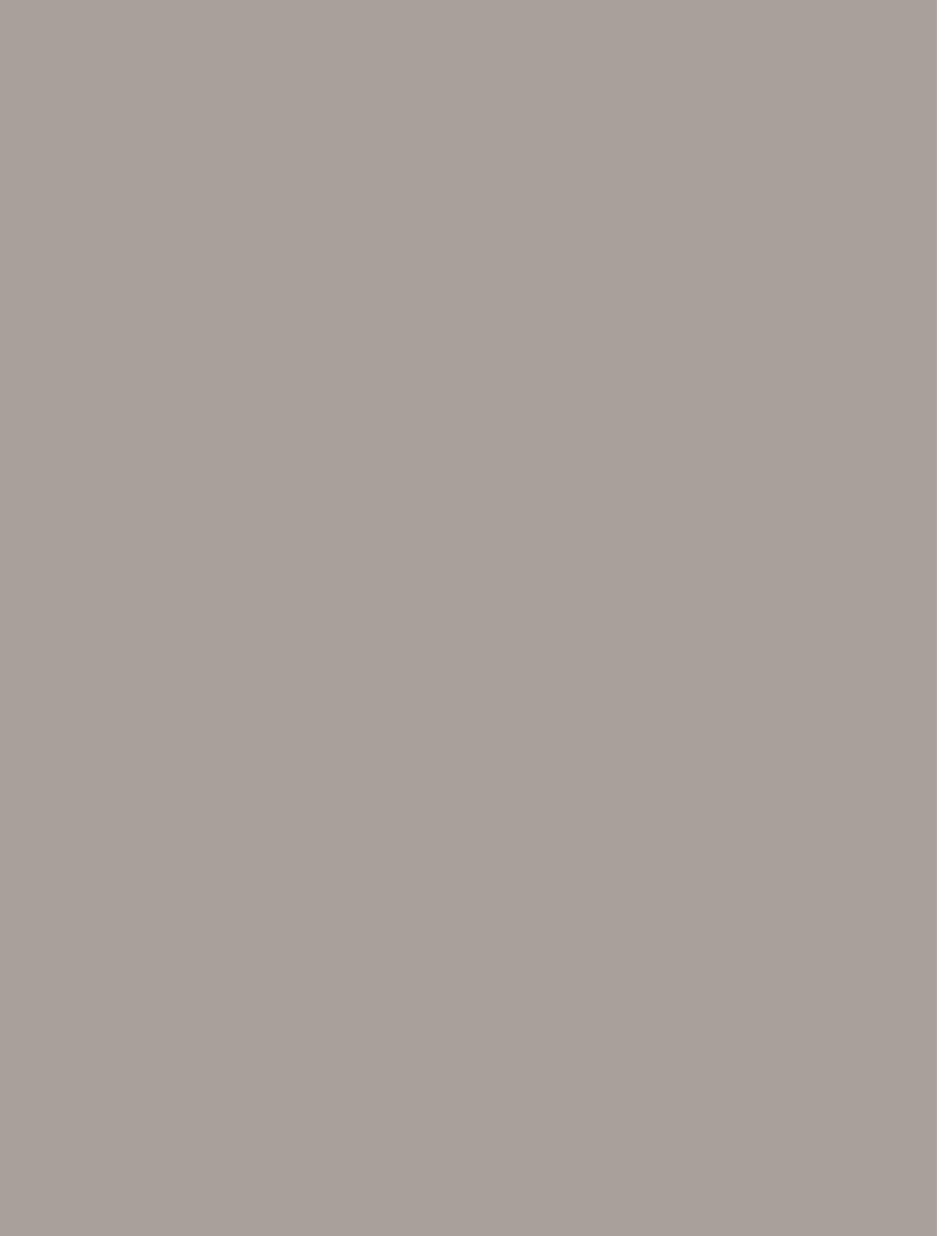


ANNUAL REPORT 2021
THE BANK OF N.T. BUTTERFIELD & SON LIMITED



Banking, trust, investments.



Established as Bermuda's first bank in 1858, Butterfield today offers a range of community banking and bespoke financial services from eight leading international financial centers, supported by centralized service centers in Canada and Mauritius. The Butterfield team works together to help our clients manage their wealth and protect it for future generations, while creating sustainable, long-term value for our shareholders.

Vision

To be the leading independent offshore bank and trust company.

Mission

To build relationships and wealth.

Values

APPROACHABLE
We commit to
personal service.

COLLABORATIVE
We collaborate for
effective teamwork.

EMPOWERED
We foster
individual initiative.

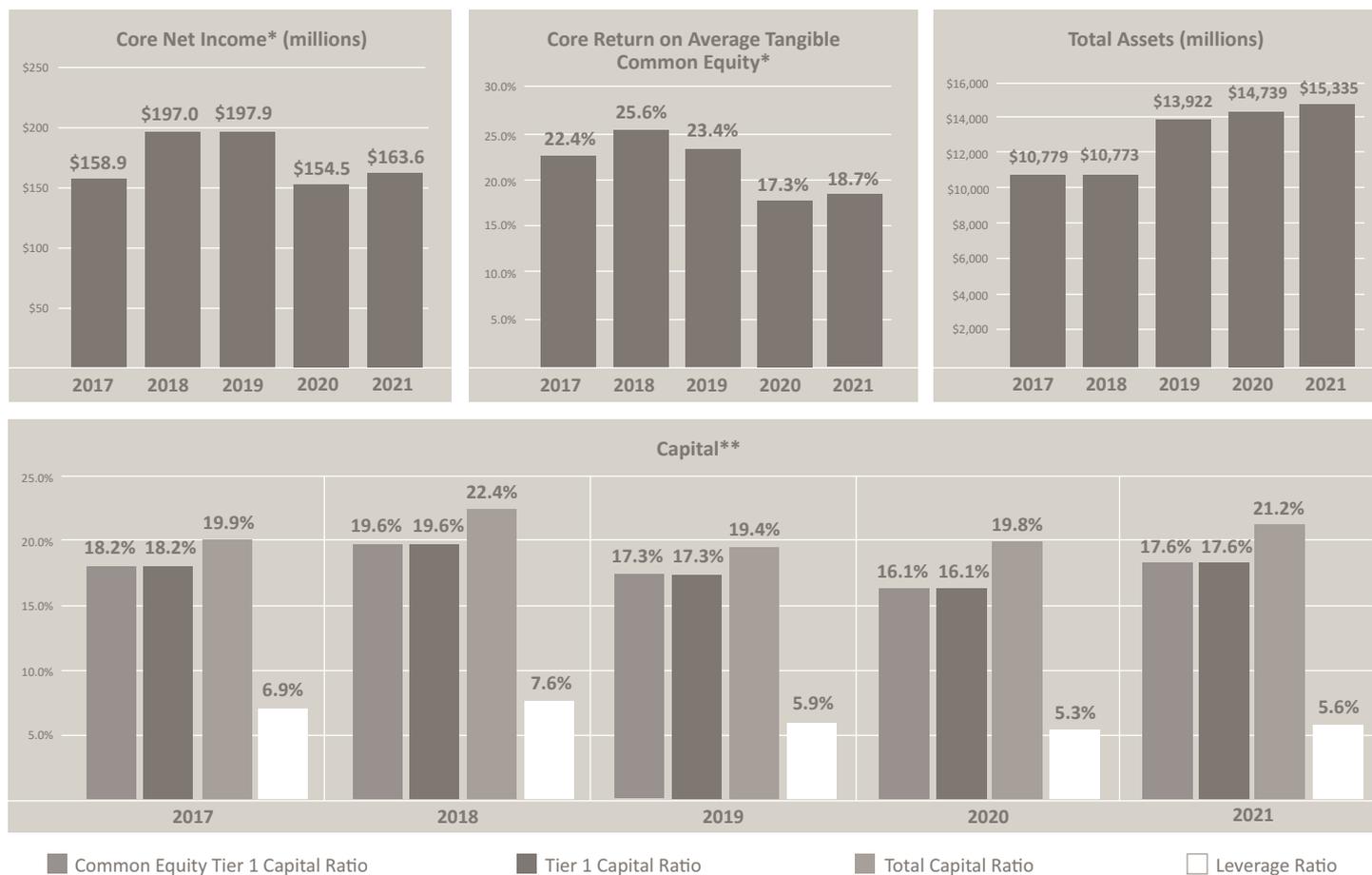
IMPACTFUL
We celebrate
collective success.

Locations

The Bahamas
Cayman Islands
Bermuda
Canada*
Jersey
Guernsey
United Kingdom
Switzerland
Mauritius*
Singapore

*Non-client-facing service center.

Results



Awards

<p>The Banker</p> <p>BANK OF THE YEAR</p> <p>BERMUDA 2020</p>	<p>Global Finance</p> <p>BEST BANK IN BERMUDA</p> <p>2021</p>
<p>Global Finance</p> <p>BEST PRIVATE BANK FOR ENTREPRENEURS</p> <p>CARIBBEAN 2021</p>	<p>Global Finance</p> <p>BEST PRIVATE BANK</p> <p>BERMUDA & CAYMAN 2022</p>

Ratings

Agency	Short-Term Debt	Long-Term Senior Debt
Moody's	P-2	A3
Standard & Poor's	A-2	BBB+
KBRA	K1	A+

All information is as at December 31, 2021 unless otherwise specified.

*Non-GAAP measure. See "Reconciliation of Non-GAAP Financial Measures" on page 52 of the Annual Report on Form 20-F within this publication for a reconciliation of US GAAP results to non-GAAP measures.

** The Bank's regulatory capital is determined in accordance with current Basel III guidelines as issued by the BMA.

Letter to Shareholders

Dear Shareholders,

In 2021, we celebrated the fifth anniversary of Butterfield listing on the New York Stock Exchange. We had strong financial results for the year, despite a challenging backdrop of COVID-19 and low interest rates. The Bank reported net income of \$162.7 million, or \$3.26 per share and core net income* of \$163.6 million, or \$3.28 per diluted share. Net income and core net income* were up year-over-year 10.5% and 5.9%, respectively. For the year, our return on common equity was 16.8% and core return on tangible common equity* was 18.7%.

The continued resilience of our business was evident in the positive performance of our credit portfolio, which had a net credit release of \$3.1 million in 2021, resulting from lower levels of non-performing loans and an improved economic outlook.

During the past year, we continued to actively manage our capital. Butterfield's strong earnings and ROE's allowed us to pay out quarterly dividends totaling \$1.76 per share or approximately 54% of net income for 2021, as we continue to target a through-cycle dividend payout ratio of approximately 50%. During the year, we repurchased over half a million shares at an average price of \$36.93. In addition to our quarterly dividend payout potential, the Board has authorized a new share repurchase plan of up to 2 million shares for 2022.

In Bermuda and the Cayman Islands, our market leading banks rebounded with the local economies. In the Channel Islands, we continued to expand our banking products and market share with the successful launch of residential mortgages, complementing our existing mortgage lending business in high-end central London. Our private trust business also performed well, generating increased recurring fee income, which offset some of the impact of continued low interest rates. All our businesses are supported by our service centers in Canada and Mauritius, which once again helped improve operating efficiency.

Our balance sheet remains highly rate sensitive. As the interest rate outlook has improved, prior experience suggests that higher rates will provide a meaningful uplift to net interest income and profitability. Since 2016, our return on equity has ranged between approximately 15% to 25%, during a full rate cycle. High-quality fees represent approximately 40% of revenue, which allows us to generate high risk-adjusted returns, without taking significant credit or investment risk.

Our growth in recent years has combined market share growth in our island markets with selective acquisitions. We continue to evaluate deals and believe acquiring appropriately priced offshore trust or banking businesses can be an accretive way to expand our footprint and continue Butterfield's growth story.

During the year, Alastair Barbour rotated in as Lead Independent Director, replacing Jim Burr. We thank Jim for his leadership and contributions, and welcome Alastair to the role.

As a leading local financial institution and responsible corporate citizen in the communities we serve, we take pride in providing community support through various charitable efforts. Through our employees, who volunteer their time and skills to important causes, and through sponsorships and donations, Butterfield supports initiatives and organizations that are working to enhance prosperity, foster social progress, and enrich the quality of people's lives in our communities. In 2021, we provided over \$1 million in donations to more than 150 charities and causes.

Butterfield's ability to create shareholder value continues to benefit from our strong balance sheet, leading market positions, robust infrastructure, efficient operations, and client centric culture. I would like to thank our staff, clients, the Board of Directors, and all of our stakeholders for their support and contributions that continue to drive Butterfield's success.



Michael W. Collins
Chairman and Chief Executive Officer

BOARD OF DIRECTORS



Michael Collins
Chairman & Chief Executive Officer



James Burr
Non-Executive Director



Alastair Barbour
Lead Independent Director



Sonia Baxendale
Non-Executive Director



Michael Covell
Non-Executive Director



Mark Lynch
Non-Executive Director



Jana Schreuder
Non-Executive Director



Michael Schrum
Executive Director & Group Chief Financial Officer



Pamela Thomas-Graham
Non-Executive Director



John Wright
Non-Executive Director

EXECUTIVE COMMITTEE



Andrew Burns
Group Head of Human Resources



Kevin Dallas
Group Head of Marketing & Communications



Bri Hidalgo
Group Head of Compliance & Operational Risk



Michael McWatt
Managing Director, Cayman Islands



Shaun Morris
General Counsel & Group Chief Legal Officer



Michael Neff
Managing Director, Bermuda and International Wealth



Jane Pearce
Group Head of Trust

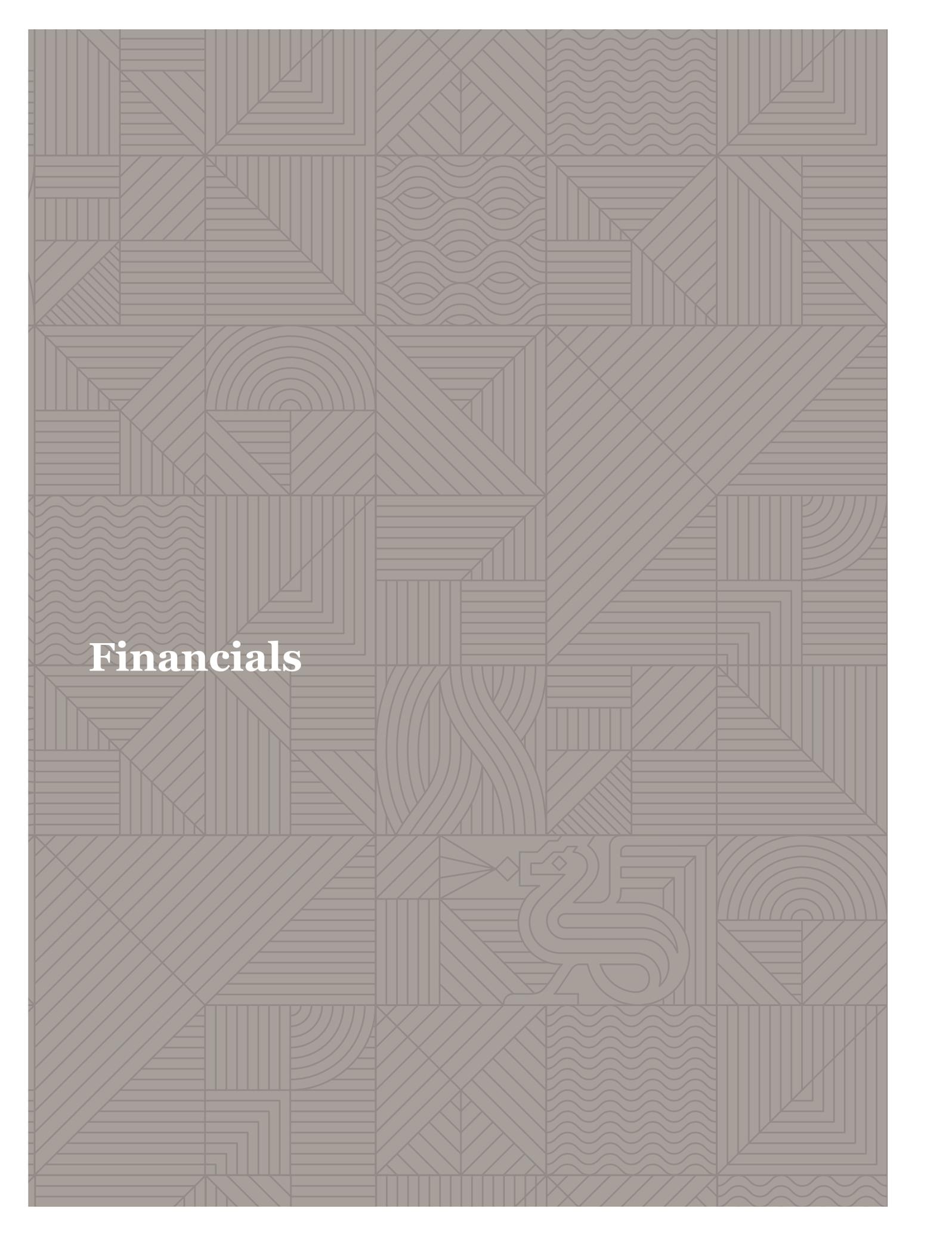


Richard Saunders
Managing Director, Channel Islands and the UK



Sabeth Siddique
Group Chief Risk Officer

*Non-GAAP measure. See "Reconciliation of Non-GAAP Financial Measures" on page 52 of the Annual Report on Form 20-F within this publication for a reconciliation of US GAAP to non-GAAP measures.



Financials

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

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

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

For the fiscal year ended

December 31, 2021

OR

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

OR

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

Date of event requiring this shell company report

For the transition period from _____ to _____

Commission file number: 001-37877

The Bank of N.T. Butterfield & Son Limited

(Exact name of Registrant as specified in its charter)

Bermuda

(Jurisdiction of incorporation or organization)

65 Front Street, Hamilton, HM 12 Bermuda

(Address of principal executive offices)

Shaun Morris, 65 Front Street, Hamilton, HM 12 Bermuda

Telephone: (441) 295-1111; Fax: (441) 292-4365

E-mail: Shaun.Morris@Butterfieldgroup.com

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

<u>Title of each class</u>	<u>Trading Symbol (s)</u>	<u>Name of each exchange on which registered</u>
Voting ordinary shares of par value BMS\$ 0.01 each	NTB	New York Stock Exchange
Voting ordinary shares of par value BMS\$ 0.01 each	NTB.BH	Bermuda Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **None**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

As at December 31, 2021, there were 49,911,351 shares of the registrant's common stock outstanding.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes No

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

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

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

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP

International Financial Reporting Standards as issued by the International Accounting Standards Board

Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

TABLE OF CONTENTS

	Page
Explanatory Note	1
Cautionary Note Regarding Forward-Looking Statements	2
Implications of Being a Foreign Private Issuer	2
Enforcement of Civil Liabilities	2
Part I	
Item 1 Identity of Directors, Senior Management and Advisers	3
Item 2 Offer Statistics and Expected Timetable	3
Item 3 Key Information	3
A. Reserved	3
B. Capitalization and Indebtedness	3
C. Reasons for the Offer and Use of Proceeds	3
D. Risk Factors	4
Item 4 Information on the Company	18
A. History and Development of the Company	18
B. Business Overview	18
C. Organizational Structure	38
D. Property, Plants and Equipment	38
E. Selected Statistical Data	39
Item 4A Unresolved Staff Comments	44
Item 5 Operating and Financial Review and Prospects	45
A. Operating Results	45
B. Liquidity and Capital Resources	86
C. Research and Development, Patents and Licenses, etc.	89
D. Trend Information	89
E. Critical Accounting Estimates	89
Item 6 Directors, Senior Management and Employees	93
A. Directors and Senior Management	93
B. Compensation	96
C. Board Practices	96
D. Employees	99
E. Share Ownership	99
Item 7 Major Shareholders and Related Party Transactions	100
A. Major Shareholders	100
B. Related Party Transactions	101
C. Interests of Experts and Counsel	101
Item 8 Financial Information	102
A. Consolidated Statements of Other Financial Information	102
B. Significant Changes	102
Item 9 The Offer and Listing	103
A. Offering and Listing Details	103
B. Plan of Distribution	103
C. Markets	103
D. Selling Shareholders	103
E. Dilution	103
F. Expenses of the Issue	103
Item 10 Additional Information	104
A. Share capital	104
B. Memorandum and Articles of Incorporation	104
C. Material Contracts	104
D. Exchange Controls	104
E. Taxation	104
F. Dividends and Paying Agents	106

	G. Statements by Experts	106
	H. Documents on Display	106
	I. Subsidiary Information	106
Item 11	Quantitative and Qualitative Disclosures about Market Risk	106
Item 12	Description of Securities other than Equity Securities	107
Part II		
Item 13	Defaults, Dividend Arrearages and Delinquencies	108
Item 14	Material Modifications to the Rights of Security Holders and Use of Proceeds	108
Item 15	Controls and Procedures	108
Item 16	Reserved	108
Item 16A	Audit Committee Financial Expert	108
Item 16B	Code of Ethics	108
Item 16C	Principal Accountant Fees and Services	108
Item 16D	Exemption from the Listing Standards for Audit Committees	109
Item 16E	Purchases of Equity Securities by the Issuer and Affiliated Purchasers	109
Item 16F	Changes in Registrant's Certifying Accountant	109
Item 16G	Corporate Governance	109
Item 16H	Mine Safety Disclosure	110
Item 16I	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	110
Part III		
Item 17	Financial Statements	F-1
Item 18	Financial Statements - Prepared Using a Basis of Accounting Other than IFRS	i
Item 19	Exhibits	ii
	Glossary	iv

EXPLANATORY NOTE

In this report, unless the context indicates otherwise, the term:

- **"Bank"** or **"Butterfield"** refers to:
 - The Bank of N.T. Butterfield & Son Limited;
- **"BMA"** refers to:
 - The Bermuda Monetary Authority;
- **"Board"** refers to:
 - The Board of Directors of the Bank;
- **"common shares"** refers to:
 - the voting ordinary shares of par value BM\$ 0.01 each in the Bank; and
- **"we", "our", "us", "the Company"** and **"the Group"** refer to:
 - the Bank and its consolidated subsidiaries.

Refer also to the Glossary at the end of this document for additional terms.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

In this report, references to **"BMD"**, **"BM\$"**, or **"Bermuda Dollars"** are to the lawful currency of Bermuda, and **"USD"**, **"US\$"**, **"\$"** and **"US Dollars"** are to the lawful currency of the United States of America. The Bermuda Dollar is pegged to the US Dollar on a one-to-one basis and therefore, for all periods presented, BM\$1.00 = US\$1.00.

Certain monetary amounts, percentages and other figures included in this report have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100% or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages that precede them.

Our consolidated financial statements as at December 31, 2021 and 2020 and for the years ended December 31, 2021, 2020 and 2019 have been audited, as stated in the report appearing herein, by PricewaterhouseCoopers Ltd., Bermuda, and are included in this report and are referred to as our audited consolidated financial statements. We have prepared these financial statements in accordance with GAAP.

We believe that the non-GAAP measures included in this report provide valuable information to readers because they enable the reader to identify the financial measures we use to track the performance of our business and guide management. Furthermore, these measures provide readers with valuable information regarding our core activities, which allows for a more meaningful evaluation of relevant trends when considered in conjunction with measures calculated in accordance with GAAP. Non-GAAP measures used in this report are not a substitute for GAAP measures and readers should consider the GAAP measures as well. For more information on non-GAAP measures, including a reconciliation to the most directly comparable GAAP financial measures, see Item 5.A. "Operating Results — Reconciliation of Non-GAAP Financial Measures".

INDUSTRY AND MARKET DATA

Some of the discussion contained in this report relies on certain market and industry data obtained from third-party sources that we believe to be reliable. Market estimates are calculated by using independent industry publications and third-party forecasts in conjunction with our assumptions about our markets. While we believe the industry and market data to be reliable as of the date of this report, this information is subject to change based on various factors, including those discussed under the headings "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors" in this report.

TRADEMARKS AND SERVICE MARKS

We own or have rights to trademarks and service marks for use in connection with the operation of our business. All other trademarks or service marks appearing in this report that are not identified as marks owned by us are the property of their respective owners. Solely for convenience, the trademarks, service marks and trade names referred to in this report are listed without the ®, (TM) and (sm) symbols, but we will assert, to the fullest extent under applicable law, our applicable rights in these trademarks, service marks and trade names.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations or assumptions regarding the future of our business, future plans and strategies, our operational results and other future conditions. Forward-looking statements can be identified by words such as "anticipate," "assume," "believe," "estimate," "expect," "indicate," "intend," "may," "plan," "point to," "predict," "project," "seek," "target," "potential," "will," "would," "could," "should," "continue," "contemplate" and other similar expressions, although not all forward-looking statements contain these identifying words. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this annual report and include statements regarding our intentions, beliefs or current expectation concerning, among other things, our results of operations, financial condition, capital and liquidity requirements, prospects, growth, strategies and the industry in which we operate.

There are important factors that could cause actual results to differ materially from those contemplated by such forward-looking statements. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. We believe that these risks and uncertainties include, but are not limited to, those described in the section captioned "Risk Factors" that appear in Item 3.D. "Risk Factors" of this annual report. These factors should not be construed as exhaustive and should be read with the other cautionary statements in this annual report.

Although we base these forward-looking statements on assumptions that we believe are reasonable when made, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from those made in or suggested by the forward-looking statements contained in this report. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate, are consistent with the forward-looking statements contained in this report, those results or developments may not be indicative of results or developments in subsequent periods.

Given these risks and uncertainties, you are cautioned not to place undue reliance on these forward-looking statements. Any forward-looking statement that we make in this report speaks only as of the date of such statement. Except to the extent required by applicable law, we undertake no obligation to update any forward-looking statements or to publicly announce the results of any revisions to any of those statements to reflect future events or developments. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data.

IMPLICATIONS OF BEING A FOREIGN PRIVATE ISSUER

We are a foreign private issuer, and so long as we qualify as a foreign private issuer under the Exchange Act, we will be exempt from certain provisions of the Exchange Act that are applicable to US domestic public companies, including:

- the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their share ownership and trading activities and liability for insiders who profit from trades made in a short period of time;
- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial and other specified information, or current reports on Form 8-K, upon the occurrence of specified significant events; and
- Regulation FD, which regulates selective disclosures of material information by issuers.

We are, however, required to file an annual report on Form 20-F within four months of the end of each fiscal year. In addition, we have published and intend to continue to publish our results on a quarterly basis through press releases, distributed pursuant to the rules and regulations of the New York Stock Exchange. Press releases related to financial results and material events have been and will continue to be furnished to the SEC on Form 6-K. However, the information we are required to file with or furnish to the SEC is less extensive and less timely compared to that required to be filed with the SEC by US domestic issuers. As a result, you may not be afforded the same protections or information that would be made available to you were you investing in a US domestic issuer.

ENFORCEMENT OF CIVIL LIABILITIES

The Bank is incorporated under the laws of Bermuda. As a result, the rights of holders of the Bank's common shares will be governed by Bermuda law, the Butterfield Act and the Bank's bye-laws. The rights of shareholders under Bermuda law may differ from the rights of shareholders of companies incorporated in other jurisdictions. Some of our directors and some of the named experts referred to in this annual report are not residents of the United States, and a substantial portion of our assets are located outside the United States. As a result, it may be difficult for investors to effect service of process on those persons in the United States or to enforce in the United States judgments obtained in US courts against us or those persons based on the civil liability provisions of the US federal securities laws. However, we may be served with process in the United States with respect to actions against us arising out of or in connection with violations of US federal securities laws relating to offers and sales of common shares made hereby by serving C T Corporation System, 28 Liberty Street, New York, NY 10005, our US agent irrevocably appointed for that purpose.

It is doubtful whether courts in Bermuda will enforce judgments obtained in other jurisdictions, including the United States, against us or our directors or officers under the securities laws of those jurisdictions, or entertain actions in Bermuda against us or our directors or officers under the securities laws of other jurisdictions.

PART 1

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable

ITEM 3. KEY INFORMATION

A. [Reserved]

B. Capitalization and Indebtedness

Not applicable

C. Reasons for the Offer and Use of Proceeds

Not applicable

D. Risk Factors

The material risks and uncertainties that management believes affect us are described below. Any of the following risks, as well as risks that we do not know of or currently deem immaterial, could have a material adverse effect on our business, financial condition or results of operations. Further, the risk factors below include cautionary statements identifying important factors that could cause actual results to differ materially from those expressed in any forward-looking statements made by us or on our behalf. See "Cautionary Note Regarding Forward-Looking Statements."

Risks Related to the COVID-19 Pandemic

The COVID-19 pandemic has created economic and financial disruptions that have adversely affected, and are likely to continue to adversely affect, our business, financial condition, liquidity and results of operations. The extent to which the COVID-19 pandemic will continue to negatively affect our business, financial condition, liquidity and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including the scope and duration of the pandemic and the emergence of new variants, the continued effectiveness of our business continuity plan (including remote working arrangements implemented for staff), the direct and indirect impact of the pandemic on our employees, customers, clients, counterparties and service providers, as well as other market participants, actions taken by governmental authorities and other third parties in response to the pandemic, and the effectiveness and acceptance of COVID-19 vaccines.

The COVID-19 pandemic has contributed to, among other things, (i) sudden and significant declines, and significant increases in volatility, in global financial markets; (ii) ratings downgrades, credit deterioration and defaults of companies operating in many industries; (iii) significant reductions in interest rates implemented by the US Federal Reserve and other central banks further contributing to a low interest rate environment globally; and (iv) heightened cybersecurity, data privacy, information security and operational risks as a result of remote working arrangements or otherwise. In addition, many of our customers, counterparties and third-party service providers have been, and may further be, affected by travel restrictions, quarantines and/or curfews in various jurisdictions, market volatility and other factors that increase their risks of business disruption or that may otherwise affect their ability to repay loans, perform under the terms of any agreements with us or provide other essential services. As a result, our credit, operational and other risks are generally expected to increase until the pandemic subsides.

We continue to monitor the sectors that are most susceptible to economic uncertainty as a result of the COVID-19 pandemic and the potential impact to our business. The continuing implications of the pandemic on our business, financial condition, liquidity and results of operations will depend on factors such as, but not limited to, the following:

- The duration and scope of the pandemic.
- The efficacy of vaccines and other actions taken to contain COVID-19 and its variants.
- The continuation of a low interest rate environment, or further reductions in interest rates, over the medium or long term, which would adversely impact our net interest income and net interest margin, as well as increase our reliance on fee businesses.
- A slow or incomplete recovery of tourism in Bermuda and the Cayman Islands, which would adversely affect our revenues, including fee income, as well as increase our credit exposure.
- Increased unemployment and decreased business in the jurisdictions in which we operate.
- An increase in defaults on our residential mortgage loans.
- Ratings downgrades, credit deterioration and defaults in many industries, including the hotel/restaurants/hospitality sector, financial services and commercial real estate.
- Further decreases in the rates and yields on US Government guaranteed securities and increased pre-payments in mortgage backed securities we hold, which may lead to further decreases in the yield on our investment portfolio.
- Heightened cybersecurity, information security and operational risks as a result of remote working arrangements implemented for staff or otherwise.
- Government and regulatory scrutiny on market and economic conditions or actions governmental authorities take in response to the pandemic.

Governmental authorities have taken measures in response to the pandemic, and may take further action in the future to provide economic assistance to individual households and businesses, stabilize the markets and support economic growth. The success of existing and future measures to provide economic assistance and increase the pace and magnitude of economic recovery is unknown, and they may not be sufficient to fully mitigate the negative impact of the COVID-19 pandemic.

The duration and scope of the pandemic and related economic consequences, as well as the efficacy of the measures being put in place to address it, are unknown. Until the pandemic subsides, we expect reduced interest income and revenues from card service fees, and increased customer and client loan defaults, including defaults in unsecured loans. Changes in the macroeconomic environment are extremely impactful to our provision for credit losses under CECL, including as a result of the COVID-19 pandemic. Even after the pandemic subsides, our businesses would be materially and adversely affected by any subsequent, prolonged recession in the jurisdictions in which we have banking and trust operations. To the extent the pandemic adversely affects our business, financial condition, liquidity or results of operations, it may also have the effect of heightening many of the other risks set out herein.

Risks Relating to the Markets in Which We Operate

Adverse economic and market conditions in Bermuda, the Cayman Islands, the Channel Islands and the UK, and other markets in which we operate, have in the past resulted in and could in the future result in lower revenue, lower asset quality, increased provisions and lower earnings.

Our financial performance generally, and in particular the ability of our borrowers to pay interest and repay principal on outstanding loans and the value for the collateral securing those loans, as well as demand for loans and other products and services we offer and whose success we rely on to drive our future growth, are highly dependent upon the business environment in the markets in which we operate. A downturn in Bermuda, the Cayman Islands, and the Channel Islands and the UK can have a profound impact on our business performance. Some elements of the business environment that affect our financial performance include short-term and long-term interest rates, any downgrade in sovereign credit ratings to which our credit ratings are correlated, the prevailing yield curve, inflation and price levels, monetary policy, regulatory or legal changes (including changes in tax laws) or changes in enforcement thereof, unemployment rates, investor or business confidence, natural or man-made disasters, the strength of the local economy

in the markets in which we operate, or a combination of these or other factors.

Unfavorable market conditions (including as a result of the COVID-19 pandemic) can result in a deterioration in the credit quality of our borrowers and the demand for our products and services, an increase in the number of loan delinquencies, defaults and charge-offs, additional provisions for loan losses, decreases in asset values, deterioration in investment performance and an overall material adverse effect on the quality of our loan portfolio.

Unlike banks that are more geographically diversified, our business is concentrated primarily in Bermuda, the Cayman Islands, and the Channel Islands and the UK, and we may be more affected by a downturn in these markets than more diversified competitors.

Our banking operations are concentrated in Bermuda, the Cayman Islands, and the Channel Islands and the UK, and we serve customers in these markets. In the year ended December 31, 2021, 45%, 29% and 20%, of our total net revenue was derived from our Bermuda, Cayman Islands, and Channel Islands and UK segments, respectively. In addition, in the year ended December 31, 2021, 39%, 20% and 39%, of our loans originated in Bermuda, the Cayman Islands, and Channel Islands and the UK, respectively. Accordingly, a downturn in these markets may have a profound effect on our banking business. In addition, we have sought to expand our core business lines, including through recent acquisitions. Any failure in our ability to expand our core business lines, or any reduction in demand for our core services in our Bermuda, Cayman Islands and Channel Islands and UK segments, including due to perceived reputational risks, increasing regulatory scrutiny over activities in these jurisdictions or otherwise, may adversely impact our business and results of operations, including the ongoing success of any of our acquired businesses.

Geopolitical events could disrupt our businesses and adversely affect our financial condition or results of operations.

We are exposed to risks arising out of geopolitical events, such as trade barriers, including the imposition of tariffs and other limitations on international trade and travel, exchange controls, government shutdowns, other measures taken by sovereign governments, including by the US, and uncertainty arising from recent or upcoming elections that can hinder economic or financial activity levels. Furthermore, unfavorable political, military or diplomatic events, armed conflict, terrorist acts and threats, and pandemics, and the responses to them by governments, could also negatively affect economic activity and have an adverse effect upon our business, financial condition or results of operations.

In addition the UK formally leaving the EU ("Brexit") and the US's present and future policies may increase the uncertainty and instability in the global financial markets, which could lead to weaker macroeconomic conditions, globally and in our key markets. Such economic weakness and uncertainty may adversely affect our business, financial condition and results of operations. Political and economic uncertainty has in the past led to, and could in the future lead to, declines in market liquidity and activity levels, volatile market conditions and exchange rates, a contraction of available credit, lower or negative interest rates, declines in the real estate market, weaker economic growth and investment performance and reduced business confidence, all of which could impact our business. The post-Brexit relationship between the UK and the EU continues to evolve, which could cause disruptions to and create uncertainty surrounding our business. Further, any continuing legal or economic disruptions resulting from Brexit may negatively impact our operations in the UK and certain UK territories and dependencies, namely Bermuda, the Cayman Islands, and the Channel Islands. It may also be time-consuming and expensive for us to alter our internal operations in order to comply with new regulations.

Furthermore, changes in legislation and regulation or an attempt by any territory or dependency of the UK in which we operate to declare independence from the UK or to implement changes in its constitution, including its fiscal and monetary policies, could have a negative effect on the applicable jurisdiction's position as an international business center. This could have a significant negative effect on the local economy and in turn negatively affect our business.

Because the primary markets in which we operate do not have well-diversified economies, a downturn in their key industries could affect their economies as a whole and have an adverse effect on our business, financial condition or results of operations.

Bermuda is among the largest reinsurance markets in the world. The Cayman Islands is a leader in fund domiciliation for global asset managers, with 12,719 regulated mutual funds as at December 31, 2021 according to CIMA. International financial services account for a significant portion of the economies of the Channel Islands. Many of our commercial customers are reinsurance or regulated fund service providers. As a result, a downturn in these key sectors, a change in laws or regulations (including the favorable tax treatment of entities in these jurisdictions), or a shift of business away from Bermuda, the Cayman Islands, or the Channel Islands, including as a result of the inclusion of any of these jurisdictions on the EU list of non-cooperative jurisdictions for tax purposes or the implementation of the global minimum tax regime proposed by the Organization for Economic Cooperation and Development ("OECD") in any of these jurisdictions, could result in job losses and adversely impact the economies in these markets. Any downturn or further concentration in the reinsurance, investment and asset management and banking markets could also adversely affect our business, financial condition and results of operations.

Banks domiciled in Bermuda, including us, are not supported by a central bank from which to borrow funds, so if we are unable to maintain sufficient liquidity by continuously attracting deposits and other short-term funding, our financial condition, including our capital ratios, funding costs or results of operations could be adversely affected.

Unlike many other jurisdictions, there is no central bank or similar governmental agency in Bermuda from which we may borrow US or Bermuda Dollars if we experience liquidity shortages, which may leave us without a lender of last resort in the event that Bermuda suffers a severe economic downturn at the same time as a liquidity shortage. Similarly, there is no central bank in the Cayman Islands, Jersey or Guernsey to act as a lender of last resort. Accordingly, we may not have a lender of last resort in case of future liquidity shortages and we may be unable to sufficiently fund our liquidity needs. While there is no central bank or similar governmental agency in Bermuda, the Cayman Islands, Jersey or Guernsey that insures bank deposits, such as the Federal Deposit Insurance Corporation in the United States, the Governments of Bermuda and Jersey and the Government of the States of Guernsey have each implemented a Deposit Insurance Scheme or Deposit Compensation Scheme. See Item 4.B. "Business Overview - Supervision and Regulation" and "- Certain jurisdictions in which we operate, including Bermuda, Guernsey and Jersey, have a Deposit Insurance Scheme or Deposit Compensation Scheme and we incur ongoing costs as a result." The regulators in these jurisdictions have also required us to hold capital add-ons to compensate for the systemic importance of our bank to the economy in the absence of a central bank. Without a central bank from which we could borrow funds, liquidity management will be critical to the management of our consolidated balance sheet, and an inability to obtain sufficient liquidity could adversely affect our financial condition.

Certain jurisdictions in which we operate, including Bermuda, Guernsey and Jersey, have a Deposit Insurance Scheme or Deposit Compensation Scheme and we incur ongoing costs as a result.

As a bank licensed by the BMA, we are required to be a member of the Deposit Insurance Scheme ("DIS") and pay contributions to the Deposit Insurance Fund. Currently, our premium contribution is calculated by the Bermuda Deposit Insurance Corporation as 0.25% per annum of the average total amount of our Bermuda Dollar deposits that are covered by the DIS guarantee over a rolling three-month period, payable every three months in arrears. The amount of the contribution we are liable to pay may change from time to time as the total level of our insured Bermuda Dollar deposits changes; in addition, there is no guarantee that the current rate of premium contributions charged by the Bermuda Deposit Insurance Corporation will stay the same and not increase or that the Bermuda Deposit Insurance Corporation will not require additional contributions in the event that the Deposit Insurance Fund is insufficient to pay compensation due to insured depositors. We may also not be able to recover our contributions to the Deposit Insurance Fund from any failed institution whose insured depositors receive payments from the Deposit Insurance Fund. Any contributions we are required to make as part of the DIS (and any associated costs) are a cost to our business, and such costs, including any future increases, may have an adverse effect on our business, financial condition or results of operations.

As a bank licensed by the Guernsey Financial Services Commission, we are required to pay contributions to the Guernsey Deposit Compensation Scheme (the "Guernsey DCS"). Currently, we are required to pay an administration levy which is calculated by the Guernsey DCS Board. The amount of the contribution we are liable to pay may change from time to time and there is no guarantee that the current rate charged by the Guernsey DCS Board will stay the same and not increase. In the event of the failure of a Guernsey licensed bank, the Guernsey DCS Board will estimate the total level of compensation levy required and the Bank will be liable in equal shares with every other participant (i.e., every other licensed bank in Guernsey) for the first £10,000,000. If the total compensation levy exceeds £10,000,000, then the Bank will be liable on a pro-rata basis (calculated by reference to the total "value at risk" of our Guernsey deposits compared to the Guernsey market) with every other participant for the amount of such excess. We may also not be able to recover our contributions to the Guernsey DCS from any failed licensed bank whose insured depositors receive payments from the Guernsey DCS. Any contributions we are required to make as part of the Guernsey DCS (and any associated costs) are a cost to our business, and such costs, including any future increases, may have an adverse effect on our business, financial condition or results of operations.

The Jersey Bank Depositors Compensation Scheme ("Jersey DCS") is funded primarily through an upfront loan from the States of Jersey. In the event of a bank failing, levies would be raised on Jersey banks, subject to certain caps for banking groups over a five-year period, based on the proportion of protected deposits each bank holds to repay the loan. In the event that the full £100 million liability of the Jersey DCS was called upon, banks would contribute approximately two-thirds of funding, with the States of Jersey contributing one-third.

We are not currently required to pay any contributions to the Jersey DCS. Any contributions we may be required in future to make as part of the Jersey DCS (and any associated costs) are a cost to our business, and such costs, including any future increases, may have an adverse effect on our business, financial condition or results of operations.

A decline in tourism in Bermuda and the Cayman Islands has, as a result of the COVID-19 pandemic, and could in the future, adversely affect our business, financial condition or results of operations.

Tourism is a major contributor to the economies of Bermuda and the Cayman Islands. The COVID-19 pandemic has resulted in a significant decline in worldwide travel and tourism, including in Bermuda and the Cayman Islands. See "Risks Related to the COVID-19 Pandemic."

A delayed or incomplete recovery of tourism in Bermuda or the Cayman Islands could have adverse effects on the economic stability of these jurisdictions, and our business, financial condition or results of operations. In addition, a continued decline in tourism could lead to further (i) decreases in the value of hotels and other commercial properties, which could further adversely affect our commercial loan portfolio, and (ii) increases in unemployment, which could further affect the ability of our residential borrowers to make payments on their loans.

Severe weather, natural disasters and potential impacts of climate change could disrupt our businesses and adversely affect our financial condition or results of operations.

The key markets in which we operate include Bermuda and the Cayman Islands and our business is therefore subject to the risks associated with severe tropical storms, hurricanes, tornadoes, earthquakes and rising sea levels, including downed telephone lines, flooded facilities, power outages, fuel shortages, damaged or destroyed property and equipment, and work interruptions. Although hurricanes in the Caribbean during 2019, 2020 and 2021 did not negatively impact the Bank's operations or cause any insurable losses, such severe weather conditions and natural disasters may, in the future, negatively impact us and our clients and their ability to meet their financial obligations to us, including the repayment of loans. Such events may also result in an impairment of the value of property or other collateral used to secure the loans that we extend. Climate change will likely aggravate the impact and increase the incidence of such severe weather conditions and natural disasters. Furthermore, severe weather events may have a significant impact on the economies of the key markets in which we operate, which could have a material adverse impact on our operations.

We cannot predict whether we will continue to be able to obtain insurance for hazard-related damages to our premises or, if obtainable and carried, whether this insurance will be adequate to cover our losses. Moreover, we expect any insurance of this nature to be subject to substantial deductibles and to provide for premium adjustments based on claims, and we do not carry insurance against all types of losses. For all these reasons, any future hazard-related costs and work interruptions could have an adverse effect on our business, financial condition or results of operations.

The majority of the markets in which we operate do not have systemic credit bureau reports.

Unlike the US where the Fair Credit Reporting Act ("FCRA") is designed to help ensure that credit bureaus furnish correct and complete information when evaluating loan applications, the majority of the markets in which we operate do not have systemic credit bureau reports. Therefore, we review each loan and we use a formal and documented tiered credit approval process that is administered through and governed by our risk management framework. Due to limitations in the availability of information, our assessment of credit risk associated with a particular customer may not be based on complete, accurate or reliable information. In addition, although we have made and continue to make improvements to our credit scoring systems to better assess borrowers' credit risk profiles, we cannot provide assurance that our credit scoring systems collect complete or accurate information reflecting the actual behavior of customers or that their credit risk can be assessed correctly. Without complete, accurate and reliable information, we have to rely on other publicly available resources and our internal resources, which may not be effective. As a result, our ability to effectively manage our credit risk and subsequently our impairment losses and allowance for credit losses may be materially adversely affected. In addition, because our credit approval process involves detailed analyses of the customer or credit risk, taking into account both quantitative and qualitative factors, it is subject to human or information technology systems errors. In exercising their judgment on current or future credit risk behavior of our customers, our employees may not always be able to assign an accurate credit rating, which may result in our exposure to higher credit risks than indicated by our risk rating system. In addition, we have been refining our credit policies and guidelines to address potential risks associated with particular industries or types of customers. However, we may not be able to timely detect all possible risks before they occur, or due to limited tools available to us, our employees may not be able to effectively implement them, which may increase our credit risk. Failure to effectively implement, consistently follow or continuously refine our credit risk management system may result in an increase in the level of nonperforming loans and a higher risk exposure for us, which could have a material adverse effect on us.

Risks Relating to Our Strategy, Brand, Portfolio and Other Aspects of Our Business

We rely on our reputation and the appeal of our brand to our customers. Any damage to our reputation and appeal could harm us and our business prospects.

The success of our strategy relies significantly on our reputation and the reputation of our senior management and the Board. In addition, our customers and key introducers must continue to associate our brand with meeting customer needs and delivering value to those customers. Adverse publicity (whether or not justified) relating to activities by our management, employees, agents or others with whom we do business, such as customer service mishaps or noncompliance with laws, could tarnish our reputation and reduce the value of our brand. With the increase in the use of social media outlets, adverse publicity can be disseminated quickly and broadly, making it increasingly difficult for us to effectively respond. Such unfavorable publicity could also require us to allocate significant resources to rebuild our reputation.

As a bank operating in Bermuda, the Cayman Islands, the Channel Islands and other international financial centers, we are subject to increasing scrutiny with respect to potential or alleged legal and regulatory breaches and unethical behavior and associated reputational risks, including with respect to the general perception and reputation of financial institutions in those jurisdictions, which may in turn be affected by factors including the EU list of non-cooperative jurisdictions for tax purposes, and policies on

controversial industries such as gaming and cryptocurrencies, among others. See "Our business may be negatively impacted by the economic substance legislation and regulations in the jurisdictions in which we operate, including Bermuda, the Cayman Islands, and the Channel Islands." Any circumstance that causes real or perceived damage to our brand or reputation, or banking or wealth management generally in these jurisdictions, may negatively affect our relationships with our customers and key introducers, which would have an adverse effect on our business, financial condition or results of operations.

Potential reputational issues include, but are not limited to:

- breaching or facing allegations of having breached legal and regulatory requirements (including, but not limited to, conduct requirements, anti-money laundering requirements, anti-terrorism financing requirements, laws against assisting in tax evasion, cybersecurity and data protection laws, bribery and corruption);
- legacy issues we inherit from the businesses we acquire through a merger or acquisition;
- acting or facing allegations of having acted unethically (including having adopted inappropriate sales and trading practices);
- failing or facing allegations of having failed to maintain appropriate standards of customer privacy, customer service and record-keeping;
- failing to appropriately address potential conflicts of interest;
- experiencing technology failures that impact customer services and accounts;
- failing to properly identify legal, reputational, credit, liquidity and market risks inherent in products offered; and
- changing the terms of our product offerings and pricing that may result in outcomes for customers that are unfair or perceived to be unfair.

A failure to address the above or any other relevant issues appropriately could make customers unwilling to do business with us, which could have an adverse effect on our business, financial condition or results of operations and could damage our relationships with our employees and regulators.

We could be negatively affected if the soundness of other financial institutions and counterparties deteriorates or if such counterparties, including clearing houses, are unwilling to do business with us, in particular in respect of US Dollar transactions.

Given the high level of interdependence between financial institutions, we are and will continue to be subject to the risk of actual or perceived deterioration in the commercial and financial soundness of other financial services institutions. Within the financial services industry, the default by any one institution could lead to defaults by other institutions. Concerns about, or a default by, one institution could lead to significant liquidity problems, losses or defaults by other institutions, because the commercial and financial soundness of many financial institutions may be closely related as a result of their credit, trading, clearing or other relationships. Even the perceived lack of creditworthiness of, or questions about, a financial institution may lead to market-wide liquidity problems and losses or defaults by us or by other institutions. This risk is sometimes referred to as "systemic risk" or "contagion" and may adversely affect financial intermediaries, such as clearing agencies, clearing houses and banks with whom we interact on a daily basis. In particular, BNYM and Wells Fargo Bank, N.A. ("Wells Fargo") act as clearing houses for all our US Dollar transactions. If BNYM's or Wells Fargo's ability to act as our clearing houses becomes impaired or BNYM or Wells Fargo cease to act as our clearing houses for any other reason and other financial institutions are not willing to provide the services currently provided to us by BNYM and Wells Fargo, we could lose our ability to engage in US Dollar transactions, which could lead to severe disruptions in our operations and adversely impact our business, financial condition or results of operations.

Our strategy includes expansion of our business through acquisitions of, or investments in, other companies or new products and services, but we may not be able to achieve regulatory approval for such transactions or be able to achieve the anticipated cost savings, growth opportunities and other benefits anticipated from such transactions.

We seek to grow both organically and through acquisitions. In the past several years, we have made various acquisitions and investments intended to complement and expand our businesses, including our July 2019 acquisition of ABN AMRO (Channel Islands) Limited, our February 2018 agreement with Deutsche Bank to refer Deutsche Bank's clients from their banking and custody business in the Cayman and Channel Islands to us, and our March 2018 acquisition of Deutsche Bank's GTS business, excluding its US operations. Our long-term growth strategy includes identifying and effecting selective acquisitions in our core geographies, but we cannot be sure that we will be able to continue to identify suitable acquisition candidates or investment opportunities. Even if we identify suitable targets, there can be no assurance that we will be able to obtain the necessary funding on acceptable terms, if at all, to finance any of those potential acquisitions or investments.

We may also be required to obtain regulatory approval (including from the BMA) prior to any potential acquisition or investment depending on the transaction and the laws and regulations of the target's country of incorporation (for example, from the Guernsey Financial Services Commission in respect of the acquisition of ABN AMRO (Channel Islands) Limited). Regulators consider a number of factors when determining whether to approve a proposed transaction, and we may have difficulty obtaining the necessary regulatory approvals, government permits or licenses required for such acquisitions. We may fail to pursue, evaluate or complete strategic and competitively significant business opportunities as a result of our inability, or our perceived inability, to obtain any required regulatory approvals in a timely manner or at all.

Even where we are able to complete an acquisition or an investment, we cannot be sure that such acquired entity, business or asset or such investment will perform in line with our assumptions or expectations or otherwise complement our business or strategy due to a variety of factors, including lower revenues than expected, unforeseen operating difficulties and expenditures, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) and risks associated with the disruption of management's attention from ongoing business operations due to acquisition and integration activities.

In addition, integrating an acquired company, business or technology possesses significant risks, including, among other things:

- the incorporation of new technologies into our existing business infrastructure;
- the maintenance of standards, controls, procedures and policies throughout the organization (including effective internal controls over financial reporting and disclosure controls and procedures);
- the consolidation of our corporate or administrative functions;
- the coordination of our sales and marketing functions to incorporate the new business or technology;
- the potential for liabilities and claims arising out of the acquired businesses;
- the integration of corporate cultures;
- the maintenance of morale, retention and integration of key employees to support the new business or technology and management of our expansion in capacity; and
- compliance with the regulatory regimes of newly entered jurisdictions.

In addition, a significant portion of the purchase price of companies that we may acquire may be allocated to goodwill and other intangible assets. Intangible assets are tested for impairment annually or when there is a triggering event requiring such testing; an intangible asset that is subject to amortization is periodically reviewed for impairment.

Goodwill is tested for impairment on an annual basis. As at December 31, 2021, we had \$25.4 million and \$60.8 million of goodwill and intangible assets, respectively. In the future, if our acquisitions do not yield expected returns or there are changes in discount rates, we may be required to take additional charges to our earnings based on the impairment assessment process, which could harm our business, financial condition, results of operations and prospects.

A decline in the residential real estate market, including in Bermuda, the Cayman Islands, the Channel Islands and the United Kingdom, could increase the risk of loans being impaired and could have an adverse effect on our business, financial condition or results of operations.

We are exposed to the risk that our borrowers may not repay their loans according to their contractual terms and that the collateral securing the payment of these loans may be insufficient. As at December 31, 2021, approximately 53% of our Bermuda loan portfolio, net of allowance for credit losses, was composed of residential mortgages in Bermuda; approximately 68% of our Cayman Islands loan portfolio, net of allowance for credit losses, was composed of residential mortgages in the Cayman Islands and approximately 84% of our Channel Islands and UK loan portfolio, net of allowance for credit losses, was composed of residential mortgages in the Channel Islands and the UK. A decline in the real estate market, in particular in Bermuda, the Cayman Islands, the Channel Islands and the UK (including as a result of the ongoing COVID-19 pandemic), would mean that the collateral for our loans would hold less value. As a result, our ability to recover on defaulted loans by selling the underlying real estate would be diminished, and we would be more likely to suffer losses on the defaulted loans. Declines in the real estate market, including as a result of lower infrastructure spending in the markets in which we operate, could also adversely affect demand for new loans, further decreasing the interest revenue generated by our loan portfolio. In addition, if our estimate for our allowance for credit losses proves to be inadequate, we will have to increase the allowance accordingly and may have future charge-offs. This may lead to impairment charges on loans and other assets, higher costs and higher incurred loan-loss provisions.

The risk of loan impairment may be compounded by the fact that there is limited economic and statistical data regarding the Bermuda, the Cayman Islands and the Channel Islands real estate markets. Although reliable and comprehensive economic and statistical data is available for certain real estate markets, such as the Case-Schiller Home Price Index in the United States, there is no comparable statistical data or mechanism to value the overall real estate market in all our markets. This lack of information makes it difficult to assess the market value of real estate in these markets, and requires us to rely on observations of the valuation of our own real estate originations in order to assess whether the value of mortgaged real estate has declined. See "- The appraisals and other valuation techniques we use in evaluating and monitoring loans secured by real property may not accurately describe the net value of the collateral that we can realize." Any of the above factors could have an adverse effect on our business, financial condition or results of operations.

The value of the securities in our investment portfolio may decline in the future.

As at December 31, 2021, we owned \$6.2 billion of investment securities consisting primarily of securities issued by the US government and US governmental agencies. In 2021, our investment portfolio had an average yield of 1.79%.

The fair value of our investment securities may be adversely affected by market conditions, including changes in interest rates, the ongoing COVID-19 pandemic, and the occurrence of any events adversely affecting the issuer of particular securities in our investment portfolio. We perform periodic reviews to determine if a credit impairment exists. Our Group Asset and Liability Committee reviews the results of the impairment analysis and advises whether a credit impairment exists. The process for determining whether a credit impairment exists usually requires complex, subjective judgments about the future financial performance of the issuer of the relevant security in order to assess the probability of receiving all contractual principal and interest payments on the security.

We did not record any credit impairment losses on investments in the years ended December 31, 2021, 2020 and 2019. We may be required to recognize credit impairments in the future periods, which could have an adverse effect on our business, financial conditions or results of operations. See "- If we are unable to effectively manage our liquidity we may need to seek additional financing and our business, financial condition or results of operations could be adversely affected."

Fluctuations in interest rates and inflation may negatively impact our net interest margin and our profitability.

Net interest income is a significant component of our revenues and changes in prevailing interest rates may adversely affect our business, including the level of net interest income we earn, and for our banking business, the levels of deposits and the demand for loans.

If interest rates increase, our net interest income would narrow if our cost of funding increased without a correlative increase in the interest we earn from loans and investments. Because we rely extensively on deposits to fund our operations, our cost of funding would increase if there is an increase in the interest rate we are required to pay our customers to retain their deposits. This could occur, for instance, if we are faced with competitive or regulatory pressures to increase rates on deposits. In addition, our cost of funding would increase if the interest rates we are required to pay for other sources of funding increase. Moreover, increases in interest rates may decrease customer demand for loans as the higher cost of obtaining credit may deter customers from seeking new loans. Further, higher interest rates might also lead to an increased number of delinquent loans and defaults, which would affect the value of our loans.

Changes in interest rates may negatively affect the value of our assets and our ability to realize gains or avoid losses from the sale of those assets, all of which also ultimately affect earnings and capital, as well as our regulatory solvency position. A sustained increase in the inflation rate in our key markets may also have an adverse effect on our business, financial condition or results of operations. For example, a sustained increase in the inflation rate may result in an increase in nominal market interest rates. A failure to accurately anticipate higher inflation and factor it into our product-pricing assumptions may result in mispricing of our products, which could adversely affect our business, financial position or results of operations. On the other hand, recent concerns regarding negative interest rates and the low level of interest rates generally may negatively impact our net interest income, which may have an adverse impact on our profitability.

Our loan and investment portfolios are subject to risk of prepayment, which could have a material adverse effect on us.

Our fixed rate loan and investment portfolios are subject to prepayment risk, which results from the ability of a borrower or issuer to pay a debt obligation prior to maturity. Generally, in a low interest rate environment, prepayment activity increases, which reduces the weighted average lives of our earning assets and could have a material adverse effect on us. For example, recent decreases in global market interest rates and increased prepayment speeds resulted in lower yields on the Bank's investments. Prepayments also require us to recognize net premiums or commissions as income over a shorter period of time, thereby reducing the corresponding asset yield and net interest income. Prepayment risk also has a significant adverse impact on credit card and collateralized mortgage loans, since prepayments could shorten the weighted average life of these assets, which may result in a mismatch in our funding obligations and reinvestment at lower yields. Prepayment risk is inherent to our commercial activity and an increase in prepayments could have a material adverse effect on us.

Volatility levels and fluctuations in foreign currency exchange rates may affect our business, financial position and results of operations.

We are exposed to foreign currency risk as a result of our holdings of foreign currency denominated assets and liabilities, investment in foreign subsidiaries, and future foreign currency denominated revenue and expense. Fluctuations in exchange rates may raise the potential for losses resulting from foreign currency trading positions, where aggregate obligations to purchase and sell a foreign currency do not offset each other or offset each other in different time periods. Exchange rate volatility may have negative impacts on our business, financial position and results of operations.

We also provide foreign exchange services to our clients, including trading on behalf of clients in all major currencies and providing hedging solutions to manage foreign exchange risk. Foreign currency volatility influences the level of client activity. Changes in client activity may result in reduced foreign exchange trading income.

In addition, the Bermuda Dollar and the Cayman Islands Dollar are pegged to the US Dollar at exchange rates of 1 Bermuda Dollar to 1 US Dollar and 1 Cayman Islands Dollar to 1.20 US Dollar, respectively. However, we cannot make assurances that these pegs will be maintained. In the event that the Bermuda Dollar or Cayman Islands Dollar is de-pegged or the current ratios are changed, including as a result of changes in laws, regulations or policies in these jurisdictions, the value of our common shares could be adversely affected. Moreover, our US Dollar deposits are used to fund mortgages in Bermuda Dollars and Cayman Islands Dollars. As the Bermuda Dollar and the Cayman Islands Dollar are pegged to the US Dollar, we do not engage in hedging activities to counteract this currency risk. If the Bermuda Dollar or Cayman Islands Dollar ceased to be pegged to the US Dollar at the current ratios, however, we could be exposed to significant currency risks.

If we are unable to effectively manage our liquidity we may need to seek additional financing and our business, financial condition or results of operations could be adversely affected.

We need liquidity to pay our operating expenses, fund depositor withdrawals, interest on our debt and dividends on our common shares, and to replace certain maturing liabilities. Without sufficient liquidity, we will be forced to curtail our operations and our business will suffer.

Our main source of funding is customer deposits. As at December 31, 2021, we had \$13.9 billion in deposits (55% USD deposits, 18% USD-pegged deposits), with 33% of our deposits derived from our Bermuda segment, 33% from the Cayman Islands segment, and 34% from the Channel Islands segment. In addition, we source our funding from net income generated by the Bank, net of dividends paid, and to a lesser extent from other sources including the sale of securities to institutional counterparties under repurchase agreements and the sale of equity securities and AFS securities. Our deposit base includes both demand and term liabilities, but the significant majority of such deposits are demand deposits or are due within six months. Because we rely primarily on short-term deposits for funding, a sudden or unexpected shortage of funds in the banking systems in which we operate may prevent us from obtaining necessary funding without incurring higher costs. Our deposit base includes deposits from commercial and institutional clients which may be more sensitive to financial strength rating changes. A significant withdrawal of deposits in either of these markets could significantly affect our liquidity and our ability to meet our funding needs.

In addition, as a bank with subsidiaries located in various jurisdictions, the Bank's access to inter-company funds can be restricted because our regulated banking subsidiaries are required to maintain certain liquidity ratios or minimum levels of capital in accordance with the laws of the jurisdictions in which they operate or otherwise. The necessity of maintaining these ratios or levels of capital or other liquidity considerations could restrict the ability of these subsidiaries to transfer funds to us, in the form of cash dividends, loans or advances.

In the event that our current resources do not satisfy our needs, we may need to seek additional financing. The availability of additional financing will depend on a variety of factors, such as market conditions, the general availability of credit, the volume of trading activities, the overall availability of credit to the financial services industry, our credit ratings and credit capacity, as well as the possibility that customers or lenders could develop a negative perception of our long- or short-term financial prospects, including as a result of economic uncertainty or any downgrade in sovereign credit ratings in key markets in which we operate.

Changes in banks' inter-bank lending rate reporting practices and the phase-out of the London Interbank Offered Rate ("LIBOR") may adversely affect our business and results of operations.

For several years, global regulators and central banks have been pursuing international efforts to reform interest rate benchmarks, such as the London Interbank Offered Rate ("LIBOR"). In July 2017, the UK Financial Conduct Authority ("FCA"), which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021. On March 5, 2021, the FCA and ICE Benchmark Administration, the authorized and regulated administrator of LIBOR, announced that all the GBP, CHF, JPY, EUR LIBOR settings and the one-week and two-month USD LIBOR settings will cease after December 31, 2021, and the remaining USD LIBOR settings will cease after June 30, 2023.

Uncertainty as to the nature of potential changes, alternative reference rates or other reforms may adversely affect market liquidity, the pricing of LIBOR-based instruments and the availability and cost of associated hedging instruments and borrowings. Payments under contracts referencing new reference rates may differ from those referencing LIBOR. The transition may change the Bank's risk profile and require changes to its risk and pricing models, valuation tools, product design and hedging strategies. Although the Bank is unable to quantify the ultimate impact of the transition from LIBOR given the uncertain nature of the potential changes, it continues to monitor the developments related to the future of LIBOR in line with any regulatory or quasi-regulatory guidance. Moreover, the failure to manage any potential transition from LIBOR to a different reference rate, or rates, may adversely affect the Bank's reputation, business and financial condition, and results of operations.

We face competition in all aspects of our business, and may not be able to attract and retain wealth management, trust and banking clients at current levels.

We compete with a broad range of financial institutions. Many of our competitors are larger and have broader ranges of product and service offerings, increased access to capital, greater efficiency and pricing power. We face competition from other lending institutions and from numerous other providers of financial services, including the following:

- *Non-banking financial institutions.* The ability of these institutions to offer services previously limited to commercial banks has intensified competition. Because non-banking financial institutions are not subject to the same regulatory restrictions as banks, they can often operate with greater flexibility and lower cost structures; and
- *Competitors that have greater financial resources.* Some of our larger competitors, including certain international banks that have a significant presence in our market area, may have greater capital and resources and higher lending limits and may offer products, services and technology that we do not. We cannot predict the reaction of our customers and other third parties with respect to our financial or commercial strength relative to our competition, including our larger competitors.

In our banking business, we face competition mainly from other local banks, such as Bermuda Commercial Bank and Clarien Bank in Bermuda and from Cayman National Corporation in the Cayman Islands, as well as from subsidiaries of international banks, being Royal Bank of Canada in the Cayman Islands and HSBC in Bermuda, whom we view as our most significant competitors. In our wealth management business line, we face competition from local competitors, as well as much larger financial institutions, including financial institutions that are not based in the markets in which we operate. Revenues from the trust and wealth management business depend in large part on the level of AUA.

In our trust business, we face competition primarily from other specialized trust service providers. Many of our competitors in the international financial sector offer fund administration and corporate services work alongside private client fiduciary services.

Our ability to successfully attract and retain trust, wealth management and banking clients is dependent upon our ability to compete with competitors' investment products, retail products and services, level of investment performance, client services and marketing and distribution capabilities. If we are not successful, our business, financial condition or results of operations may be adversely affected.

The Bank's credit ratings have a direct effect on its competitive position, and declines in the Bank's ratings would increase the cost of borrowing funds and make our ability to raise new funds, attract and retain deposits or renew maturing debt more difficult, which may negatively affect long-term and short-term funding.

The Bank's credit strength ratings are an important component of its liquidity profile and competitive position. Ratings show each agency's view of our financial strength, operating performance and ability to meet debt obligations as they become due. Nationally recognized statistical rating organizations ("NRSROs") periodically review the financial performance and condition of banks and may downgrade or change the outlook on a bank's ratings due to, for example: a change in a bank's regulatory capital ratios; a change in an NRSRO's determination of the amount of capital cushion required to maintain a particular rating; an increase in the perceived risk of a bank's investment portfolio; reduced confidence in management; or other considerations that may or may not be under our control. The Bank has credit ratings from Standard & Poor's ("S&P"), Moody's Investor Service ("Moody's") and Kroll Bond Rating Agency ("KBRA"). Each of the rating agencies reviews its ratings and rating methodologies on a recurring basis and may decide on a downgrade at any time. The Bank's ratings as at December 31, 2021 are shown in the table below:

	Ratings		
	KBRA	Moody's	S&P
Long-term issuer	A+	A3	BBB+
Short-term issuer	K1	P-2	A-2
Subordinated debt		A3	
Long-term counterparty risk assessment		A2	
Short-term counterparty risk assessment		P-1	

A downgrade in our credit ratings could adversely affect clients' perception of us and our ability to compete successfully in the marketplace for deposits (or result in the withdrawal of deposits). A downgrade in our short-term debt ratings will affect our short-term funding capabilities. As a result, the impact of a one-notch downgrade in credit ratings is currently not likely to have a direct impact on funding programs, activities, borrowing capacity or borrowing costs. In addition, there has been no measurable correlation or effect on deposit levels during previous downgrades and, as a result, historically, no material impacts on the Bank's operations or results.

Negative changes in the Bank's long-term deposit ratings would also likely increase the cost of raising long-term funding in the capital markets or of borrowing funds. Even where we can access the capital markets, negative changes in our ratings could affect our share price and make any equity offerings more difficult and dilutive to current shareholders, further driving down the Bank's share price. Our ability to replace maturing or existing debt may be more difficult and expensive. In addition, our lenders and counterparties in derivative transactions are sensitive to the risk of a ratings downgrade. However, we may issue additional debt securities in the future which may increase the impact of a one-notch downgrade in credit ratings.

Management cannot predict what actions rating agencies may take, or what actions we may take in response to the actions of rating agencies that could adversely affect our business. As with other companies in the financial services industry, our ratings could be downgraded at any time and without any notice by any NRSRO, which could adversely affect our business, financial conditions or results of operations.

We could fail to attract, retain or motivate highly skilled and qualified personnel, including our senior management, other key employees or members of the Board, which could adversely affect our business.

Our ability to implement our strategic plan and our future success depends on our ability to continue to attract, retain and motivate highly skilled, diverse and qualified personnel, including our senior management and other key employees and directors, competitively with our peers. The marketplace for skilled personnel is becoming more competitive, which means the cost of hiring, incentivizing and retaining skilled personnel may continue to increase. The failure to attract or retain, including as a result of an untimely death or illness of key personnel, or replace a sufficient number of appropriately skilled and key personnel could place us at a significant competitive disadvantage and prevent us from successfully implementing our strategy or effectively managing our risk framework and business operations. This could impair our ability to implement our strategic plan successfully, achieve our performance targets and otherwise have an adverse effect on our business, financial condition or results of operations.

We may also be unable to attract and retain staff due to our locations. Many of our employees are employed in Bermuda, the Cayman Islands, and the Channel Islands, which are small markets. To the extent we have needs for employees in these locations, this may be an impediment to attracting and retaining experienced personnel. Further, immigration laws in small markets may impose limitations on attracting experienced personnel.

In addition, governmental scrutiny with respect to matters relating to compensation and other business practices in the financial services industry has increased dramatically in the past several years and has resulted in more aggressive and intense regulatory supervision in certain markets in which we operate. Future legislation or regulation or government views on compensation may result in us altering compensation practices in ways that could adversely affect our ability to attract and retain talented employees.

We rely on third parties to provide services that are integral to our ordinary operations, and their failure to perform in a satisfactory manner could negatively affect us.

We rely on third parties to provide services that are integral to our ordinary course operations, including providers of information technology, administrative or investment advisory services. These third party supported functions or operating systems may not function properly, become insufficient to support our evolving business needs or become defective or damaged as a result of a number of factors including events beyond our control. Enhancements and upgrades to third party supported infrastructure or operating systems may entail significant time and costs, and create risks associated with implementing new systems and integrating them with existing ones. Due to the complexity of our systems, across multiple jurisdictions and product types, the process of enhancing our infrastructure and operating systems, including their security measures and controls, can create a risk of system disruptions and security issues. Similarly, we may not be able to timely recover critical business processes or operations that have been disrupted, which may further increase the associated costs and consequences of such disruptions. Although we have business continuity plans in place, cybersecurity and other safeguards in place to help provide operational resiliency, our business operations may be adversely affected by significant and prolonged disruption to our operating systems that support our businesses and customers. Furthermore, third parties on which we rely, could also introduce operational risk to us, including from information breaches or loss, breakdowns, cyber incidents, disruptions or failures of their own systems or infrastructure, or any deficiencies in the performance of their responsibilities. A material breach of customer data may negatively impact our business reputation and cause a loss of customer business; may result in increased expense to contain the event and/or require that we provide credit monitoring services for affected customers; may result in regulatory fines and sanctions; and/or may result in litigation. We rely on our outsourced service providers to implement and maintain prudent cyber-security controls. We have procedures in place to assess a vendor's cyber security controls prior to establishing a contractual relationship and to periodically review assessments of those control systems; however, these procedures are not infallible and a vendor's system can be breached despite the procedures we employ. In addition, outsourcing is subject to regulatory controls in certain jurisdictions in which we operate and we may not always be able to obtain approval to outsource on terms available or sought by us, which could adversely affect our ability to enter into outsourcing arrangements.

In addition, BNYM and Wells Fargo act as clearing houses for all our US Dollar transactions and, if our relationships with BNYM and Wells Fargo are terminated, we could lose our ability to engage in US Dollar transactions. For more information see " - We could be negatively affected if the soundness of other financial institutions and counterparties deteriorates or if such counterparties, including clearing houses, are unwilling to do business with us, in particular in respect of US Dollar transactions."

Information provided to us about clients and counterparties may not be accurate or complete.

In deciding whether to extend credit or enter into other transactions with clients and counterparties, we rely on information furnished by or on behalf of clients and counterparties, including financial statements and other financial information. We also may rely on representations of clients and counterparties as to the accuracy and completeness of that information and, with respect to financial statements, on reports of independent auditors. Such information could turn out to be inaccurate, including as a result of fraud or misrepresentation on behalf of our clients, counterparties or other third parties, which would increase our credit risk and expose us to possible write-downs and losses.

We cannot be certain that our underwriting and operational controls will prevent or detect such fraud or that we will not experience fraud losses or incur costs or other losses related to such fraud. Our clients and counterparties may also experience fraud in their businesses which could adversely affect their ability to repay their loans or make use of our services.

During the periods reported in this annual report, we have not experienced any material losses, or had to write down collateral, as a result of fraud or misrepresentation, but we cannot be certain that the Bank will not experience any such losses or have to write down any such collateral in the future, which could have a material adverse impact on our results of operation and financial condition.

Our business is subject to risks related to litigation and regulatory actions.

We are, from time to time, involved in various legal and regulatory proceedings arising from our normal business activities. These claims and legal actions, including supervisory actions by our regulators or proceedings or investigations brought by other regulators, could involve large monetary claims and significant defense costs. The outcome of these cases is uncertain. Substantial legal liability or significant regulatory action against us could have material financial effects or cause significant reputational harm to us, which in turn could seriously harm our business, financial condition, results of operations and prospects. We may be exposed to substantial uninsured liabilities, which could materially affect our results of operations and financial condition.

As previously publicly announced, in November 2013, the USAO 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 purpose of these summonses was to identify US persons who may have been using our banking, trust, or other services to evade their own tax obligations in the United States. The Bank cooperated with the US authorities in their investigation and reached a resolution with the US Department of Justice in July 2021. The resolution is in the form of a non-prosecution agreement with a three-year term and payment of \$5.6 million.

The appraisals and other valuation techniques we use in evaluating and monitoring loans secured by real property may not accurately describe the net value of the collateral that we can realize.

In considering whether to make a loan secured by real property, we generally require an appraisal of the property. However, an appraisal is only an estimate of the value of the property at the time the appraisal is made, and, as real estate values may change significantly in relatively short periods of time (especially in periods of heightened economic uncertainty), this estimate may not accurately describe the net value of the real property collateral after the loan is made. As a result, we may not be able to realize the full amount of any remaining indebtedness when we foreclose on and sell the relevant property. In addition, we rely on appraisals and other valuation techniques to establish the value of our OREO and to determine certain loan impairments. If any of these valuations are inaccurate, our consolidated financial statements may not reflect the correct value of our OREO, and our allowance for credit losses may not reflect accurate loan impairments. This could have an adverse effect on our business, financial condition or results of operations.

Risks Relating to Operations, Risk Oversight and Internal Controls

Our operations are reliant on effective implementation and use of technology and require us to adapt to new technologies, and a breach, interruption or failure of our technology services or the inability to effectively integrate new technologies could have an adverse effect on our business, financial condition or results of operations.

We rely heavily on communications and information systems to conduct business. In particular, we rely on technology to provide key components of our information system infrastructure, including loan, deposit and general ledger processing, risk management information collection and processing for internal control purposes, internet connections and network access. Any disruption in service of these key components, due to system errors, a natural catastrophe, or the termination of any third-party software licenses upon which any of these systems is based, could adversely affect our ability to effectively deliver products and services to clients, to detect, assess and manage risk and otherwise to conduct operations. See " - We rely on third parties to provide services that are integral to our ordinary operations, and their failure to perform in a satisfactory manner could negatively affect us." Furthermore, any security breach, due to computer viruses, programming, malfeasance or human errors or other events or developments, of information systems or data, whether managed by us or third parties, could interrupt our business, harm our reputation or cause a decrease in the number of clients using our services. The financial services industry is continually undergoing rapid technological change with frequent introductions of new, and technology-driven products and services. We face the risk of having to establish and maintain further improved technological capabilities, and our future success depends, in part, on our ability to recognize and implement new technologies to address our operational and internal control needs, operational efficiencies and to meet the demands of our clients. See " - Cyber-attacks, distributed denial of service attacks and other cyber-security matters, if successful, could have an adverse effect on our business, financial condition or results of operations."

The widespread adoption of new technologies, including cryptocurrencies and payment systems, could require substantial expenditures to modify or adapt our existing products and services as we continue to grow our internet and mobile banking capabilities. The persistence or acceleration of this shift in demand towards internet and mobile banking may necessitate changes to our retail distribution strategy, which may include restructuring our branches and work force. These actions could lead to losses on these assets and may lead to increased expenditures to reform our retail distribution channel.

Many of our competitors have substantially greater resources to invest in technological improvements than we do. We may not be able to effectively implement new, technology-driven products and services or be successful in marketing these products and services to our customers. In addition, the implementation of technological changes and upgrades to maintain current systems and integrate new ones may also cause service interruptions, transaction processing errors and system conversion delays and may cause us to fail to comply with applicable laws. Failure to successfully keep pace with technological change affecting the financial services industry and avoid interruptions, errors and delays could have an adverse effect on our business, financial condition, results of operations, or competitive position.

Cyber-attacks, distributed denial of service attacks and other cyber-security matters, if successful, could have an adverse effect on our business, financial condition or results of operations.

We are under continuous threat of loss due to cyber-attacks, especially as we continue to expand customer capabilities to utilize the internet and other remote channels to transact business. Third parties with whom we or our customers do business also present operational and information security risks to us, including security breaches or failures of their own systems. Two of the most significant cyber-attack risks that we face are e-fraud and loss of sensitive customer data. Such attacks are infrequent, but could present significant reputational, legal and regulatory costs to us if successful.

We also face risks related to cyber-attacks and other security breaches in connection with credit card transactions that typically involve the transmission of sensitive information regarding our customers through various third parties, including merchant acquiring banks, payment processors, payment card networks (e.g., Visa or Mastercard), our processors, and BNYM and Wells Fargo as clearing banks. Some of these parties have in the past been the target of security breaches and cyber-attacks, and because the transactions involve third parties and environments such as the point of sale that we do not control or secure, future security breaches or cyber-attacks affecting any of these third parties could impact us through no fault of our own, and in some cases we may have exposure and suffer losses for breaches or attacks relating to them, including from remediation costs, increased future protection costs, reputational harm, loss of customers and potential regulatory inquiries and/or civil litigation. We also rely on numerous other third-party service providers to conduct other aspects of our business operations and face similar risks relating to them.

In addition, in April 2016, the Society for Worldwide Interbank Financial Telecommunication ("SWIFT") announced that one of its member banks was a target of a cyber-attack in February 2016. During 2017 and 2018, there were several instances of cyber-attacks involving access to the SWIFT platform. The SWIFT platform is used by more than 10,000 financial institutions around the world, including us, to effect fund transfers. A cyber-attack on the SWIFT network can result in theft of funds and other adverse consequences, and our business, financial condition or results of operations may be adversely affected in the event that such a cyber-attack is successful.

As a result of the COVID-19 pandemic, many of our employees (and staff of service providers) have been working remotely or from other sites. These working arrangements could potentially provide increased opportunities for cyber threat actors to exploit.

Our risk management framework, systems and process, and related guidelines and policies, may prove inadequate to manage our risks, and any failure to properly assess or manage such risks could harm us.

Our approach to risk management requires senior management to make complex judgments, including decisions (based on assumptions about economic factors) about the level and types of risk that we are willing to accept in order to achieve our business objectives. These also include the maximum level of risks we can assume before breaching constraints determined by regulatory capital and liquidity needs and our regulatory and legal obligations including, among others, from a conduct and prudential perspective. Given these complexities, and the dynamic environment in which we operate, the decisions made by senior management may not be appropriate or yield the results expected. In addition, senior management may be unable to recognize emerging risks quickly enough for us to take appropriate action in a timely manner.

Our controls and procedures may fail or be circumvented, which could have an adverse impact on our business, financial condition or results of operations.

We face the risk that the design of our controls and procedures that govern operations, financial reporting and compliance across jurisdictions, including those to mitigate the risk of human error, fraud or breach of fiduciary duties relating to our trust services by employees or outsiders, or to monitor financial reporting, may be inadequate, circumvented or exposed to variations in compliance at the local level, thereby causing inaccuracies in data and information or delays in the detection of errors. At present, we do not have a uniform core banking platform in place across the jurisdictions in which we operate and, therefore, we need to use manual processes to compile certain financial information from certain subsidiaries. Moreover, in the past, our information technology capabilities in Bermuda and other jurisdictions have experienced difficulties with certain identified weaknesses, including internal control deficiencies in our operations (including interest rate calculation functions). To address this, we used manual processing, data spreadsheets or a combination thereof. Use of such manual procedures and data spreadsheets presents financial reporting and operational risks and increases the importance of staff compliance with internal operating and security procedures. In addition, we may incur operational losses due to non-compliance by our staff with internal operating and control procedures and arising from human error. Any failure or circumvention of our controls and procedures or failure to comply with any current or future regulations related to controls and procedures could have an adverse effect on our business, financial condition or results of operations.

Regulatory and Tax-Related Risks

We operate in a complex and changing regulatory environment and legal and regulatory changes or our failure to comply with laws and regulations could have a negative impact on our business, financial condition or results of operations.

Our business is subject to ongoing changes in laws, regulations, policies, voluntary codes of practice and interpretations in the markets in which we operate. We currently face an increasingly extensive and complex set of laws, regulations and standards as a result of the concerns enveloping the global financial sector. We are exposed to potential changes in governmental or regulatory policies, price controls, capital controls, exchange controls, other restrictive actions, unfavorable political and diplomatic developments, and changes in legislation.

Some areas of potential regulatory change involve multiple jurisdictions seeking to adopt a coordinated approach. This may result in conflicts with specific requirements of the jurisdictions in which we operate and, in addition, such changes may be inconsistently introduced across jurisdictions. See "- Our international business model exposes us to various and possibly conflicting regulatory regimes across multiple jurisdictions."

Changes may also occur in the oversight approach of regulators. It is possible that governments in jurisdictions in which we operate or obtain funding might revise their application of existing regulatory policies that apply to, or impact, the Bank's business, including for reasons relating to national interest and/or systemic stability. The powers exercisable by our regulators may also be expanded in the future.

Regulatory changes and the timing of their introduction continue to evolve and we manage our businesses in the context of regulatory uncertainty. The nature and impact of future changes are not predictable and are beyond our control. Regulatory compliance and the management of regulatory change are an important part of our planning processes. We expect that we will be required to continue to invest significantly in compliance and the management and implementation of regulatory change and, at the same time, significant management attention and resources will be required to update existing, or implement new, processes to comply with new regulations.

Changes and restrictions imposed by our primary lead regulator, the BMA, and other regulators may also impact our operations by requiring us to have increased levels of liquidity, and higher levels of, and better quality, capital and funding, as well as placing restrictions on the businesses we conduct (including limiting our ability to provide products and services to certain customers), requiring us to amend our corporate structure or requiring us to alter our product or service offerings. If a regulatory change has any such effect, it could adversely affect one or more of our businesses, restrict our flexibility, require us to incur substantial costs and impact the profitability of one or more of our business lines. Any such costs or restrictions could adversely affect our business, prospects, financial performance or financial condition.

Our failure or inability to fully comply with the laws and regulations could lead to fines, public reprimands, reputational damage, civil liability, enforced suspension of operations or, in extreme cases, withdrawal of authorization to operate, which could adversely affect our business, financial condition or results of operations. We could also be required to incur significant expenses to comply with new or revised regulations. Future developments or changes in laws, regulations, policies, voluntary codes of practice and their effects are expected to require greater capital resources and significant management attention, and may require us to modify our business strategies and plans.

The costs of complying with, or our failure to comply with, US and foreign laws related to privacy, data security and data protection, such as the EU General Data Protection Regulation, could adversely affect our financial condition, operating results and reputation.

Regulatory authorities have increased their focus on how companies collect, process, use, store, share and transmit personal data. New privacy security laws and regulations, including the UK's Data Protection Act 2018, the Data Protection (Jersey) Law 2018, the Data Protection (Bailiwick of Guernsey) Law, 2017, The Cayman Islands Data Protection Law 2017 (which became effective on September 30, 2019), Bermuda's Personal Information Protection Act 2016, and the EU General Data Protection Regulation 2016, pose increasingly complex and rigorous compliance challenges, which may increase our compliance costs. Any failure to comply with data privacy laws and regulations could result in significant penalties, fines, legal challenges and reputational harm. See Item 4.B. "Business Overview - Supervision and Regulation".

Failure to comply with any applicable anti-corruption legislation could result in fines, criminal penalties and an adverse effect on our business, financial condition or results of operations.

We must comply with all applicable laws and regulations, which include anti-corruption, anti-money laundering, international financial sanctions and anti-terrorist financing laws and regulations. Recently, there has been a substantial increase in the global enforcement of these laws and regulations, in particular in respect of the financial services industry. The measures and procedures we have in place may not be entirely effective in preventing third parties from using us (and our correspondent banks) as a conduit for money laundering (including illegal cash operations), terrorist financing or other financial crimes without our (and our correspondent banks') knowledge or consent. Although, as of the date of this report, we have not been subject to any fines or penalties, as a result of violations of anti-money laundering and counter-terrorism laws and regulations, there can be no assurances that we will not be subject to such fines, penalties or losses or harm in the future. If we were to be associated with money laundering (including illegal cash operations) or terrorist financing, our reputation could be harmed and we could become subject to fines, sanctions or legal enforcement (including being added to any "blacklists" that would prohibit certain parties, potentially including US Dollar clearing banks, from engaging in transactions with us), which could have an adverse effect on our business, financial condition or results of operations.

Our international business model exposes us to various and possibly conflicting regulatory regimes across multiple jurisdictions.

Our international business model exposes us to different regulatory schemes across multiple jurisdictions. Although our central management and a large part of our business are located in Bermuda, our operations are spread throughout ten international jurisdictions. In addition to the logistical and communications challenges this creates, the financial services industry is heavily regulated in many jurisdictions, and each line of the business is exposed to different, constantly evolving and possibly conflicting regulatory schemes. Our management has enacted internal controls and procedures that are designed to result in compliance with these regulatory schemes, which are periodically reviewed and updated, but in the future we might have difficulty meeting and remaining in compliance with existing or new regulatory requirements imposed by a particular jurisdiction, particularly in light of the increasing regulatory scrutiny of financial institutions and their subsidiaries. Our current internal controls for one jurisdiction may not sufficiently comply with the demands of increased oversight in another jurisdiction.

To the extent we are unable to comply with the regulatory scheme of a particular jurisdiction, we might not be able to operate in that jurisdiction, or we may incur fines or penalties for compliance failures or incur costs in order to remediate compliance failures, any or all of which could adversely affect our business, financial condition or results of operations.

The Financial Action Task Force ("FATF") may identify any of the jurisdictions in which we operate as a jurisdiction which has systemic anti-money laundering and/or anti-terrorist financing deficiencies, which could have an adverse effect on our business.

The FATF is an international body that identifies jurisdictions with weak measures to combat money laundering and terrorist financing in public documents published three times a year. FATF and its regional bodies work with such jurisdictions, governments, and regulatory bodies and report on progress made in addressing identified deficiencies. Such reviews are at a country level, rather than an entity-specific level. Thus, while the Bank can have in place globally accepted standards to fight money laundering and terrorist financing, the existing regulations in any of the jurisdictions in which we operate may not meet FATF requirements. Failure to comply with FATF standards by any jurisdictions in which we operate could adversely affect our reputation and our ability to obtain financing from the international markets and attract foreign investments.

Our business may be negatively impacted by the economic substance legislation and regulations in the jurisdictions in which we operate, including Bermuda, the Cayman Islands, and the Channel Islands.

In 2018, all major offshore jurisdictions enacted legislation in response to new requirements imposed by the EU's Economic and Financial Affairs Council ("ECOFIN") regarding the need for entities registered in offshore jurisdictions to demonstrate economic substance. Compliance with these requirements is necessary to avoid a jurisdiction being placed on the EU's list of non-cooperative jurisdictions for tax purposes. Many of the jurisdictions in which we operate, including Bermuda, the Cayman Islands, The Bahamas, Guernsey and Jersey have enacted legislation that will require entities registered, incorporated or continued under certain legislation in the respective jurisdictions engaged in "relevant activities" (which includes engaging in banking or financing activities) to satisfy economic substance requirements by maintaining a substantial economic presence in the respective jurisdiction. For example, in December 2018, Bermuda passed The Economic Substance Act 2018, the Cayman Islands passed International Tax Co-operation (Economic Substance) Law, Guernsey passed the Income Tax (Substance Requirements) (Implementation) Regulations, 2018 and Jersey passed the Taxation (Companies - Economic Substance) (Jersey) Law 2019. Any entity that must satisfy economic substance requirements but fails to do so could face financial penalties, a restriction of its business activities or being struck-off as a registered entity in the relevant jurisdiction.

From February to October 2020, the Cayman Islands were on the EU's list of non-cooperative jurisdictions for tax purposes. ECOFIN concluded that the Cayman Islands did not have appropriate measures in place relating to collective investment vehicles, and in response the Cayman Islands adopted reforms sufficient to address this deficiency. Bermuda was similarly placed on the EU's list of non-cooperative tax jurisdictions in March 2019, but removed from this list in May 2019 and added, along with The Bahamas, to the EU's list of cooperative tax jurisdictions in February 2020. EU Finance Ministers signaled their approval of the economic substance regulations by placing Jersey and Guernsey on the EU's list of cooperative tax jurisdictions in March 2019, and the Organisation for Economic Co-operation and Development has endorsed Jersey and Guernsey's domestic legal framework as being in line with the relevant standard. As the EU continues to monitor compliance by the jurisdictions in which we operate, further economic substance requirements imposed by these jurisdictions or a future addition of these jurisdictions to the EU's list of non-cooperative tax jurisdictions could have a material adverse effect on us.

There is significant uncertainty with respect to the impact of these new economic substance requirements, and any past or future addition to the EU's list of non-cooperative tax jurisdictions on the economies of the jurisdictions in which we operate that have enacted economic substance legislation. In particular, our existing customers

may be out of scope of economic substance requirements, may already be compliant with the economic substance requirements, or may be required to restructure their business and operations to comply with economic substance requirements, which may include exiting jurisdictions and terminating their banking relationship with us. The new economic substance requirements and any addition of a jurisdiction to the EU's list of non-cooperative tax jurisdictions may lead to a decline in AUM, a reduction in our client base and/or a general economic downturn in the jurisdictions in which we operate, any or all of which could adversely affect our business, financial condition or results of operations.

We are also required to evidence our compliance (and the compliance of each of our subsidiaries located in Bermuda, the Cayman Islands, The Bahamas and the Channel Islands) with applicable economic substance requirements. Ensuring and reporting on our compliance with new economic substance requirements may require us to devote additional resources or divert resources from other aspects of our business, and/or restructure certain aspects of our operations, all of which may lead to greater expense and could adversely affect our business, financial condition or results of operations.

Our business in Bermuda may be negatively impacted by the proposed Bermuda Tax Reform legislation.

On January 14, 2021, the Bermuda government announced that a new Tax Reform Commission (the "2021 Tax Commission") would be established in 2021 with the view to completing a wholesale review of Bermuda's tax system by the end of 2021. The 2021 Tax Commission replaces the Tax Reform Commission that was established in 2017 and subsequently disbanded at the end of 2018. Any additional taxes that are identified by the 2021 Tax Commission and subsequently enacted by the government could potentially result in i) an increase in costs associated with our business and operations in Bermuda; ii) a decrease in demand for our banking services in Bermuda; and iii) a negative impact on our results of operations.

We are required to obtain approval from our regulators before engaging in certain activities.

The laws, regulations, policies, voluntary codes of practice and interpretations applicable to us govern a variety of matters, including acquisitions and other activities we may engage in. As our primary lead regulator, the BMA requires that we obtain its prior consent, letter of no objection and/or approval before engaging in certain activities, including paying dividends on our common shares, entering into material acquisitions or issuing or repurchasing our common shares, and there can be no assurance that any regulatory approvals we may require will be obtained, either in a timely manner or at all. See "- Our strategy includes expansion of our business through acquisitions of, or investments in, other companies or new products and services, but we may not be able to achieve regulatory approval for such transactions or be able to achieve the anticipated cost savings, growth opportunities and other benefits anticipated from such transactions." Our regulators have the ability to compel us to, or restrict us from, taking certain actions entirely, such as actions that our regulators deem to constitute an unsafe or unsound banking practice. Any restrictions on our business placed by a regulator could have a negative impact on our ability to execute on our growth strategy. See "- Laws in certain jurisdictions in which we operate and our bye-laws could adversely affect the rights of our shareholders or prevent or delay a change in control."

Our ability to pay dividends to non-residents of Bermuda and the transfer of our common shares to non-residents of Bermuda could be impaired by Bermuda regulations.

A large number of our shareholders are resident outside of Bermuda, and our common shares are listed on the BSX and the NYSE. Bermuda regulations impacting non-Bermuda holders of our common shares are set by the Bermuda Controller of Foreign Exchange, whose current policy:

- permits the conversion of Bermuda Dollars for payment of dividends in foreign currency to shareholders who are non-residents of Bermuda for exchange control purposes, provided that all payments are processed through an authorized dealer, including, for this purpose, us; and
- permits the free transferability of equity securities of a Bermuda company for so long as such equity securities of such company are listed on an "appointed stock exchange" appointed by the Minister of Finance under section 2(9) of the Companies Act 1981.

However, if the Controller of Foreign Exchange were to change the foregoing policies, our ability to pay dividends in US Dollars to non-residents of Bermuda for exchange control purposes could be impaired. Furthermore each transfer of our common shares to or from non-residents of Bermuda for exchange control purposes could require specific approval by the Controller of Foreign Exchange. This could impact the liquidity of the market for our common shares, and the value of the common shares could be adversely affected.

If we are considered to be a passive foreign investment company, such characterization could result in adverse US federal income tax consequences to shareholders that are US investors.

Special adverse US federal income tax rules apply if a US shareholder holds shares of a company that is treated as a passive foreign investment company ("PFIC"), for any taxable year during which the US shareholder held such shares. A foreign corporation will be considered a PFIC for any taxable year in which (1) 75% or more of its gross income is passive income, or (2) 50% or more of the average fair market value of its assets is attributable to assets that produce or are held for the production of passive income (the "asset test"). Passive income for this purpose generally includes dividends, interest, royalties, rents, annuities and gains from assets that produce passive income. If a foreign corporation owns at least 25% (by value) of the stock of another corporation, the foreign corporation is treated, for purposes of the PFIC tests, as owning a proportionate share of the other corporation's assets and receiving its proportionate share of the other corporation's income.

Banks generally derive a substantial part of their income from assets that are interest-bearing or that otherwise could be considered passive under the PFIC rules. The US Internal Revenue Service (the "IRS"), has issued a notice, and has proposed regulations, that exclude from passive income any income derived in the active conduct of a banking business by a qualifying foreign bank.

Based upon the proportion of our income derived from activities that are "bona fide" banking activities for US federal income tax purposes, we believe that we were not a PFIC for the taxable year ended December 31, 2021 (the latest period for which the determination can be made) and, based further on our present regulatory status under local laws, the present nature of our activities, and the present composition of our assets and sources of income, we do not expect to be a PFIC for the current year or for any future years. However, because PFIC status is a factual determination and because there are uncertainties in the application of the relevant rules, there can be no assurances that we will not be a PFIC for any particular year. If we were a PFIC in any taxable year during which a US shareholder owns our common shares and the US shareholder does not make a "mark-to-market" election, as discussed under the heading "Certain Taxation Considerations - Material US Federal Income Tax Consequences - US shareholders - Passive Foreign Investment Company Considerations," or a special "purging election," we generally would continue to be treated as a PFIC with respect to such US shareholders in all succeeding years, regardless of whether we continue to meet the income or asset test discussed above. US shareholders are urged to consult their own tax advisers with respect to the tax consequences to them if we were to become a PFIC for any taxable year in which they own our common shares.

US withholding tax and information reporting requirements imposed under the Foreign Account Tax Compliance Act may apply.

As discussed below under the heading "Certain Taxation Considerations - Material US Federal Income Tax Consequences - Foreign Account Tax Compliance Act Withholding," pursuant to the Foreign Account Tax Compliance Act ("FATCA") enacted in 2010, a 30% withholding tax will be imposed on certain payments to certain non-US financial institutions that fail to comply with certain information-reporting, account identification, withholding, certification and other FATCA-related requirements in respect of their

direct and indirect US shareholders and/or US account holders. To avoid becoming subject to FATCA withholding, we and other financial institutions may be required to report information to the IRS regarding the holders of our common shares and to withhold on a portion of payments under our common shares to certain holders that fail to comply with the relevant information reporting requirements (or that hold our common shares directly or indirectly through certain non-compliant intermediaries). However, under proposed Treasury regulations, such withholding will not apply to payments made before the date that is two years after the date on which final regulations defining the term "foreign passthrough payment" are enacted. The rules for the implementation of this legislation have not yet been fully finalized, so it is impossible to determine at this time what impact, if any, this legislation will have on holders of the common shares.

Many countries, including Bermuda, have entered into agreements with the United States ("intergovernmental agreements" or "IGAs") to facilitate the implementation of FATCA. These IGAs modify the FATCA withholding regime described above. In December 2013, Bermuda entered into a Model 2 IGA with the United States pursuant to which Bermudian financial institutions are directed by the Bermudian authorities to register with the IRS and to enter into an agreement with the IRS to perform specified due diligence, reporting and withholding functions.

Risks Relating to the Common Shares

Purchases of our common shares under our share repurchase program may result in the price of our common shares being higher than the price that otherwise might have existed in the open market.

On February 14, 2022, the Board of Directors approved a new share repurchase program. Pursuant to the program, the Bank is authorized to repurchase up to 2.0 million common shares of the Bank through February 28, 2023. This was executed following the expiration of the previous share repurchase program of 2.0 million common shares approved by our Board of Directors on February 10, 2021. The timing, manner, price and amount of any repurchases will be determined by the Company, in its discretion, based upon the evaluation of economic and market conditions, stock price, available cash, applicable legal and regulatory requirements and other factors, and which may include purchases pursuant to Rule 10b5-1 of the Exchange Act. The program does not require the Company to repurchase any specific number of shares and there can be no assurance that any shares will be repurchased under the program. The program may be suspended, extended, modified or discontinued by the Company at any time. These activities may have had the effect of maintaining the market price of our common shares or retarding a decline in the market price of the common shares, and, as a result, the price of our common shares may have been higher than the price that otherwise might have existed in the open market.

We are a "foreign private issuer" under US securities law. Therefore, we are exempt from certain requirements applicable to US domestic registrants.

Although we are subject to the periodic reporting requirements of the Exchange Act, the periodic disclosure required of foreign private issuers, including us, under the Exchange Act is different from periodic disclosure required of US domestic registrants. Therefore, there may be less publicly available information about us than is regularly published by or about US domestic registrants. We are exempt from certain other sections of the Exchange Act to which US domestic registrants are subject, including the requirement to provide our shareholders with information statements or proxy statements that comply with the Exchange Act. In addition, our insiders and large shareholders are not obligated to file reports under Section 16 of the Exchange Act. See "Implications of Being a Foreign Private Issuer."

As a foreign private issuer, we are also permitted by the NYSE to comply with Bermuda corporate governance practice in lieu of complying with certain NYSE corporate governance requirements. This means that we are not required to comply with NYSE requirements that:

- the board of directors consists of a majority of independent directors;
- independent directors meet in regularly scheduled executive sessions;
- the audit committee satisfy NYSE standards for director independence;
- the audit committee has a written charter addressing the committee's purpose and responsibilities;
- we have a nominating and corporate governance committee composed of independent directors with a written charter addressing the committee's purpose and responsibilities;
- we have a compensation committee composed of independent directors with a written charter addressing the committee's purpose and responsibilities;
- we establish corporate governance guidelines and a code of business conduct;
- our shareholders approve any equity compensation plans; and
- there be an annual performance evaluation of the nominating and corporate governance and compensation committees.

With the exception of having shareholders approve equity compensation plans, we have elected to comply with the NYSE requirements listed above, notwithstanding the exemptions available to us as a foreign private issuer. However, as ongoing compliance is not required by the NYSE, our shareholders may not have the same protections afforded to shareholders of companies that are subject to all of the NYSE corporate governance requirements.

We are a Bermuda company. Bermuda law differs from the laws in effect in the United States and might afford less protection to shareholders.

We are a Bermuda-based company incorporated under the laws of Bermuda. As a result, the rights of holders of our common shares will be governed by Bermuda law, including the Companies Act, the Butterfield Act and our bye-laws. The rights of shareholders under Bermuda law may differ from the rights of shareholders of companies incorporated in other jurisdictions. In particular, under Bermuda law, the duties of directors and officers of a company are generally owed to the company only, and shareholders do not generally have rights to take action against directors or officers of the company. In addition, class actions and derivative actions are generally not available to shareholders under Bermuda law. The status of laws currently in place, and areas not currently governed, are subject to change. The interests of our shareholders could be adversely affected if significant regulations are added or deleted from Bermuda's existing statutory framework. For a summary of the existing legal framework in Bermuda, see Item 4.B. "Business Overview - Supervision and Regulation."

In addition, our business is based outside of the United States, a majority of our directors and officers reside outside of the United States and a majority of our assets and some or all of the assets of such persons are located outside of the United States. As a result, it may be difficult or impossible to effect service of process on us or our directors and officers in the United States or to enforce in the United States judgments obtained in the United States courts against us or those persons based on the civil liability provisions of the United States securities laws. Furthermore, it is doubtful whether courts in Bermuda will enforce judgments obtained in other jurisdictions, including the United States, against us or our directors or officers under the securities laws of those jurisdictions or entertain actions in Bermuda against us or our directors or officers under the securities laws of other jurisdictions.

There are provisions in our bye-laws that may be used to delay or block a takeover attempt, which could discourage, delay or prevent a change in control of the Bank and could adversely impact the value of our common shares. For a detailed summary of the anti-takeover provisions in our bye-laws, see "Description of Share Capital" in our registration statement on Form F-1 filed with the SEC on February 13, 2017 with file number 333-216018.

Laws in certain jurisdictions in which we operate and our bye-laws could adversely affect the rights of our shareholders or prevent or delay a change in control.

Under the provisions of Bermuda's Banks and Deposit Companies Act 1999 ("BDCA"), the rights of our shareholders could be impaired if any such shareholder becomes a shareholder controller. If a shareholder controller fails to comply with the notice requirements in connection with a change in control under the BDCA or continues as such after being given notice of objection to its being a shareholder controller, the BMA may take the actions specified in the BDCA, including, among other things, revoking the relevant license of the Bank under the BDCA. For more information, see the summaries of relevant provisions of the BDCA regulations under Item 4.B. "Business Overview - Supervision and Regulation" and "Description of Share Capital" in our registration statement on Form F-1 filed with the SEC on February 13, 2017 with file number 333-216018.

Similarly, in Guernsey certain changes to the ownership structure of our Guernsey company (which is licensed by the Guernsey Financial Services Commission) may be considered to be a change of control requiring a declaration of "no objection" from the regulator, and in Jersey a change to the ownership or control of the Jersey regulated entity may also require regulatory approval.

In addition to these restrictions, the provisions of our bye-laws provide that a person who is not "Bermudian" (as such term is defined in the Companies Act) who is "interested" (as such term is defined in the bye-laws) in our shares which constitute more than 40% of all shares then issued and outstanding is not entitled to vote the shares which are in excess of such 40% interest at any general meeting without the prior written approval of the Minister of Finance. See also Item 4.B. "Business Overview - Supervision and Regulation."

Our common shares trade on more than one market and this may result in price variations; in addition, investors may not be able to easily move shares for trading between such markets.

Our common shares have traded on the BSX since 1971 and began trading on the NYSE in September 2016. Trading in our common shares on these markets takes place in different currencies (US Dollars on the NYSE and Bermuda Dollars on the BSX), and at different times (resulting from different time zones, different trading days and different public holidays in the United States and Bermuda). The trading prices of our common shares on these two markets may differ due to these and other factors. Any decrease in the price of our common shares on the BSX could cause a decrease in the trading price of our common shares on the NYSE, or vice versa. Investors could seek to sell or buy our common shares to take advantage of any price differences between the markets through a practice referred to as arbitrage. Any arbitrage activity could create unexpected volatility in both our share prices on one exchange, and the shares available for trading on the other exchange.

General Risk Factors

We may be alleged to have infringed upon intellectual property rights owned by others or may be unable to protect our own intellectual property.

Competitors or other third parties may allege that we, or consultants or other third parties retained or indemnified by us, infringe on their intellectual property rights. Even in instances where we believe that claims and allegations of intellectual property infringement against us are without merit, defending against such claims is time consuming and expensive and could result in the diversion of time and attention of our management and employees. In addition, although in some cases a third party may have agreed to indemnify us for such costs, such indemnifying party may refuse, or be unable, to uphold its contractual obligations.

Moreover, we rely on a variety of measures to protect our intellectual property and proprietary information, including copyrights, trademarks, and controls on access and distribution. These measures may not prevent misappropriation or infringement of our intellectual property or proprietary information and a resulting loss of competitive advantage. In any event, we may be required to litigate to protect our intellectual property and proprietary information from misappropriation or infringement by others, which is expensive and could cause a diversion of resources and may not be successful.

Our insurance coverage may not be adequate to cover all possible losses that we could suffer, and our insurance costs could increase in the future.

Our insurance policies do not cover all types of potential losses and liabilities and are subject to limits and excesses. There can be no assurance that our insurance will be sufficient to cover the full extent of all losses or liabilities for which we are ultimately responsible, which could result in losses being incurred by the Bank. Additionally, we cannot guarantee that we will be able to renew our current insurance policies on favorable terms, or at all.

Changes in accounting policies and practices may be adopted by applicable regulatory agencies or other authoritative bodies, which could materially impact our financial statements.

Our accounting policies and methods are fundamental to how we record and report our financial condition and results of operations. From time to time, applicable regulatory agencies and other authoritative bodies change the financial accounting and reporting standards that govern the preparation of our financial statements. These changes can be difficult to predict and can materially impact how we record and report our financial condition and results of operations.

The value of the common shares may fluctuate significantly.

The value of our common shares may fluctuate significantly as a result of a large number of factors, including, in part, changes in our actual or forecasted operating results and the inability to fulfill the profit expectations of securities analysts, as well as the high volatility in the securities markets generally, and more particularly in shares of financial institutions. The current market price of our common shares may not be indicative of future market prices.

Other factors, besides our financial results, that may impact the price of our common shares include, but are not limited to:

- market expectations of the performance and capital adequacy of financial institutions in general;
- investor perception of the success and impact of our strategies;
- investor perception of our positions and risks, including risks associated with economic uncertainty in key markets in which we operate;
- a downgrade or review of our credit ratings;
- potential litigation or regulatory action involving us;
- announcements concerning financial problems or any investigations into the accounting practices of other financial institutions; and
- general market circumstances.

Holders of our common shares may not receive dividends.

The dividend policy described under Item 8.A. "Consolidated Statements and Other Financial Information - Dividend Policy" should not be construed as a dividend forecast. Our results of operations and financial condition are dependent on our performance. There can be no assurance that we will declare and pay dividends in the future. Any decision to declare and pay dividends in the future will be subject to the prior approval of the BMA and be made at the discretion of the Board. Such dividends shall be

declared and paid by the Board only as permitted under applicable law. In determining the amount of any future dividends, factors the Board may take into account include: (1) our financial results; (2) our available cash, as well as anticipated cash requirements (including debt servicing); (3) our capital requirements, including the capital requirements of our subsidiaries; (4) our capital requirements to fund potential acquisitions; (5) contractual, legal, tax and regulatory restrictions on, and implications of, the declaration and payment of dividends by us to our shareholders or share buy-back activity; (6) general economic and business conditions; (7) restrictions applicable to the Bank and its subsidiaries under Bermuda and other applicable laws, regulations and policies, including the requirement to obtain a letter of no objection from the BMA for the payment of dividends on our common shares; and (8) any other factors that the Board may deem relevant. Therefore, there can be no assurance that we will declare or pay any dividends to holders of the common shares, or as to the amount of any such dividends.

Our ability to declare and pay dividends may also depend on the level of distributions, if any, received from our operating subsidiaries. Our operating subsidiaries may be precluded from declaring and paying dividends by various factors, such as their own financial condition, or restrictions applicable to us and our subsidiaries under Bermuda and other applicable laws, regulations and policies. The ability of certain of our subsidiaries to upstream funds has been increasingly restricted due to changes in the business and regulatory environments in the jurisdictions in which those subsidiaries operate. In addition, any change in tax treatment of dividends or interest received by us may reduce the level of yield received by our shareholders.

The issuance of additional shares in connection with future acquisitions, any share incentive or share option plan or otherwise may dilute all other shareholdings.

We may seek to raise capital to fund future acquisitions and other growth opportunities. We may, for these and other purposes, such as in connection with share incentive and share option plans, issue additional equity or convertible securities. Any issuance of additional shares, however, is subject to prior BMA approval, and we cannot guarantee that their approval will be obtained, either in a timely manner or at all. In the event that we are able to and do issue additional shares, existing shareholders could suffer dilution in their percentage ownership.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Corporate Information

We are a company incorporated under the laws of Bermuda, incorporated on October 22, 1904, pursuant to the The N.T. Butterfield & Son Bank Act, 1904 (the "Butterfield Act"). We are registered with the Registrar of Companies in Bermuda under registration number 2106. Our registered office and principal executive offices are located at 65 Front Street, Hamilton, HM 12, Bermuda. Our agent for service of process in the United States is C T Corporation System, 28 Liberty Street, New York, New York 10005. Our telephone number is (441) 295 1111. We maintain a website at www.butterfieldgroup.com. Neither this website nor the information on or accessible through this website is included or incorporated in, or is a part of, this report.

The SEC maintains an internet site at <https://www.sec.gov> that contains reports, information statements, and other information regarding issuers that file electronically with the SEC.

Our History

The origin of The Bank of N.T. Butterfield & Son Limited dates back to the founding of the trading firm of Nathaniel Butterfield circa 1784. In 1858, our company was established as a bank in Bermuda and has been instrumental to the functioning of the local economy ever since. The Bank was later incorporated under a special act of the local Parliament in 1904. In the 1960s, as international businesses began contributing substantially to Bermuda's economy, we developed services to work to meet their needs. In 1967, we opened offices in the Cayman Islands and by the 1980s had expanded our operations to include retail banking, investment management, and fund administration. In 1973, we opened our Guernsey office in order to provide customers with access to the Pound Sterling currency after Bermuda's departure from the British Sterling zone. In addition to being Bermuda's first bank, we opened the first ATMs in Bermuda in the 1980s and launched Bermuda's first internet banking service in 2001. In 1971, we listed our common shares on the BSX ("Bermuda Stock Exchange") under the ticker symbol "NTB.BH". In 2016, we listed our common shares on the NYSE under the ticker symbol "NTB".

In 2008 and 2009, as a result of the global financial crisis, we realized losses attributable primarily to US non-agency mortgage backed securities in our investment portfolio, as well as write-downs on local market hospitality loans. To raise capital to offset these losses, the Bank executed a \$200 million preference share offering in June 2009. In 2009 and 2010, we implemented a comprehensive restructuring plan for the Company: we hired a new management team, de-risked our balance sheet, and raised \$550 million of common equity from a group of investors as well as existing shareholders.

Since our restructuring, we have pursued a strategy to focus on our core business in banking and wealth management. We have executed upon our strategy by streamlining the Company's operations through exiting non-core markets, repositioning our balance sheet, investing in efficiency initiatives, and continuing to invest in our core business lines to grow both organically and through acquisitions. By following this strategy, we have improved our financial results and have been able to initiate a progressive capital return policy for investors. The following are the most recent key steps in executing our strategy:

- In October 2017, we entered into an agreement to acquire Deutsche Bank AG's ("Deutsche Bank's") Global Trust Solutions ("GTS") business, excluding its US operations, for net cash payments of \$24.7 million. Upon completion of the transaction, Butterfield took over the ongoing management and administration of the GTS portfolio, comprising approximately 1,000 trust structures for some 900 private clients in Guernsey, Switzerland, the Cayman Islands and Singapore. As part of the transaction, we also acquired a service company in Mauritius to provide operations and support services to our trust businesses. This transaction was completed in March 2018.
- In February 2018, we entered into an agreement to acquire Deutsche Bank's banking and custody business in the Cayman Islands, Jersey and Guernsey, which provides services primarily to financial intermediaries and corporate clients. The Bank began to onboard certain customer deposits relating to the acquisition in 2018, and this onboarding activity was completed in the first half of 2019.
- In May 2018, we issued \$75 million of 5.25% Fixed to Floating Rate Subordinated Notes due in 2028 to repay a portion of our outstanding indebtedness and for other general corporate purposes.
- In July 2019, we completed the £160.7 million (\$201.1 million) acquisition of ABN AMRO (Channel Islands) Limited ("ABN AMRO (Channel Islands)"), which provides banking, investment management and custody products to three distinct client groups, including trusts, private clients, and funds.
- In June 2020, we issued \$100 million of 5.25% Fixed to Floating Rate Subordinated Notes due in 2030 for general corporate purposes, including the repayment of a portion of our previously outstanding debt.

B. Business Overview

Overview

We are a full service bank and wealth manager headquartered in Hamilton, Bermuda. We operate our business through three geographic segments: Bermuda, the Cayman Islands, and the Channel Islands and the UK. We offer banking services, comprising of retail, private and corporate banking, treasury services, and wealth management, which consists of investment management, advisory and brokerage services, trust, estate, and company management in both our Bermuda and Cayman Islands segments, as well as custody services in our Bermuda segment. The Channel Islands and the UK segment include 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 intermediaries including private banking and treasury services, internet banking, wealth management and fiduciary services. In 2021, the Channel Islands entered the local mortgage market offering various products to local residents. The UK jurisdiction provides mortgage services for high-value residential properties. We also have operations in the jurisdictions of The Bahamas, Canada, Mauritius, Singapore and Switzerland, which we include in our Other segment.

For the year ended December 31, 2021, we generated \$499.7 million in net revenue after provision for credit losses and other gains/losses ("net revenue"). Our total net revenue, before inter-segment eliminations, by each of our three geographic segments and our non-reportable "Other" segment for the years ended December 31, 2021, 2020 and 2019 are as follows:

In millions of \$	For the year ended		
	2021	2020	2019
Net Revenue			
Bermuda	\$ 233.7	\$ 238.0	\$ 272.1
Cayman Islands	\$ 150.7	\$ 145.6	\$ 168.9
Channel Islands and the UK	\$ 105.2	\$ 101.9	\$ 82.9
Other	\$ 27.6	\$ 14.4	\$ 22.2

As at December 31, 2021, we had \$15.3 billion in total assets, \$5.2 billion in net loans, \$13.9 billion in total deposits (55% USD deposits, 18% USD-pegged deposits), \$106.4 billion and \$36.8 billion of trust and custody businesses assets under administration, respectively, and \$5.5 billion of assets under management.

In our Bermuda and Cayman Islands segments, our bank provides a full range of retail and corporate banking services to individuals, local businesses, captive insurers, reinsurance companies, trust companies, and hedge funds. The key products we offer include personal and business deposit services, residential and commercial mortgages, small and medium-sized enterprise and corporate loans, credit and debit cards, merchant acquiring, mobile and internet banking, and cash management.

In our Channel Islands and UK segment, our bank provides a broad range of services to private clients and financial institutions including private banking, corporate banking and treasury services, internet banking, wealth management, mortgage lending and fiduciary services. In 2021, the segment entered the local mortgage market offering various products to local residents. The UK jurisdiction provides mortgages for high-value residential properties.

In all of our segments, we offer wealth management to high net worth and ultra-high net worth individuals, family offices, and institutional and corporate clients. Our wealth management platform has three lines of business: trust, private banking, and asset management.

The trust business line, which utilizes specialists in each of our geographic areas, responds to client needs in estate and succession planning, administration of complex asset holdings, and efficient coordination of family affairs. In addition, the business provides pension and employee benefits services for multinational corporations, as well as services that involve administration of and fiduciary responsibility for customized trust structures holding a wide range of asset types including financial assets, property, business assets and art.

Our private banking business line offers access to a suite of services, targeted toward high net worth and ultra-high net worth individuals, trusts, and family offices, that can be customized to each client's needs and preferences and delivered as part of a coordinated strategy by a dedicated private banker. We provide clients in our Bermuda, Cayman Islands, and Channel Islands and the UK segments with an integrated model that combines traditional wealth management with banking, lending, cash management, foreign exchange services, custody and access to asset management and trust professionals within Butterfield. We also provide our clients with access to their account information through the use of internet and mobile banking.

Our asset management business line provides a broad range of portfolio management services to institutional and private clients. Our target client base includes institutions such as pension funds and captive insurance companies with investable assets over \$10 million and private clients such as high net worth and ultra-high net worth individuals, families, and trusts with investable assets over \$1 million. Our principal services include discretionary investment management, managed portfolio services, money market, and mutual fund offerings. We also offer advisory and self-directed brokerage options. Over 90% of the business's discretionary investment mandates call for balanced growth to conservative allocations. We focus on delivery of reasonable appreciation with an emphasis on capital preservation. The Bank relies on third parties to provide research and investment management expertise, while our own services are concentrated on portfolio construction and managing client relationships. We also provide customized reporting to meet specific needs of our major clients.

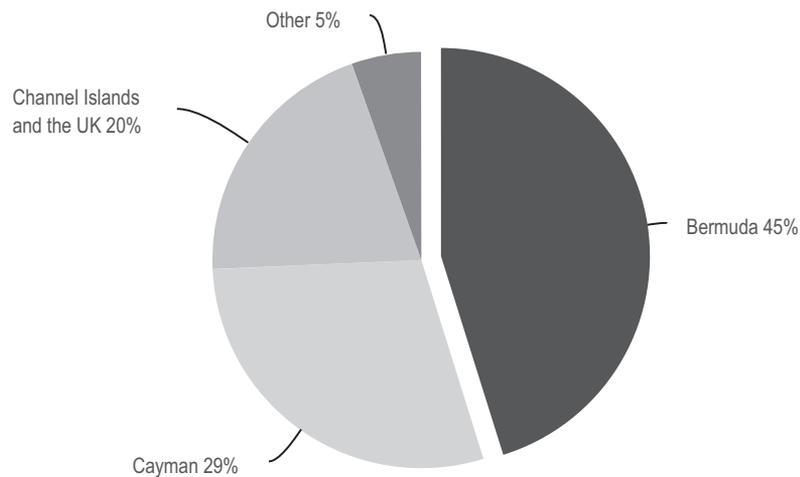
From 2016 to 2021, our GAAP net income to common shareholders and our core net income to common shareholders ("Core Net Income to Common")⁽¹⁾ had compound annual growth rates ("CAGR") of 18.6% and 4.9%, respectively. Our earnings generation has allowed us to build capital to return to shareholders and invest strategically, both organically and through acquisitions, to further enhance the growth prospects of our Company. We aim to continue to build excess capital in the future, which we can redeploy into growing our business and return to shareholders.

⁽¹⁾ Core Net Income to Common is a non-GAAP financial measure that is calculated by adjusting net income for income or expense items which management considers not to be representative of the ongoing operations of our business and preference share dividends, guarantee fees and premiums paid on preference share buybacks and redemptions. For a reconciliation of Core Net Income to Common to GAAP net income to common, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".

Our Markets

The charts below provide the geographic distribution of our Net Revenue for the year ended December 31, 2021.

Segment Distribution of Net Revenue



2021 Net Revenue: \$499.7 million

The Bermuda and Cayman Islands banking markets have historically been characterized by a limited number of participants and significant barriers to entry. In addition, these markets provide us with access to several attractive customer bases: in retail banking, we serve local residents and businesses; in corporate banking, we serve captive insurers, hedge funds, middle-market reinsurers, and other corporates; and in wealth management, we serve private trust clients and high net worth and ultra-high net worth individuals and families.

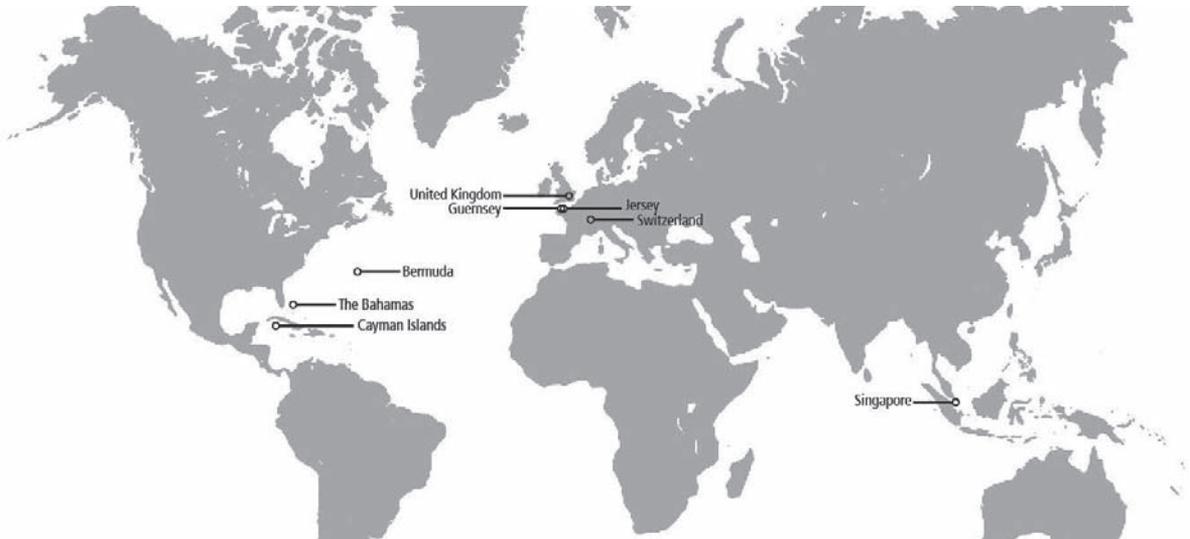
The international trust market is primarily concentrated in select jurisdictions, including Bermuda, the Cayman Islands, Guernsey, Jersey, Hong Kong, Singapore, and Switzerland. The leading international trust law firms serve as key introducers of clients to Butterfield and are the primary source of new business. Trust clients often hold assets that are international in nature, and as a result, performance of trust businesses is expected to have limited correlation with the performance of the domestic economies where clients are served.

The private banking market in Bermuda, the Cayman Islands, and Guernsey is composed largely of resident high net worth and ultra-high net worth individuals meeting minimum deposit and/or loan thresholds. Clients are introduced to the private bank through Butterfield's retail banking operation upon reaching the appropriate deposit or loan threshold, Butterfield's trust and asset management arms, as well as through external introducers. Although locally based, private banking clients often hold international assets, and as a result, business performance is not necessarily correlated to the domestic economies where clients are served.

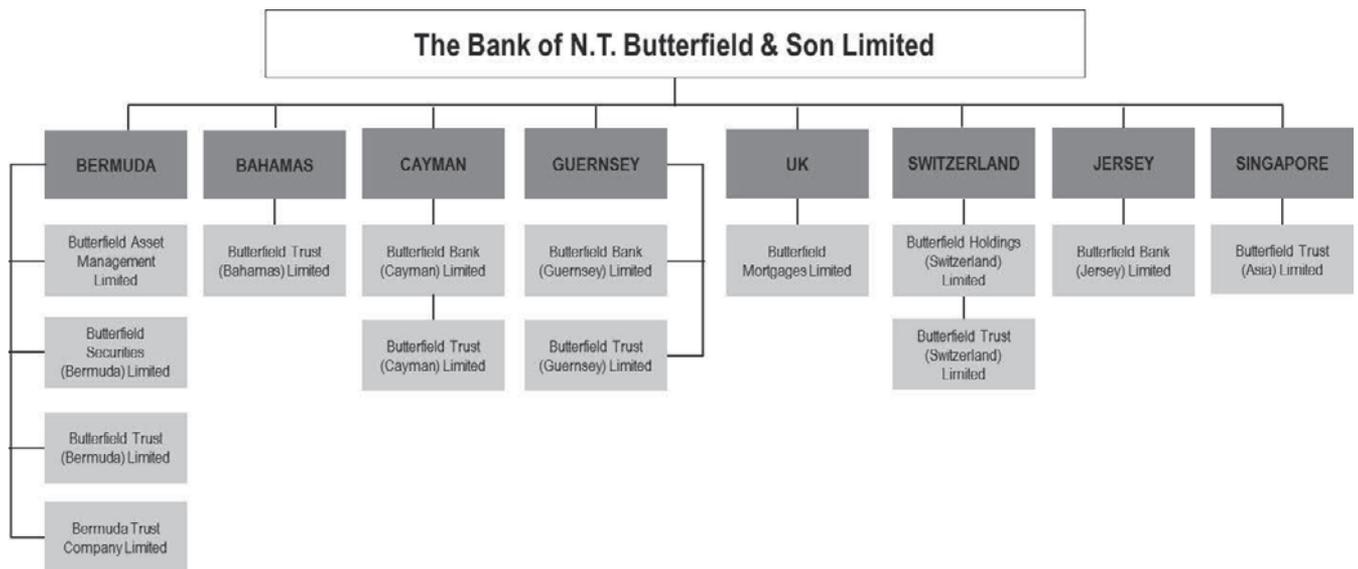
Our asset management business line operates in Bermuda, the Cayman Islands, and Guernsey. As at December 31, 2021, 69% of our AUM was in Bermuda, 16% was in the Cayman Islands, and 15% was in Guernsey. In Bermuda and the Cayman Islands, a majority of our institutional and private clients are domestic from a domicile perspective while a majority of our clients in Guernsey are tied to our trust business and are international in nature.

Our International Network and Group Structure

The following map presents the several geographic regions in which our business operates. Business support centers in Canada and Mauritius are not shown.



The following chart presents our corporate structure, indicating our principal regulated subsidiaries as at December 31, 2021. All of the subsidiaries listed below are wholly owned by the Bank.



Bermuda

The Bank itself is licensed in Bermuda to provide banking and custody services. Through Butterfield Asset Management Limited and Butterfield Securities (Bermuda) Limited, it is licensed and provides investment services and, through Butterfield Trust (Bermuda) Limited and Bermuda Trust Company Limited, it is licensed and provides corporate trustee, fiduciary and corporate administration services. Butterfield Securities (Bermuda) Limited also provides investment advisory and listing sponsor services.

Bahamas

Butterfield Trust (Bahamas) Limited provides trust and fiduciary services.

Cayman Islands

Butterfield Bank (Cayman) Limited provides banking services and Butterfield Trust (Cayman) Limited provides trustee, fiduciary and corporate administration services.

Guernsey

Butterfield Bank (Guernsey) Limited provides private banking, corporate banking, custody services and mortgage lending. Butterfield Trust (Guernsey) Limited provides trustee and fiduciary services.

United Kingdom

Butterfield Mortgages Limited provides residential property lending services.

Switzerland

Butterfield Holdings (Switzerland) Limited provides investment services and Butterfield Trust (Switzerland) Limited provides trust and fiduciary services.

Jersey

Butterfield Bank (Jersey) Limited provides deposit-taking, mortgage services, investment business and custody services.

Singapore

Butterfield Trust (Asia) Limited provides trust and fiduciary services.

Competition

The financial services industry and each of the markets in which we operate are competitive. We face strong competition in gathering deposits, making loans and obtaining client assets for management. We compete, both domestically and internationally, with globally oriented asset managers, retail and commercial banks, investment banking firms, brokerage firms and other investment service firms. Due to the trend toward consolidation in the global financial services industry, our larger competitors tend to have broader ranges of product and service offerings, greater access to capital, and greater efficiency. Larger financial institutions may also have greater ability to leverage increasing regulatory requirements and investment in technology platforms. We also face competition from non-banking financial institutions. These institutions have the ability to offer services previously limited to commercial banks. In addition, non-banking financial institutions are not subject to the same regulatory restrictions as banks, and can often operate with greater flexibility and lower cost structures.

The Bermuda banking industry currently consists of four licensed banks and one licensed deposit-taking institution. These include one subsidiary of an international bank, HSBC, and three domestic institutions: Butterfield, Bermuda Commercial Bank and Clarien Bank. In the Cayman Islands, the Bank is one of six Class 'A' full service retail banks licensed to conduct business with domestic and international clients. There are also four non-retail Class 'A' banks and 98 limited service Class 'B' banks according to CIMA. In the Channel Islands, Guernsey has 20 licensed banks and Jersey has 20, the majority of which are subsidiaries of global banking groups and brands such as Barclays, RBS, Lloyds, Credit Suisse, Investec, Royal Bank of Canada and Northern Trust. In certain interest rate environments, additional significant competition for deposits may be expected to arise from corporate and government debt securities and money market mutual funds. We view HSBC in Bermuda and Scotia and CIBC FirstCaribbean in the Cayman Islands as our most significant competitors in those markets.

In our wealth management business line, we face competition from local competitors, as well as much larger financial institutions, including financial institutions that are not based in the markets in which we operate. Revenues from the trust and wealth management business depend in large part on the level of assets under management, and larger international banks may have higher levels of assets under management.

In our trust business line, we face competition primarily from other specialized trust service providers. There are many trust companies in the main international financial centers, and many of our competitors in this sector offer fund administration and corporate services alongside private client fiduciary services.

Competition for deposits is also affected by the ease with which customers can transfer deposits from one institution to another. Our cost of funds fluctuates with market interest rates and may be affected by higher rates being offered by other financial institutions. We believe that our most direct competition for deposits comes from international and domestic financial services firms that target the same customers as the Bank.

Deposits

We are a deposit-led institution with leading market shares in Bermuda and the Cayman Islands¹, and a small but growing market share in the Channel Islands. We strive to maintain deposit growth and to maintain a strong liquidity profile through a significant excess of deposits over loans through market cycles.

Our deposits are generated principally by our banking business line, which offers retail and corporate checking, savings, and term deposits through our segments in Bermuda, the Cayman Islands and the Channel Islands. In addition, wealth management, through its private banking business line, also provides deposit services to high net worth and ultra-high net worth clients in those same geographic segments. As at December 31, 2021, our Bermuda, Cayman Islands and Channel Islands and the UK segments contributed \$4.5 billion, \$4.6 billion and \$4.7 billion, respectively, to our total deposit base.

Total deposits as at December 31, 2021 were \$13.9 billion, up 4.7% over total deposits as at December 31, 2020. Demand deposits, which include checking, savings and call accounts, totaled \$10.9 billion, or 78.8% of our total deposits, as at December 31, 2021, compared to \$10.6 billion, or 79.9%, as at December 31, 2020. Term deposits totaled \$2.9 billion as at December 31, 2021. The cost of funds on total deposits decreased from 21 basis points in 2020 to 11 basis points in 2021. The increase in deposit balances was driven by retail and corporate deposit increases in Cayman and the Channel Islands, and partially offset by expected corporate deposit decreases in Bermuda. Cost of funds decreased primarily due to the active repricing of deposits.

Lending

We offer a broad set of lending products and services including residential mortgage lending, automobile lending, credit cards, consumer financing, and overdraft facilities to our retail customers, and commercial real estate lending, commercial and industrial loans, and overdraft facilities to our commercial and corporate customers. These offerings are provided to our retail, commercial, and private banking clients in our key jurisdictions of Bermuda and the Cayman Islands. We also offer residential mortgage lending through our banking business in Guernsey and to our high net worth and ultra-high net worth clients in the UK. Our loan portfolio, net of allowance for credit losses, stood at \$5.2 billion as at December 31, 2021 compared to \$5.2 billion as at December 31, 2020. The loan portfolio represented 34.2% of total assets as at December 31, 2021, and loans, net of allowance for credit losses, as a percentage of total deposits were 37.8%. The effective yield on total loans for the year ended December 31, 2021 was 4.26%, compared to 4.54% for the year ended December 31, 2020.

Residential Mortgage Lending

The residential mortgage portfolio comprises mortgages to clients with whom we are seeking to establish (or already have) a comprehensive financial services relationship. It includes mortgages to individuals and corporate loans secured by way of first ranking charges over the residential property to which each specific loan relates, generally on terms which allow for the repossession and sale of the property if the borrower fails to comply with the terms of the loan. As at December 31, 2021, residential mortgages totaled \$3.6 billion, accounting for approximately 68.8% of the Group's total gross loan portfolio with \$36.6 million of residential mortgage non-accrual loans representing 59.9% of total non-accrual loans in the loan portfolio.

¹ Based on interpretive data provided by the BMA and CIMA respectively.

Consumer Lending

We provide loans, as part of our normal banking business, in respect of automobile financing, consumer financing, credit cards and overdraft facilities to retail and private banking clients in the jurisdictions in which we operate. As at December 31, 2021, non-residential loans to consumers totaled \$214.8 million, accounting for approximately 4.1% of the Group's total gross loan portfolio and approximately 1.9% of total non-accrual loans in the Group's loan portfolio.

Commercial Real Estate Lending

Commercial real estate loans are offered to real estate investors, developers and builders domiciled primarily in Bermuda, the Cayman Islands, Guernsey and the UK. To manage the Group's credit exposure on such loans, the principal collateral is real estate held for commercial purposes and is supported by a registered mortgage. Cash flows from the properties, primarily from rental income, are generally supported by long-term leases.

As at December 31, 2021, our commercial real estate loan portfolio totaled \$693.2 million, accounting for approximately 13.2% of the Group's total gross loan portfolio with \$4.7 million of commercial real estate non-accrual loans representing 7.8% of total non-accrual loans in the loan portfolio.

Our commercial real estate loan portfolio is broken down into two categories: commercial mortgage and construction. As at December 31, 2021, commercial mortgages totaled \$683.5 million, and construction loans totaled \$9.6 million, accounting for approximately 98.6% and 1.4% of our commercial real estate loan portfolio, respectively.

Other Commercial Lending

The commercial and industrial loan portfolio includes loans and overdraft facilities advanced primarily to corporations and small and medium-sized entities, which are generally not collateralized by real estate and where loan repayments are expected to flow from the operation of the underlying businesses. As at December 31, 2021, the Group's commercial loan portfolio, excluding loans to governments, totaled \$478.4 million, accounting for approximately 9.1% of the Group's total gross loan portfolio and the Group's loans to governments totaled \$259.6 million, accounting for approximately 4.9% of our total gross loan portfolio. There was \$18.6 million of other commercial non-accrual loans representing approximately 30.4% of total non-accrual loans in the loan portfolio.

Investments

Given the large customer deposit base commanded in our Bermuda, Cayman Islands and Channel Islands operations, and the relatively low volume of lending demand from our customer base, our investment strategy is more important than may be the case for most financial institutions. In recognition of this, we maintain what we believe to be a conservative approach to investments, requiring the purchase of mainly fixed-rate investments in order to manage interest rate risk. Our investment portfolio comprises mainly securities issued or guaranteed by the US government or federal agencies. The securities in which we invest are limited generally to securities that are considered investment grade (i.e., "BBB" and higher by S&P's Financial Services LLC or an equivalent credit rating). Effective April 1, 2013, we entered into an agreement with Alumina pursuant to which Alumina provides investment advisory services to us in respect of our US Treasury and agency portfolio.

As at December 31, 2021, the Group held \$6.2 billion in investments, representing approximately 40.7% of total assets.

Cash and Liquidity Management

We operate across multiple currency jurisdictions with multi-currency products. In our deposit taking jurisdictions—Bermuda, the Cayman Islands, Guernsey and Jersey—there are currently no dedicated central banks, and no pre-funded deposit insurance scheme infrastructures (such as the Federal Deposit Insurance Corporation in the United States), with the exception of Bermuda, where a pre-funded deposit insurance scheme has been implemented, and as described below in "Supervision and Regulation" and "Risk Factors - Risks Relating to the Markets in Which We Operate - Certain jurisdictions in which we operate, including Bermuda, Guernsey and Jersey, have a Deposit Insurance Scheme or Deposit Compensation Scheme and we incur ongoing costs as a result". In addition, we do not have access to borrowing or deposit facilities with the US Federal Reserve or the European Central Bank; therefore, we conservatively manage client deposit balances and the liquidity risk profile of our balance sheets. This involves the retention of significant cash or cash equivalent balances, management of intra-bank counterparty exposure and management of a significant short-dated Canadian, UK and US Treasury Bill portfolio. As at December 31, 2021, the cash due from banks of \$2.2 billion was composed primarily of \$1.6 billion in interest earning cash equivalents, which are investments with a less than 90-day duration. The remaining amounts were comprised of non-interest bearing and interest bearing deposits of \$0.1 billion and \$0.4 billion, respectively.

Foreign Exchange Services

We provide foreign exchange services in the normal course of business in all banking jurisdictions. The major contributors to foreign exchange revenues are Bermuda and the Cayman Islands, accounting for 78% of our foreign exchange revenue for the year ended December 31, 2021. We do not maintain a proprietary trading book. Foreign exchange commission income is generated from client-driven transactions and totaled \$43.4 million during the year ended December 31, 2021.

Administration Services

Through our wholly-owned trust subsidiaries, we provide custody administration and settlement services to a wide range of internal and external investment clients dealing in global markets. Our custody service currently offers custody settlement and safekeeping services in 39 markets globally, including major markets and smaller, less-developed markets, with principal markets covered being the United States, Canada, Europe and Asia.

Our custody service offers safekeeping services for physical and book-entry assets. Custody for listed securities is conducted through BNYM. Hedge funds, mutual funds and exchange traded funds are held by Brown Brothers Harriman. Trading in investment transactions is settled via our global sub-custodians, BNYM and BBH. Custody services are offered from our Bermuda, Cayman Islands and Channel Islands segments and complement core wealth management services offered by other parts of the Group, and we currently anticipate this business to grow in line with our wealth management business. Clients of our custody service include a wide range of investment funds and other investment vehicles, corporations and trusts whose related banking requirements are provided by the Bank. As such, the custody client base, in addition to delivering a fee based income, also provides cash balances and foreign exchange transaction flows.

Custody fees are earned based on the value of Assets Under Custody, which are subject to a minimum levels for smaller, less complex portfolios. In addition to these fees, custody clients are charged banking transaction fees based on account activity.

Information Technology

We devote significant resources to maintaining stable, reliable, efficient and scalable information technology systems. We work with our third-party vendors to monitor and maximize the efficiency of our use of their applications. We use integrated systems to originate and process loans and deposit accounts, which reduces processing time,

improves customer experience and reduces costs. Most customer records are maintained digitally. We are also currently executing several initiatives to enhance our online and mobile banking services to further improve the overall client experience.

Currently, our information technology is operationally divided into two platforms: (i) Bermuda and Cayman and (ii) Channel Islands and the UK and Group Trust. In our Bermuda and Cayman operations, we operate on a single industry standard banking technology platform utilizing a predominantly outsourced and supported model hosted across paired data centers in Canada. In our Channel Islands and UK and Group Trust operations, core services and applications are hosted across both Guernsey and Jersey data centers.

Protecting our systems to ensure the safety of our customers' information is critical to our business. We use multiple layers of protection to control access and reduce risk, including conducting access testing and regular vulnerability scanning on our platforms, systems and applications to reduce the risk that any attacks are successful. To protect against disasters, we have a Business Continuity Management framework and IT Disaster Recovery plans. For more information, see Item 3.D. "Risk Factors - Risks Relating to Risk Oversight and Internal Controls".

Marketing

Through our Marketing & Communications department, we engage select advertising, branding and promotional companies on an as-needed basis and provide business development and sales support for businesses in all jurisdictions. In support of our banking businesses, we broadly market our products and services through print, broadcast, web and social media advertising in the major markets in which we operate. Trust and fiduciary services are marketed primarily to intermediaries through representative attendance at and sponsorship of industry conferences and through print advertising in international trade journals.

Intellectual Property

In the highly competitive banking industry in which we operate, intellectual property is important to the success of our business. We own a variety of trademarks, service marks, trade names and logos and spend time and resources maintaining this intellectual property portfolio. We control access to our intellectual property through license agreements, confidentiality procedures, non-disclosure agreements with third parties, employment agreements and other contractual rights to protect our intellectual property. For more information, see Item 3.D. "Risk Factors - Risks Relating to Our Strategy, Brand, Portfolio and Other Aspects of Our Business".

Supervision and Regulation

Bermuda

The Bank is subject to regulation and supervision by the Bermuda Monetary Authority (the "BMA") under:

- the Bermuda Monetary Authority Act 1969;
- the Banks and Deposit Companies Act 1999 (the "BDCA");
- the Trusts (Regulation of Trust Business) Act 2001;
- the Investment Business Act 2003;
- the Exchange Control Regulations 1973;
- the Corporate Services Provider Business Act 2012; and
- any applicable code of practice or guidance notes that may be published by the BMA from time to time.

The Bank is also subject to regulation by the Minister of Finance in Bermuda under the Companies Act 1981, the Banking (Special Resolution Regime) Act 2016 and the Economic Substance Act 2018 and regulations promulgated thereunder (including applicable guidance notes published by the Registrar of Companies from time to time). It is also subject to the Deposit Insurance Act 2011 and the Deposit Insurance Rules 2016.

Supervision and Monitoring by the BMA

Our activities are regulated by the BMA and our ability to engage in certain activities is subject to prior approval by the BMA. One of the principal objectives of the BMA is to supervise, regulate and inspect financial institutions which operate in or from within Bermuda and further to promote the financial stability and soundness of such financial institutions. The supervision is primarily for the benefit and protection of the Bank's clients and not for the benefit of our investors. The BMA is also responsible for managing and regulating transactions in foreign currency or gold.

In addition to conducting on-site reviews, the BMA utilizes a comprehensive quarterly statistical return system that enables off-site monitoring of institutions licensed under the BDCA. The statistical system, which follows the standards imposed on banks in the UK by the Financial Conduct Authority and is consistent with Basel Committee Standards, provides the BMA with a detailed breakdown of the Bank's balance sheet and profit-and-loss accounts on both a consolidated and unconsolidated basis. This information enables the BMA to monitor the soundness of the Bank's financial position and ensure that it meets certain capital requirements.

As the Bank's supervisory authority in Bermuda, the BMA is responsible for the consolidated supervision of our worldwide operations. There are also host regulatory bodies performing a similar function to that of the BMA in all major locations in which the Bank operates regulated activities. Many of these local authorities require detailed reporting on the activities of the Bank's subsidiaries located in their jurisdictions. As part of its oversight process, the BMA receives copies of each of these reports on a regular basis and liaises with the regulatory authorities in the respective locations.

From time to time, in the ordinary course of business, the Bank enters into agreements with the BMA under which the Bank agrees to achieve or maintain certain levels of capital and to obtain the BMA's prior approval to take certain corporate actions. Certain actions that may not be taken without prior BMA approval include: (1) creating or increasing the authorized amount of, or issuing any class of shares; (2) repurchasing any class of shares; and (3) entering into a material acquisition.

Under the market disclosure requirements (referred to as Pillar III disclosures) applicable under the Basel III Accord ("Basel III"), the Bank is required to publish information about the risks to which it is exposed. Effective as of January 1, 2015, the BMA adopted capital and liquidity regulatory requirements consistent with Basel III, a framework released by the BCBS. Basel III aims to raise the quality, consistency and transparency of the capital base, limit the build-up of excess leverage and increase capital requirements for the banking sector. Basel III adopts CET1 capital as the predominant form of regulatory capital with the CET1 ratio as a new metric. Basel III also adopts the new Leverage Ratio, LCR and NSFR regimes.

The Basel III regulatory framework adopts a phased implementation approach for Bermuda banks with full implementation from January 1, 2019, consistent with BCBS recommendations. The Bank is subject to the following requirements:

- CET1 as the primary and predominant form of regulatory capital, with a requirement of CET1 of at least 7.0% of RWA, inclusive of a minimum CET1 capital adequacy ratio of 4.5% plus a capital conservation buffer of 2.5%, but excluding the D-SIB surcharge described below. The BMA allowed Bermuda banks to make the one-time irrevocable election to exclude other comprehensive income on their AFS portfolios from CET1 by no later than March 31, 2015;
- a Tier 1 capital requirement of at least 8.5% of RWA, inclusive of a minimum Tier 1 ratio of 6% and the capital conservation buffer of 2.5% but excluding the D-SIB surcharge described below;
- a total capital requirement of at least 10.5% of RWA, inclusive of a minimum total capital ratio of 8% and the capital conservation buffer of 2.5% but excluding the D-SIB surcharge described below;
- the Bank is considered to be a D-SIB and is subject to a 3% surcharge composed of CET1-eligible capital implemented by the BMA effective September 30, 2015. This is based upon its assessment of the extent to which the Bank (individually and collectively with the other Bermuda banks) poses a degree of material systemic risk to the economy of Bermuda due to its role in deposit taking, corporate lending, payment systems and other core economic functions;
- the inclusion of a countercyclical buffer to be introduced when macro-economic indicators provide an assessment of excessive credit or other pressures building in the banking sector, potentially increasing the Bank's required capital buffer by up to 2.5%;
- the introduction of a 5% leverage ratio as calculated in accordance with Basel III;
- an LCR with a minimum requirement of 100%; and
- a NSFR with a minimum requirement of 100%.

The minimum capital ratio requirements set forth above do not reflect additional Pillar II add-on requirements that the BMA may impose upon the Group as a prudential measure from time to time. As the Group's capital requirements remain under continuous review by the BMA pursuant to its prudential supervision, the Group cannot guarantee that the BMA will not seek higher total capital ratio requirements from time to time.

The Bank may from time to time also be subject to additional regulatory requirements imposed by the BMA in its role as Bermuda's main prudential regulator such as the Outsourcing Guidance Notes for Relevant Legal Entities, including banks, corporate service providers, trust companies, investment businesses and fund administrators, which require (among other things) these entities to demonstrate good risk management, and to notify the BMA of any new material outsourcing arrangements.

Effective February 29, 2020, the Bermuda Banking Code of Ethical Conduct was promulgated. This is a voluntary code that the Bank subscribes to. It sets out a number of guiding principles and commitments in the Bermuda banking industry for customers. The code complements the BDCA in promoting best practice and encouraging higher standards for the benefit of customers through competition and market forces.

Bermuda Monetary Authority Act 1969

The Bermuda Monetary Authority Act 1969 established the BMA as a statutory corporate body responsible for, among other things, supervising, regulating and inspecting any financial institution which operates in or from within Bermuda (which includes the Bank). Specific areas of financial regulation, such as the banking industry, are also the subject of separate, specific legislation (some of which is discussed below), but this specific legislation is nevertheless administered by the BMA in its supervisory capacity. In addition to its supervisory functions, both under the Bermuda Monetary Authority Act 1969 and the specific legislation discussed below, the BMA is empowered to assist foreign regulatory bodies by requiring entities supervised and regulated by the BMA to furnish information on demand to the BMA in connection with foreign regulatory requests.

Banks and Deposit Companies Act 1999

The BDCA prohibits any person from carrying on a deposit-taking business in or from within Bermuda unless that person is a company incorporated in Bermuda and licensed by the BMA under the BDCA. The BDCA provides for three classes of licenses: banking licenses, restricted banking licenses and deposit company licenses. The Bank holds a banking license and a deposit company license. Unless otherwise permitted by the BMA, a company that holds a banking license must provide a range of minimum services to the public in Bermuda, including (without limitation) current accounts in Bermuda dollars, other deposit accounts, loan facilities in Bermuda Dollars, foreign exchange services and credit card or debit card facilities. A company holding a deposit company license typically offers a small range of services but, unless otherwise permitted by the BMA, must also provide some specified services to the public in Bermuda, including (without limitation) savings, deposit or other similar accounts in Bermuda Dollars and loans in Bermuda Dollars secured on mortgages of real property in Bermuda.

As the agency responsible for administering the BDCA, regulating deposit-taking businesses and protecting depositors, the BMA has broad authority to compel companies licensed under the BDCA to take or cease specific actions and comply with informational or access requests. Under the BDCA, the BMA can, or can compel these companies, including us, to, among other things, do any or all of the following:

- submit a report prepared by the Bank's auditors or by an accountant or other person with professional skills on any matter about which the BMA could require us to provide information;
- produce documentation or other information as the BMA may reasonably require; and
- permit any officer, servant or agent of the BMA, on producing evidence of his authority, to enter the Bank's premises to obtain information and documents.

In addition, the BMA has the power to do any or all of the following:

- require the Bank to take certain steps or to refrain from adopting or pursuing a particular course of action or to restrict the scope of the Bank's business in a particular way;
- appoint competent persons to investigate and report to the BMA on the Bank's business or the Bank's ownership and control;
- restrict the scope of a license or revoke a license; and
- vary or revoke the Bank's banking license and to give directions if it feels these are necessary to protect the Bank's depositors.

The Bank's failure to comply with any of the statutory requirements set forth in the BDCA could result in civil or criminal penalties.

The Bank is required to report certain transactions to the BMA. These include any transaction or transactions relating to any one person as a result of which the Bank would be exposed to a risk of incurring losses in excess of 10% of the Bank's available capital resources, or where the Bank proposes to enter into a transaction or transactions relating to any one person, which, either alone or together with previous transactions entered into by the Bank in relation to the same person, would result in the Bank being exposed to the risk of incurring losses in excess of 25% of its available capital resources. This also applies where the transaction relates to different persons if they are connected in such a way that the financial soundness of any of them may affect the financial soundness of the others or the same factors may affect the financial soundness of both or all of them. The BMA may extend the scope of this requirement to the Bank's subsidiaries even if these subsidiaries are not licensed under the BDCA as if the

transactions and available capital resources of the Bank's subsidiaries were included in the Bank's available capital resources. For the purpose of the foregoing, the transactions which must be reported by the Bank to the BMA are those between the Bank and a person where:

- (a) that person incurs an obligation to the Bank or as a result of which such person may incur such an obligation;
- (b) the Bank will incur, or as a result of which it may incur, an obligation in the event of that person defaulting on an obligation to a third party; or
- (c) the Bank acquires or incurs any obligation to acquire, or as a result of which it may incur an obligation to acquire, an asset the value of which depends wholly or mainly on that person performing their obligations or otherwise on his financial soundness.

The risk of loss attributable to the transaction is, in a case within paragraph (a) or (b), the risk of the person concerned defaulting on the obligation therein mentioned and, in a case within paragraph (c), the risk of the person concerned defaulting on the obligations therein mentioned or of a deterioration in such person's financial soundness. The Bank's available capital resources may be determined by the BMA, after consultation with it and in accordance with principles published by the BMA, which are currently the Basel III principles described above. It is an offense for the Bank to fail to make the required reports.

Under the BDCA, any person who becomes a significant shareholder of a deposit-taking institution, which is defined to include persons, either individually or with associates (within the meaning of the BDCA), who (i) hold 5% or more of the shares in the institution or another company of which it is a subsidiary company; or (ii) is entitled to exercise, or control the exercise of 5% or more of the voting power at any general meeting of the institution or of another company of which it is such a subsidiary, must notify the BMA in writing of that fact within seven days. Failure to provide the BMA with prompt and appropriate notice would constitute an offense that could result in a fine.

The BDCA prohibits a person from becoming a shareholder controller of any company licensed under the BDCA unless the person provides written notice to the BMA of his intent to do so and the BMA does not object. The definition of shareholder controller is set out in the BDCA but generally refers to a person who, among other things, either alone or with any associate or associates (i) holds 10% or more of the shares in the licensed institution or another company of which it is a subsidiary company; (ii) is entitled to exercise, or control the exercise of 10% or more of the voting power at any general meeting of the licensed institution or another company of which it is such a subsidiary; or (iii) is able to exercise a significant influence over the management of the institution or of another company of which it is a subsidiary by virtue of holding shares in or an entitlement to exercise or control the exercise of the voting power at any general meeting of either the institution or the other company concerned. The BDCA distinguishes between shareholder controllers of the following threshold descriptions: "10% shareholder controllers," "20% shareholder controllers," "30% shareholder controllers," "40% shareholder controllers," "50% shareholder controllers," "60% shareholder controllers" and "principal shareholder controllers" who have a 75% or greater interest. A person who intends to become a shareholder controller, or a shareholder controller who intends to increase his shareholding/control, meaning generally, ownership of shares or the ability to exercise or control the exercise of voting rights attached to shares, beyond his present threshold, must provide written notice to the BMA that he intends to do so. It is an offense not to give this notice. The BMA may object to a person's notice of intent to become a shareholder controller of any description or to an existing shareholder controller seeking to increase their control where it appears to the BMA that, among other things, such person is not or is no longer a fit and proper person to be such controller. If the BMA objects, the BMA will provide such person with written notice of its objection.

Prior to serving a notice of objection, the BMA shall serve the person seeking to become a shareholder controller of any description or existing shareholder controller seeking to increase their control with a preliminary written notice stating that the BMA is considering service on that person of a notice of objection, and that notice shall state among other things, the reasons for the BMA's proposed objection. The statement of the BMA's reasons for their proposed objection will, however, be subject to the BMA's determination that such statement would not involve the disclosure of confidential information, the disclosure of which would be prejudicial to a third party. A person served with a preliminary written notice may, within a period of 28 days beginning with the day on which the notice is served, make written representations to the BMA and the BMA shall take any such representations into account in deciding whether to serve a notice of objection.

If three months pass from the date of giving notice of intent to the BMA without the BMA serving a notice of objection, then the person may become a shareholder controller as requested in the notice of intent. In practice, the BMA's procedure is generally to respond to a shareholder controller notification of intent.

If a person becomes a shareholder controller or increases their shareholding/control in spite of the BMA's objection thereto, if a shareholder controller fails to comply with the foregoing notice requirements or if a shareholder controller continues as such after being given notice of objection to his or her being a shareholder controller, the BMA may take the actions specified in the BDCA, including revoking the relevant license where a 50%, 60% or principal shareholder controller is involved, or mandating that any specified shares become subject to one or more of the following restrictions:

- any transfer of or agreement to transfer those shares or, in the case of unissued shares, any transfer of or any agreement to transfer the right to be issued with them, will be void;
- no voting rights may be exercisable in respect of the shares;
- no further shares may be issued in right of them or pursuant to any offer made to their holder; or
- except in liquidation, no payment may be made of any sums due from the institution on the shares, whether in respect of capital or otherwise.

A court in Bermuda may, on the application of the BMA, order the sale of any such shares. Any person may appeal to a tribunal constituted under the BDCA for a review of a notice of objection given by the BMA as described above. However, this right of appeal does not apply to a person in any case in which such person has failed to give a notice or has become or continued to be a controller in contravention of the BDCA. In addition, if a person has had its license revoked or has been subject to any of the restrictions set forth above, the tribunal may confirm or reverse the decision which is the subject of the appeal but shall not have power to vary it except:

- where the decision was made to impose or vary any restriction, the tribunal may direct the BMA to impose different restrictions or to vary them in a different way; or
- where the decision was to revoke a license, the tribunal may direct the BMA to restrict it instead.

In the event that the BMA imposes any of the restrictions listed above, the restrictions may apply to:

- all shares of the institution where the person in question is a shareholder controller that (i) are held by him or any associate of his, and (ii) were not so held immediately before he became such shareholder controller of the institution; and
- all shares in another company where the person in question became a shareholder controller (i) as a result of the acquisition by him or any associate of his of shares in such other company, and (ii) the shares were not so held before he became a shareholder controller of such institution.

A company licensed under the BDCA must give written notice to the BMA in the event that any person has either become or ceased to be a director, controller or senior executive of such licensed company. The written notice is required to be given to the BMA within 14 days beginning with the day on which the licensed company becomes aware of the relevant change in director, controller or senior executive. The definition of "controller" is set out in the BDCA but generally refers to a shareholder controller, a managing director or chief executive officer of the institution or of another company of which it is a subsidiary, or a person in accordance with whose directions or instructions the directors of the institution or of another company of which the institution is a subsidiary, or persons who are shareholder controllers (or any of them) are accustomed to act.

In September 2021, the BMA published a consultation paper on the new code of conduct to be issued pursuant to section 8A of the BDCA, which requires the BMA to publish a code of conduct providing guidance on the duties, requirements, procedures, standards and sound principles to be observed by persons carrying on a deposit-taking business. In a letter to stakeholders dated December 7, 2021, the BMA indicated that it intends to finalize the code of conduct and soon implement amendments to the BDCA to allow the BMA to issue the code of conduct. The BMA noted that a suitable transition period will be recommended and communicated to all institutions licensed under the BDCA, including the Bank, to allow them to come into compliance with the new provisions.

Trusts (Regulation of Trust Business) Act 2001

The principal purpose of the Trusts (Regulation of Trust Business) Act 2001 (the "Trusts Business Act"), is to regulate "trust business," which is generally defined as providing the services of a trustee as a business, trade, profession or vocation. Under the Trusts Business Act, a license is required to conduct trust business in or from within Bermuda. Licenses are designated as either "unlimited" or "limited." Only bodies corporate are entitled to obtain unlimited licenses, which allow them to conduct trust business and solicit business from the public generally. Holding a license under the Trust Business Act obliges the licensed undertaking to maintain a physical presence in Bermuda at which the licensed undertaking is directed and managed. A licensed undertaking is also required to hold all client funds separately from its own funds or funds held in respect of any other business and maintain such books of account and other records such that client funds may be readily identified at any time.

At present, the Bank and certain of its subsidiaries hold unlimited licenses issued by the BMA pursuant to the Trusts Business Act. Pursuant to Section 6 of the Trusts Business Act, the BMA has published a Statement of Principles, in accordance with which it is acting or purporting to act with respect to the exercise of its powers under the Trusts Business Act, including (without limitation) the BMA's minimum licensing criteria, the grounds for revocation of licenses, the power to grant, revoke or restrict a license and the power to obtain information or require the production of documents. As at December 31, 2019, the BMA amended the minimum licensing criteria under the Trusts Business Act, such that a licensed undertaking is not regarded as conducting its business in a prudent manner (which is a requirement for licensing) unless it maintains or will maintain adequate liquidity, having regard to the relationship between its assets and its actual and contingent liabilities, to the time at which those liabilities will or may fall due and its assets mature, and to other factors appearing to the BMA to be relevant. In addition, pursuant to Section 7 of the legislation, the BMA published a Code of Practice that provides guidance as to the duties, requirements, procedures, standards and principles to be observed by persons carrying on trust business under the Trusts Business Act.

The BMA's powers under the Trusts Business Act include (without limitation) the power to:

- impose conditions on a license with respect to scope and type of business, to protect a client or potential client of a licensee;
- revoke a license in certain circumstances including if the licensee has not complied with the licensing criteria; and
- request and obtain information from a licensee to ensure compliance with the Trusts Business Act, and to safeguard the interests of the licensee's clients and potential clients.

The Trusts Business Act prohibits a person from becoming a 10% shareholder controller or a majority shareholder controller of a licensed undertaking, unless such person provides written notice to the BMA of his intent to do so and the BMA does not object. It is an offense not to provide this notice. The definition of shareholder controller is set out in the Trusts Business Act, but generally refers to a person who, among other things, either alone or with any associate or associates (within the meaning of the Trusts Business Act) (i) holds 10% or more of the shares in the licensed undertaking or another company of which it is a subsidiary company; or (ii) is entitled to exercise, or control the exercise of 10% or more of the voting power at any general meeting of the licensed undertaking or another company of which it is such a subsidiary or (iii) is able to exercise a significant influence over the management of a licensed undertaking or of another company of which the licensed undertaking is a subsidiary by virtue of holding shares in or an entitlement to exercise or control the exercise of the voting power at any general meeting of either the licensed undertaking or the other company concerned. A "majority shareholder controller" is defined under the Trusts Business Act as a shareholder controller which, among other things, (i) holds 50% or more of the shares in the licensed undertaking or another company of which it is a subsidiary company; or (ii) is entitled to exercise, or control the exercise of 50% or more of the voting power at any general meeting of the licensed undertaking or another company of which it is such a subsidiary.

The BMA may object to a person's notice of intent to become a 10% shareholder controller or majority shareholder controller or may object to an existing shareholder controller of any description where it appears to the BMA that, among other things, such person is not or is no longer a fit and proper person to be such a controller of the licensed undertaking. If the BMA objects, the BMA will provide such person with a written notice of objection. Prior to serving any such notice of objection, the BMA shall serve the person seeking to become a shareholder controller or the existing shareholder controller with a preliminary written notice stating that the BMA is considering service on that person of a notice of objection, stating, among other things, the reasons for the BMA's proposed objection. The statement of the BMA's reasons for its proposed objection will, however, be subject to the BMA's determination that such statement would not involve the disclosure of confidential information, the disclosure of which would be prejudicial to a third party. A person served with a preliminary written notice may, within a period of 28 days beginning with the day on which the notice is served, make written representations to the BMA and the BMA shall take any such representations into account in deciding whether to serve a notice of objection.

If three months pass from the date of notifying the BMA of a new shareholder controller or an increased shareholding/control beyond a shareholder controller's then current threshold, without the BMA serving a notice of objection, then the person may become a shareholder controller as requested in the notice. In practice, the BMA's procedure is generally to respond to a person's shareholder controller notification.

If a person becomes a shareholder controller or increases their shareholding control, in spite of the BMA's objection thereto, if a shareholder controller fails to comply with the foregoing notice requirements or if a shareholder controller continues as such after being given notice of objection to his being a shareholder controller, the BMA may take certain actions, including revoking the relevant license where a shareholder controller holding 50% or more of the shares of the licensed undertaking is involved or mandating that any specified shares become subject to one or more of the following restrictions:

- any transfer of or agreement to transfer those shares or, in the case of unissued shares, any transfer of or any agreement to transfer the right to be issued with them, will be void;
- no voting rights may be exercisable in respect of the shares;
- no further shares may be issued in right of them or pursuant to any offer made to their holder; or
- except in liquidation, no payment may be made of any sums due from the licensed undertaking on the shares, whether in respect of capital or otherwise.

A court in Bermuda may, on the application of the BMA, order the sale of any such shares. Any person may appeal to a tribunal constituted under the Trusts Business Act for a review of a notice of objection given by the BMA as described above. However, this right of appeal does not apply to a person in any case in which such person has failed to give a notice or has become or continued to be a controller in contravention of the Trusts Business Act. In addition, if a person has had its license revoked or has been subject to any of the restrictions set forth above, the tribunal may confirm or reverse the decision which is the subject of the appeal but shall not have power to vary it except:

- where the decision was made to impose different restrictions or vary them in a different way, the tribunal may direct the BMA to impose different restrictions; or
- where the decision was to revoke a license, the tribunal may direct the BMA to restrict it instead.

In the event that the BMA imposes any of the restrictions listed above, the restrictions may apply to:

- all shares of the licensed undertaking of which the person in question is a shareholder controller that (i) are held by him or any associate of his, and (ii) were not so held immediately before he became such shareholder controller of the licensed undertaking; and
- all shares in another company where the person in question became a shareholder controller (i) as a result of the acquisition by him or any associate of his of shares in such other company, and (ii) the shares were not so held before he became a shareholder controller of such licensed undertaking.

An undertaking licensed under the Trusts Business Act must give written notice to the BMA in the event that any person has either become or ceased to be a controller or officer of such licensed undertaking. The written notice is required to be given to the BMA within 14 days beginning with the day on which the licensed undertaking becomes aware of the change in controller or officer. The definition of "controller" is set out in the Trusts Business Act but generally refers to a shareholder controller, a managing director or chief executive officer of the undertaking or of another company of which it is a subsidiary, or a person in accordance with whose directions or instructions the directors of the undertaking or of another company of which the undertaking is a subsidiary, or persons who are shareholder controllers (or any of them) are accustomed to act. The definition of "officer" under the Trusts Business Act includes a director, secretary or any senior executive.

Investment Business Act 2003

The Investment Business Act 2003 (the "Investment Business Act") prohibits any person from carrying on, or purporting to carry on, an investment business in or from within Bermuda unless that person holds a license granted under the Investment Business Act, or is exempted from holding a license. The Investment Business Act defines "investment business" broadly as the business of dealing in investments, arranging deals in investments, managing or offering investments and giving advice on investments.

Under the Investment Business Act, the BMA is given the authority to grant licenses and to supervise license holders. The BMA will only grant a license if it is satisfied that the applicant complies with licensing criteria set out in the Investment Business Act, which include (without limitation) that controllers and senior executives of the applicant are fit and proper persons to carry on such business, the applicant company's business is effectively directed by at least two individuals (unless the BMA otherwise approves), the Board of the applicant has a number of non-executive directors considered appropriate by the BMA, the applicant's business is conducted in a prudent manner, the position of the applicant in the group does not obstruct effective consolidated supervision and the applicant will carry on the investment business with integrity and professional skill appropriate to the nature and scale of its activities.

At the present time, the Bank and its wholly owned subsidiaries Butterfield Trust (Bermuda) Limited, Butterfield Securities (Bermuda) Limited and Butterfield Asset Management Limited hold licenses under the Investment Business Act.

Under the Investment Business Act, the BMA may require an accountant's or auditor's report on a license holder or the appointment of an inspector to carry out an investigation into the affairs of a license holder and/or demand the production of documents or information relating to the investment business of a license holder. The Investment Business Act also grants the BMA broad powers to enforce the provisions of the Investment Business Act, including (without limitation) powers to issue directions, to vary, restrict or cancel a license, to appoint a person to manage and administer an offending investment business, to give directions desirable to safeguard the interests of the investment provider's clients, to levy fines and to seek from the court injunctions and restitution orders.

The Investment Business Act prohibits a person from becoming a 10% shareholder controller or a majority shareholder controller of an investment provider, unless such person provides written notice to the BMA of his intent to do so and the BMA does not object. It is an offense not to provide this notice. The definition of 10% shareholder controller is set out in the Investment Business Act, but generally refers to a person who, among other things, either alone or with any associate or associates (within the meaning of the Investment Business Act) (i) holds 10% or more of the shares in the investment provider or its parent undertaking; (ii) is entitled to exercise, or control the exercise of 10% or more of the voting power in the investment provider or in the parent undertaking; or (iii) is able to exercise a significant influence over the management of the investment provider or its parent undertaking by virtue of the voting power in the investment provider or its parent undertaking. A "majority shareholder controller" is defined under the Investment Business Act as a shareholder controller which (i) holds 50% or more of the issued and outstanding shares in the investment provider or its parent undertaking; or (ii) is entitled to exercise, or control the exercise of 50% or more of the voting power in the investment provider or in the parent undertaking.

The BMA may object to a person's notice of intent to become a 10% shareholder controller or majority shareholder controller or to an existing shareholder controller of any description where it appears to the BMA that, among other things, such person is not or is no longer a fit and proper person to be such controller of the licensed company. If the BMA objects, the BMA will provide such person with a written notice of objection. Prior to serving any such notice of objection, the BMA serves the person seeking to become a shareholder controller or will serve an existing shareholder controller with a preliminary written notice stating that the BMA is considering service on that person of a notice of objection, stating, among other things, the reasons for the BMA's proposed objection. The statement of the BMA's reasons for their proposed objection will, however, be subject to the BMA's determination that such statement would involve the disclosure of confidential information, the disclosure of which would be prejudicial to a third party. A person served with a preliminary written notice may, within a period of 28 days beginning with the day on which the notice is served, make written representations to the BMA and the BMA shall take any such representations into account in deciding whether to serve a notice of objection.

If three months pass from the date of notifying the BMA of a new shareholder controller or an increased shareholding/control beyond a shareholder controller's then current threshold, without the BMA serving a notice of objection, then the person may become a shareholder controller as requested in the notice. In practice, the BMA's procedure is generally to respond to a person's shareholder controller notification.

If a person becomes a shareholder controller or increases their shareholding/control in spite of the BMA's objection to his becoming a shareholder controller or if a shareholder controller fails to comply with the foregoing notice requirements or if a shareholder controller continues as such after being given notice of objection to his being a shareholder controller, the BMA may take certain actions, including revoking the relevant license where a shareholder controller holding 50% or more of the shares of the licensed company is involved or mandating that any specified shares become subject to one or more of the following restrictions:

- any transfer of or agreement to transfer those shares or, in the case of unissued shares, any transfer of or any agreement to transfer the right to be issued with them, will be void;
- no voting rights may be exercisable in respect of the shares;
- no further shares may be issued in right of them or pursuant to any offer made to their holder; or
- except in liquidation, no payment may be made of any sums due from the investment provider on the shares, whether in respect of capital or otherwise.

A court in Bermuda may, on the application of the BMA, order the sale of any such shares. Any person may appeal to a tribunal constituted under the Investment Business Act for a review of a notice of objection given by the BMA as described above. However, this right of appeal does not apply to a person in any case in which such person has failed to give a notice or has become or continued to be a controller in contravention of the Investment Business Act. In addition, if a person has had its license revoked or has been subject to any of the restrictions set forth above, the tribunal may confirm or reverse the decision which is the subject of the appeal but shall not have power to vary it except:

- where the decision was made to impose or vary any restriction, the tribunal may direct the BMA to impose different restrictions or to vary them in a different way; or
- where the decision was to revoke a license, the tribunal may direct the BMA to restrict it instead.

In the event that the BMA imposes any of the restrictions listed above, the restrictions may apply to:

- all shares of the investment provider of which the person in question is a shareholder controller that (i) are held by him or any associate of his; and (ii) were not so held immediately before he became such shareholder controller of the investment provider; and
- all shares in another company where the person in question became a shareholder controller (i) as a result of the acquisition by him or any associate of his of shares in such other company; and (ii) the shares were not so held before he became a shareholder controller of such investment provider.

A company licensed under the Investment Business Act must give written notice to the BMA in the event that any person has either become or ceased to be a controller or officer of such investment provider. The written notice is required to be given to the BMA within 14 days beginning with the day on which the investment provider becomes aware of the change in controller or officer. The definition of "controller" is set out in the Investment Business Act but generally refers to a shareholder controller, a managing director or chief executive officer of the investment provider or of another company of which it is a subsidiary, or a person in accordance with whose directions or instructions the directors of the investment provider or of its parent undertaking or persons who are shareholder controllers (or any of them) are accustomed to act. The definition of "officer" under the Investment Business Act includes a director, secretary or any senior executive.

Corporate Service Provider Business Act 2012

The Corporate Service Provider Business Act 2012 ("CSPB") regulates persons carrying on a corporate service provider business in Bermuda. "Corporate service provider business" in this context means the provision of any of the following services for a profit: (a) acting as a company formation agent or agent for establishment of a partnership; (b) providing nominee services, including (among other things) providing nominee shareholders; (c) providing administrative and secretarial services to companies or partnerships (including, among other things, providing a registered office and maintaining the books and records of a company or partnership); (d) performing functions in the capacity as a resident representative under various Bermuda statutes; and (e) providing any other corporate or administrative services as may be specified in regulations made under the CSPB. Under the CSPB, the Bank or any of its subsidiaries is required to hold a corporate service provider license to lawfully provide corporate services to our customers in Bermuda. Licensing under the CSPB is administered by the BMA. Holding a license under the CSPB obliges the licensed undertaking to maintain a physical presence in Bermuda at which the licensed undertaking is directed and managed. A licensed undertaking is also required to hold all client funds separately from its own funds or funds held in respect of any other business and maintain such books of account and other records such that client funds may be readily identified at any time.

Pursuant to the provisions of the CSPB any person who, together with their associates (within the meaning of the CSPB), intends to become either a shareholder controller or a majority shareholder controller of a CSPB licensed entity, must first serve notice of their intent to do so on the BMA and either receive a notice of non-objection from the BMA, or wait for the expiration of a three month period starting from the date of the notice to the BMA without the BMA having served a written notice of objection. A "shareholder controller" under the CSPB is any person who, either alone or with any associate or associates, (i) holds 10% or more of shares of the licensed entity (if it is a company) or 10% or more of another company of which the licensed entity is a subsidiary; (ii) is entitled to control or control the exercise of 10% or more of the voting power at any general meeting of the licensed entity (if it is a company) or of another company of which the licensed entity is a subsidiary; or (iii) is able to exercise a significant influence over the management of a licensed entity or of another company of which the licensed entity is a subsidiary by virtue of holding shares in or an entitlement to exercise or control the exercise of the voting power at any general meeting of either the licensed entity (if it is a company) or its holding company. A "majority shareholder controller" under the CSPB has the same meaning as limbs (i) and (ii) in the preceding sentence, save that the relevant percentage threshold for ownership is 50% or more.

In addition to the requirement to notify and obtain BMA non-objection (whether express or deemed) of any change in shareholder controller or majority shareholder controller of a CSPB licensed entity, if at any time it appears to the BMA that a person who is a "controller" of any description of a CSPB licensed entity is not a fit and proper person for such role, the BMA may serve a written notice of objection to that controller; provided that, before serving such a notice, the BMA must serve that person with a preliminary written notice stating that the BMA is considering service on that person of a notice of objection, specifying the reasons for which it appears to the BMA why that person is not or is no longer a fit and proper person and advising as to the rights of that person to make written representations to the BMA within 28 days beginning on the day on which such notice is served, and that such written representations shall be taken into account by the BMA in deciding whether to serve a notice of objection. For these purposes a "controller" includes (i) a managing director of a licensed entity or the licensed entity's holding company; (ii) the CEO of the licensed entity or the licensed entity's holding company; and (iii) a person in accordance with whose directions or instruction the directors of the licensed entity (or its holding company) are accustomed to act. Upon determining that any individual is not a fit and proper person, the BMA may pass a prohibition order, thereby preventing that individual from exercising any functions in connection with any business requiring licensing under the CSPB. Furthermore, under the CSPB, a licensed entity is required to give written notice to the BMA of any person becoming or ceasing to be a controller or an "officer" (director, company secretary or senior executive) of the licensed entity.

Breaches of the CSPB are punishable by a range of criminal and civil penalties including fines, imprisonment and public censure; breaches can result in the licensed entity losing its license and therefore its ability to conduct corporate service provider business. The BMA is also empowered to restrict a controller's ability to sell any shares (and exercise any rights in respect of such shares) held by the controller in a CSPB licensed entity if they continue to be or become a controller following a notice of objection from the BMA.

Companies Act 1981

As a local company incorporated in Bermuda, the Bank is subject to the Companies Act 1981 (the "Companies Act"). Under section 114 of the Companies Act, no local company may carry on business of any sort in Bermuda unless, among other things, (i) it complies with the control and ownership requirements set out in Part I of the Third Schedule of the Companies Act; (ii) it is licensed under section 114B of the Companies Act and is carrying on such business in accordance with the terms and conditions imposed in such license; or (iii) its shares are listed on a designated stock exchange and the company is engaged as a business in a material way in a prescribed industry pursuant to section 114(1)(e) of the Companies Act.

In December 2000, the Minister of Finance issued to the Bank a license pursuant to section 114B of the Companies Act allowing the Bank to carry on business in Bermuda without complying with certain provisions of the Third Schedule to the Companies Act. Effective June 10, 2016, the Bank relinquished its section 114B license and carries on business in Bermuda without complying with the provisions of the Third Schedule in reliance upon the exemption in section 114(1)(e) of the Companies Act. The Bank qualifies for this statutory exemption by virtue of (i) the listing of the Bank's shares on the BSX, which is a "designated stock exchange" for the purposes of the Companies Act and (ii) the Bank's material business of banking, which is a "prescribed industry" for the purposes of the Companies Act.

Exchange Control

The Bank is designated as resident in Bermuda for exchange control purposes.

The BMA has given its consent for the issue and free transferability of all of the common shares to and between non-residents of Bermuda for exchange control purposes, provided the Bank's shares remain listed on an appointed stock exchange, which includes the NYSE. Approvals or permissions given by the BMA do not constitute a guarantee by the BMA as to our performance or our creditworthiness. Accordingly, in giving such consent or permissions, the BMA shall not be liable for the financial soundness, performance or default of our business or for the correctness of any opinions or statements expressed in this report.

Financial Crime Regulation

Bermuda has enacted a number of laws relating to combating money laundering and terrorist financing. These laws include the Proceeds of Crime Act 1997, the Anti-Terrorism (Financial and Other Measures) Act 2004, the Proceeds of Crime (Anti-Money Laundering and Anti-Terrorist Supervision and Enforcement) Act 2008 and the Proceeds of Crime (Anti-Money Laundering and Anti-Terrorist Financing) Regulations 2008, the Financial Intelligence Agency Act 2007, and the Anti-Terrorism (Financial and Other Measures) (Businesses in Regulated Sector) Order 2008 each as amended from time to time.

The Bank may be regulated together with its branches and subsidiaries in respect of anti-money laundering and anti-terrorist financing policies and procedures as a "financial group" if so designated by the Bermuda minister responsible for justice. Furthermore, under the Bribery Act 2016 of Bermuda, the Bank may be guilty of an offense if persons associated with the Bank (which can include the Bank's employees, agents or subsidiaries) bribe another person intending to obtain or retain business for the Bank or to obtain or retain an advantage in the conduct of business for the Bank. It is a defense to such offenses if the Bank proves that it has in place adequate procedures designed to prevent persons associated with the Bank from undertaking such bribery.

Stamp Duty

Stamp duty is a tax in Bermuda imposed on written documents. The governing legislation is the Stamp Duties Act 1976, as amended (the "Stamp Duties Act"). The Stamp Duties Act sets out the instruments that are subject to stamp duty, which generally include certain instruments or documents as specified in the Stamp Duties Act that are executed in Bermuda or, if executed outside of Bermuda, are then brought into Bermuda.

There are certain limited stamp duty exemptions under the Bermuda Stock Exchange Company Act 1992 (the "BSX Act"), which extend to local companies, the securities of which are listed on the BSX. The Bank's common shares are currently listed on the NYSE and BSX. Pursuant to the BSX Act, the provisions of the Stamp Duties Act will not apply to any instrument which relates to (i) a conveyance or transfer on sale, (ii) a conveyance or transfer to effect or having the effect of a voluntary disposition inter vivos, or (iii) any agreement for the lending and borrowing, of any securities which are listed on the BSX. Accordingly, for so long as the common shares of the Bank remain listed on the BSX (and to the extent any other securities issued by the Bank are listed on the BSX), the foregoing stamp duty exemptions under the BSX Act would apply. However, dealings in the Bank's common shares beyond the limited exemptions under the BSX Act may attract stamp duty under various heads of the Schedule to the Stamp Duties Act. For example, ad valorem stamp duty may be payable (i) where security is granted over shares of the Bank, (ii) where shares of the Bank form part of a deceased's estate and probate is sought, and (iii) on a share certificate where the share is issued by the Bank for the first time at a premium in excess of the par value thereof.

The Stamp Duties Act prescribes the persons liable to pay the stamp duty, whether the amount of duty is a fixed or ad valorem amount and the time period in which the duty must be paid, depending on the nature of the instrument. The Stamp Duties Act also sets out the consequences for failure to stamp instruments which are subject to duty.

Generally, if a stampable document has been executed in Bermuda or has been executed outside of Bermuda and then brought into Bermuda and stamp duty is not paid, the document is not valid for any purpose (including registration) in Bermuda, until such time as it is stamped. In addition, a stampable document which is not stamped (i) is not admissible in court proceedings in Bermuda, except in criminal proceedings or stamp duty violation prosecutions; and (ii) may not be acted upon, filed, or registered by any public official or by any company. For any instrument which is liable to stamp duty that is not duly stamped, every person who is specified in the Stamp Duties Act as liable for stamping commits an offense.

Limits on Shareholding

Generally, the Companies Act imposes limits on the percentage of shares in a local company carrying on business in Bermuda which may be held by persons who are non-Bermudian as that term is defined in the Companies Act. As described above, the Bank relies on an exemption under section 114(1)(e) of the Companies Act to these ownership and related control requirements.

Additionally, the bye-laws of the Bank restrict the voting rights of a person who is not "Bermudian" (as such term is defined in the Companies Act) and who is "interested" (as such term is defined in the bye-laws) in the shares of the Bank which constitute more than 40% of all shares then issued and outstanding, and such person is not entitled to vote the shares which are in excess of this 40% interest at any general meeting without the prior written approval of the Minister of Finance.

In addition, there are certain prior approval requirements pursuant to the BDCA, the Trusts Business Act and the Investment Business Act with respect to any person who seeks to become a "shareholder controller" (as defined in each of those Acts) of the Bank.

Deposit Insurance Scheme

Pursuant to the Deposit Insurance Act 2011 and the Deposit Insurance Rules 2016 of Bermuda, a Deposit Insurance Scheme ("DIS") has come into effect in Bermuda. The DIS is administered by the Bermuda Deposit Insurance Corporation. The DIS is designed to protect the deposits of individuals, charities, unincorporated associations, partnerships, sole proprietors and small businesses by guaranteeing up to \$25,000 of their aggregate Bermuda Dollar deposits in the event of a Bermuda deposit taking institution's failure. The DIS is backed by a Deposit Insurance Fund which is in turn funded from premium contributions that are payable by all banks and credit unions licensed by the BMA. As a bank licensed by the BMA, we are required to be a member of the DIS and pay contributions to the Deposit Insurance Fund. Currently, our premium contribution is calculated by the Bermuda Deposit Insurance Corporation as 0.25% per annum of the average total amount of our Bermuda Dollar deposits that are covered by the DIS guarantee over a rolling three-month period based on information disclosed by us to the Bermuda Deposit Insurance Corporation. Each contribution to the Deposit Insurance Fund is payable every three months in arrears.

Personal Information Protection Act 2016

Bermuda's principal data protection legislation is the Personal Information Protection Act 2016 ("PIPA"). PIPA applies to every organization (which includes any individual, entity or public authority) that uses personal information in Bermuda where that personal information is used by automated or other means which form, or are intended to form, part of a structured filing system. For the purposes of PIPA, "personal information" means any information about an identified or identifiable individual (meaning a natural

person), and "use" or "using" are very broadly defined and effectively include possessing or carrying out any operation on personal information. The Bank uses and holds individuals' personal information in Bermuda, so must comply with the provisions of PIPA.

The majority of the operative provisions of PIPA, which include certain personal information privacy rights for individuals and specific obligations on organizations that control the processing of personal information, are not yet in force in Bermuda. The first Bermuda Privacy Commissioner was appointed with effect from January 20, 2020, and this appointment is an important step in bringing the remaining operative provisions of PIPA into force. However, as of December 2021, there is still no clear timetable for the publication of PIPA codes of practice or the actual implementation of the remaining operating provisions.

The Cayman Islands

The Cayman Islands Monetary Authority ("CIMA")

Our activities in the Cayman Islands are monitored by CIMA. CIMA is responsible for currency management, regulation and supervision of the Cayman Islands financial services sector (which includes securities and investments business, banking, insurance and fiduciary services), advice to the Cayman Islands government and cooperation with overseas regulatory authorities. CIMA's principal focus is to promote and maintain a sound financial system in the Cayman Islands and to promote and enhance market confidence, consumer protection and the reputation of the Cayman Islands as a financial center.

CIMA has broad statutory powers of enforcement. These powers are intended to permit CIMA to have access to information held or maintained by a licensee as necessary and to enable CIMA to take appropriate remedial action if a licensee is in default of its obligations under applicable laws.

Relevant Legislation/Regulations

Banks & Trust Companies Act (2021 Revision)

The Banks and Trust Companies Act (2021 Revision) (the "BATCA") provides that it is an offense to conduct banking business or trust business without the appropriate license. Bank of Butterfield (Cayman) Limited holds a category "A" banking license and a trust license, both issued by CIMA.

The BATCA is supplemented by certain regulations which, among other things, prescribe the fees that are payable by licensees and certain information that must be submitted to CIMA in connection with any license application.

Licensees must adhere to certain capital adequacy requirements and must file audited financial statements with CIMA within three months of their financial year-end. Prior written approval of CIMA is required in a number of circumstances including, but are not limited to, the issue, transfer or disposal of any shares, the appointment of a new director or senior officer or where the licensee wishes to conduct business that deviates from its business plan submitted at the time of its license application.

Securities Investment Business Act (2021 Revision), as amended

The Securities Investment Business Act (2021 Revision), as amended (the "SIBA") provides that a person shall not carry on, or purport to carry on, securities investment business in or from the Cayman Islands unless that person is for the time being licensed under SIBA or is exempted from the requirement to hold a license pursuant to SIBA. Butterfield Bank (Cayman) Limited holds a securities investment business license, issued by CIMA, to conduct its business.

SIBA is essentially designed to achieve the licensing and regulation of securities investment providers and applies to (i) any company, foreign company or partnership incorporated or registered in the Cayman Islands and carrying on "securities investment business" anywhere in the world, or (ii) any entity which has a "place of business" in the Cayman Islands through which "securities investment business" is carried on. The entity need not have a physical presence in the Cayman Islands in order for such entity to fall within the ambit of SIBA.

Certain categories of persons conducting activities that would otherwise fall within the definition of securities investment business are categorized as non-registrable persons under SIBA. Such persons include single family offices who do not advise third parties and managers of non-Cayman limited liability companies who carry on securities investment business only in that capacity. In addition, SIBA requires certain persons who are engaged in securities investment business with, among other things, sophisticated or high net worth persons (as such terms are defined in SIBA) to register as a registered person under SIBA. Upon such registration, a registered person is subject to CIMA regulation, however a number of requirements applicable to SIBA licensees do not apply to SIBA registered persons. For example, a SIBA registered person is not required to submit annual audited financial statements or business plans to CIMA.

Insurance Act, 2010 (as amended)

CIMA regulates the insurance industry in the Cayman Islands pursuant to the Insurance Act, 2010 (as amended) (the "IA"). Such regulation includes licensing, ongoing supervision, and enforcement.

Pursuant to the IA, a company is required to hold a license in order to carry on insurance or reinsurance business or business as an insurance agent, insurance broker or insurance manager in or from the Cayman Islands. Bank of Butterfield (Cayman) Limited (which is not itself an insurer) holds an insurance agent license, issued by CIMA, permitting it to solicit domestic business on behalf of not more than one general insurer and one long term insurer.

Companies Act (2021 Revision) as amended

Butterfield Bank (Cayman) Limited is an ordinary resident company incorporated in the Cayman Islands, meaning that, subject to it being licensed under the BATCA, it can carry on business within the Cayman Islands. Butterfield Bank (Cayman) Limited is required to comply with the requirements of the Companies Act (2020 Revision), this being the principal statute governing the incorporation and ongoing operations of the Cayman Islands companies.

Anti-Money Laundering Regulations (2020 Revision); Proceeds of Crime Act (2020 Revision); and Terrorism Act (2018 Revision), each as amended

Butterfield Bank (Cayman) Limited is subject to the Anti-Money Laundering Regulations (2020 Revision) (the "Regulations") made pursuant to the Proceeds of Crime Act (2020 Revision) (the "PCL"), each as amended. The Regulations apply to anyone conducting "relevant financial business" in or from the Cayman Islands intending to form a business relationship or carry out a one-off transaction. The Regulations require a financial service provider to maintain certain anti-money laundering procedures including those for the purposes of verifying the identity and source of funds of an "applicant for business" except in certain circumstances, including where an entity is regulated by a recognized overseas regulatory authority and/or listed on a recognized stock exchange in an approved jurisdiction. In addition, if any person resident in the Cayman Islands knows or suspects, or has reasonable grounds for knowing or suspecting that another person is engaged in criminal conduct, or is involved with terrorism or terrorist property, and the information for that knowledge or suspicion came to their attention in the course of business in the regulated sector, or other trade, profession, business or employment, the person will be required to report such knowledge or suspicion to (i) the Financial Reporting Authority of the Cayman Islands (the "FRA"), pursuant to the PCL, if the disclosure

relates to criminal conduct or money laundering; or (ii) a police officer of the rank of constable or higher, or the FRA, pursuant to the Terrorism Law 2018 Revision), if the disclosure relates to involvement with terrorism or terrorist financing and property.

The Cayman Islands Data Protection Act, 2021 Revision)

The Data Protection Act (2021 Revision) (the "DPA") came into force on September 30, 2019 and establishes a framework of rights and duties designed to safeguard individuals' personal data, balanced against the need of public authorities, businesses and organizations to collect and use personal data for legitimate purposes. The DPA was developed in line with international best practices while ensuring that it reflects the specific needs of the Cayman Islands. It is based substantially on the Data Protection Act, 1998 of the United Kingdom. The DPA defines "personal data" very widely to include any data which enables a living individual to be identified.

In common with most businesses, Butterfield Bank (Cayman) Limited records information in respect of individuals, particularly those who are employees, clients or suppliers, and the obligations under the DPA require a detailed review or establishment of policies and procedures in order to achieve compliance. Non-compliance with the DPA may have serious ramifications.

The DPA is centered on eight data protection principles under which personal data must:

- be processed fairly and only when specific conditions are met, including where consent has been given, where there is a legal obligation, or where it is necessary for the performance of a contract to which the data subject is a party. Additional conditions apply in respect of "sensitive personal data" (examples of which include racial or ethnic origin, political opinions, religious beliefs, trade union membership, genetic data, health, sex life and offences);
- be obtained only for one or more specified lawful purposes, and shall not be further processed in any manner incompatible with such purposes;
- be adequate, relevant and not excessive in relation to the purpose or purposes for which they are collected or processed;
- be accurate and, where necessary, kept up to date;
- not be kept for longer than is necessary for the purpose;
- be processed in accordance with the rights of individuals as specified under the DPA;
- be protected by appropriate technical and organizational measures against unauthorized or unlawful processing, and against accidental loss, destruction or damage; and
- not be transferred abroad unless the country or territory to which it is transferred ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data.

Under the DPA, individuals have the right to be informed how personal data is processed and Butterfield Bank (Cayman) Limited is required to provide individuals with a privacy notice in this regard. Individuals also have the right (i) to request access to their personal data, (ii) to request rectification or correction of personal data, (iii) to request that processing of personal data be stopped or restricted and (iv) to require Butterfield Bank (Cayman) Limited to cease processing personal data for direct marketing purposes.

Individuals who believe that their personal data has been handled incorrectly or are not satisfied with responses from Butterfield Bank (Cayman) Limited to any requests made regarding the use of their personal data have a right under the DPA to complain to the Cayman Islands' Ombudsman.

The Bahamas

The Central Bank of The Bahamas

Butterfield Trust (Bahamas) Limited has been granted a license from the Central Bank of The Bahamas to conduct trust business from within The Bahamas. As the primary regulator of Butterfield Trust (Bahamas) Limited, the Central Bank of The Bahamas is responsible for the regulation and supervision of Butterfield Trust (Bahamas) Limited with respect to all of its operations, corporate governance issues, and compliance with applicable laws and regulations. The Central Bank of The Bahamas' regulations on capital adequacy and the regulatory framework within The Bahamas take into account the recommendations of the BCBS.

Relevant Legislation/Regulations

The Banks and Trust Companies Regulation Act and Regulations

The Banks and Trust Companies Regulation Act and Regulations set forth the basic provisions relating to the licensing and operations of banks and trust companies in The Bahamas, as well as the powers of the Central Bank of The Bahamas to supervise and audit the activities of such entities. As it relates to the preservation of confidentiality, the Banks and Trust Companies Regulation Act makes it an offense for certain individuals to disclose without customer consent, inter alia, the identity, assets, liabilities, transactions or accounts of a customer of a licensee, save for in specified circumstances.

The Central Bank of The Bahamas Act and Regulations

The Central Bank of The Bahamas Act provides general provisions relating to the structure and operation of the Central Bank of The Bahamas, the regulatory reporting required to be submitted to the Central Bank of The Bahamas by the licensees and the penalties that may be imposed for failure to comply with the orders of the Central Bank of The Bahamas. From time to time, the Central Bank issues regulations, guidelines and policies which are available on its website.

Financial and Corporate Service Providers Act

The Financial and Corporate Service Providers Act provides regulations for the administration and supervision of all licensed financial and corporate service providers in the Bahamas. This Act details the obligations and duties of a licensee under the Act and sets out the supervisory powers of the Securities Commission over its licensees inclusive of penalties and sanction for non-compliance.

Financial Intelligence and Reporting

The Financial Intelligence Unit Act provides for the establishment of the financial intelligence unit organization in The Bahamas that is responsible for receiving, analyzing, obtaining and disseminating information which relates to or may relate to the proceeds of offenses under the Proceeds of Crime Act or the Anti-Terrorism Act.

The Financial Transactions Reporting Act and Regulations provides the basic requirements applicable to financial institutions in The Bahamas with respect to verifying the identities of facility holders and bank customers, the obligation to report suspicious transactions to the financial intelligence unit, and minimum record retention policies and procedures.

Data Protection (Privacy of Personal Information) Act

This Data Protection (Privacy of Personal Information) Act makes provision for the protection of the privacy of the personal data of individuals and the regulation of its collection, processing, keeping, use and disclosure.

Other Relevant Legislation

Butterfield Trust (Bahamas) Limited is also subject to various other acts and regulations, including the Proceeds of Crime Act, which sets forth that it is a crime in The Bahamas for a person to conceal, transfer or deal with the proceeds of criminal conduct (such as money laundering) and the Anti-Terrorism Act, which sets forth that it is a crime in The Bahamas for a person to provide or collect funds or provide financial services or make such services available to persons with the intention that such funds or services are to be used in full or in part to carry out a terrorist act. In addition to the laws and regulations set forth above, Butterfield Trust (Bahamas) Limited is also obligated to comply with the guidelines released by the Central Bank of The Bahamas from time to time.

Guernsey

Guernsey Financial Services Commission

Our activities in Guernsey are monitored by the Guernsey Financial Services Commission (the "GFSC") through its Probability Risk and Impact System. The primary objective of the GFSC is to regulate and supervise finance businesses in the Bailiwick of Guernsey ("Guernsey," or the "Bailiwick"). Almost all financial service activities in Guernsey are required to be licensed by the GFSC. Once licensed, the businesses are subject to the regulation, oversight, investigatory, information gathering and enforcement powers of the GFSC.

The various divisions of the GFSC perform regular visits with the purpose of understanding the business and reviewing the risk management and internal control environment (including monitoring and any outsourced functions). Such visits also monitor compliance with applicable laws and regulation.

In addition to conducting on-site reviews, the GFSC has a continuing duty to determine whether entities it regulates and the persons who own or run them remain fit and proper. Licensees therefore have a statutory obligation to notify the GFSC of various changes, which are set out in comprehensive rules and regulations. The GFSC also requires financial services businesses to submit periodic returns for statistical analysis and inclusion in thematic studies.

The GFSC has wide powers of enforcement to address shortcomings and breaches by financial services businesses. These range from private warnings and reprimands to revocation and suspension of applicable licenses and consents, fines and referral for criminal prosecution, among others.

The Banking Supervision (Bailiwick of Guernsey) Law, 1994

The Banking Supervision (Bailiwick of Guernsey) Law, 1994 (the "BSL") provides that no person shall in the Bailiwick accept a deposit in the course of carrying on, whether in Guernsey or elsewhere, a deposit-taking business except under the authority of and in accordance with the conditions of a license granted by the GFSC. Butterfield Bank (Guernsey) Limited holds a license under the BSL. In order to be granted a license, a company's business must be carried on with prudence, integrity, professional skills and in a manner which will not tend to bring the Bailiwick into disrepute. The business must also be directed by at least two individuals who are resident in the Bailiwick of Guernsey with appropriate standing and experience and sufficiently independent of each other. Businesses must also adhere to codes, principles, rules and instructions issued from time to time.

Regulation of Fiduciaries, Administration Businesses and Company Directors, etc. (Bailiwick of Guernsey) Law 2000

The Regulation of Fiduciaries, Administration Businesses and Company Directors, etc. (Bailiwick of Guernsey) Law 2000 (the "Guernsey Fiduciaries Law") provides that only a person licensed by the GFSC under the Guernsey Fiduciaries Law can operate fiduciary businesses, which includes:

- formation, management and administration of trusts;
- company or corporate administration;
- provision of executorship services; and
- the formation and management of foundations.

The GFSC can grant two different categories of license, including a full fiduciary license, which can only be granted to a company or a partnership, and a personal fiduciary license. The full fiduciary license covers any director, manager, partner or employee acting in the course of their employment.

The Protection of Investors (Bailiwick of Guernsey) Law, 1987

Under the Protection of Investors (Bailiwick of Guernsey) Law, 1987, as amended (the "POI Law"), a person shall not (subject to certain exemptions) carry on, or hold himself out as carrying on, any controlled investment business in or from within the Bailiwick, except under and in accordance with the terms of a license. For the purposes of the POI Law, a controlled investment includes collective investment schemes and general securities and derivatives. All Guernsey domiciled funds have to be authorized by or registered with the GFSC and be administered by a Guernsey licensed administrator. In addition, open-ended funds must also have a Guernsey-licensed custodian.

The Financial Services Commission (Bailiwick of Guernsey) Law, 1987

The Financial Services Commission (Bailiwick of Guernsey) Law, 1987 provides that the general functions of the GFSC are to supervise the finance business in the Bailiwick, to counter financial crime and the financing of terrorism and to maintain confidence in the Bailiwick's reputation as an international finance center.

The Criminal Justice (Proceeds of Crime) (Bailiwick of Guernsey) Law, 1999

The Criminal Justice (Proceeds of Crime) (Bailiwick of Guernsey) Law, 1999 established certain offenses in connection with the proceeds of criminal conduct including the concealing of transferring the proceeds of crime, assisting another person to retain the proceeds of criminal conduct, acquisition, possession or use of proceeds of criminal conduct and tipping-off.

The Terrorism and Crime (Bailiwick of Guernsey) Regulations, 2007

The Terrorism and Crime (Bailiwick of Guernsey) Regulations, 2007 provides for a positive obligation on businesses to report internally any suspicions of money laundering. A money laundering reporting officer must be appointed to fulfill this function and to make disclosure to the relevant division of Guernsey's police unit.

Deposit Compensation Scheme, 2008

Pursuant to the Banking Deposit Compensation Scheme (Bailiwick of Guernsey) Ordinance, 2008, a Guernsey DCS is in effect in Guernsey. The Guernsey DCS provides compensation of up to £50,000 per qualifying deposit in the event of the failure of a Guernsey-licensed bank. The maximum total amount of compensation is capped at £100 million in any 5 year period. If claims exceed this cap, compensation will be reduced pro rata. The cap also means that compensation in respect of any one bank cannot exceed £100 million. The Guernsey DCS is paid for by Guernsey banks through an annual administration levy and, in the event of a bank failure, a compensation levy.

Data Protection (Bailiwick of Guernsey) Law, 2017

The Data Protection (Bailiwick of Guernsey) Law, 2017 ("DPL 2017") came into force on May 25, 2018 to coincide with the enforcement of the EU's General Data Protection Regulation (EU) 2016/679. The DPL 2017 updated Guernsey's data protection framework to ensure that Guernsey retained its data protection "adequacy" status with the European Commission.

The DPL 2017 applies to the processing of personal data and provides rights to data subjects (i.e., individuals) and places obligations on data controllers and processors of personal data including, among other matters, in relation to subject access requests, transfers of personal data and notification of data breaches.

The Office of the Data Protection Authority is the independent regulatory authority responsible for the regulatory functions under the DPL 2017, including the ability to levy fines.

Jersey

Butterfield Bank (Jersey) Limited is regulated by the Jersey Financial Services Commission ("JFSC") to carry on deposit-taking business under The Banking Business (Jersey) Law 1991 (as amended); investment business pursuant to the Financial Services (Jersey) Law 1998 (as amended); fund services business pursuant to the Financial Services (Jersey) Law 1998 (as amended); and money service business pursuant to the Financial Services (Jersey) Law 1998 (as amended).

The JFSC uses four key areas in supervising banks which are the development of regulatory requirements including laws and codes of practice; on-site examinations and meetings; off-site supervision including the analysis of financial information; and international dialogue and liaison with other regulators involved in the supervision of the broader group.

The JFSC has wide powers of enforcement to address shortcomings and breaches by financial services businesses. These range from private warnings and reprimands to revocation and suspension of applicable licenses and consents, fines and referral for criminal prosecution, among others.

Financial Services Commission (Jersey) Law 1998

The Financial Services Commission (Jersey) Law 1998 provides that the JFSC is, among other things, responsible for the supervision and development of financial services in or from within Jersey, preparing and submitting recommendations for legislation regarding financial services, supervising regulated entities, and administering laws such as the Control of Borrowing (Jersey) Law 1947 and the Companies (Jersey) Law 1991. It also has particular regard to the reduction of risk to the public of financial loss, to protecting and enhancing the reputation and integrity of Jersey, and to the best economic interests of Jersey and the need to counter financial crime.

Banking Business (Jersey) Law 1991

The Banking Business (Jersey) Law 1991 (the "BBL") provides that no person shall carry on or hold themselves out as carrying on a deposit taking business in or from within Jersey unless they are registered under the BBL. Butterfield Bank (Jersey) Limited holds a license under the BBL. In order to be granted a license, the JFSC will consider the integrity, competence and financial standing of a company's business and that it would be in the best interests of persons who may deposit money that the company should be registered. The business must also have a physical presence in Jersey involving meaningful decision making and management, and be subject to supervision by a relevant supervisory authority. Businesses must adhere to secondary legislation and codes issued from time to time. This law also contains provisions regarding notification of principal persons, key persons and shareholders, and sets out further powers of the JFSC.

Financial Services (Jersey) Law 1998

This law regulates investment, trust company, general insurance mediation, money service, fund services and alternative investment fund services business. It includes requirements to register if carrying on regulated business, provisions for the supervision of financial services (including requirements to notify of changes to principal persons, key persons and shareholders), and gives the JFSC powers to issue directions and public statements, request information, and issue further orders and regulations. It also sets out the offenses of market manipulation, misleading information and insider dealing.

Collective Investment Funds (Jersey) Law 1988

Under the Collective Investment Funds (Jersey) Law, a person shall not (subject to certain exemptions) hold himself out as being a functionary of a recognized fund in or from within Jersey, except under a permit. For the purposes of this law, a recognized fund is a type of collective investment fund subject to additional regulations. Any person carrying on the business of an unclassified fund must also hold a certificate. This law also contains provisions regarding notification of principal persons, key persons and shareholders, and sets out further powers of the JFSC.

Proceeds of Crime (Jersey) Law 1999 and Terrorism (Jersey) Law 2002

The Proceeds of Crime (Jersey) Law 1999 established certain offenses in connection with the proceeds of criminal conduct including acquiring, using or having possession or control of criminal property, concealing, disguising, converting, transferring or removing such criminal property from Jersey, and tipping off and interference with material.

The Terrorism (Jersey) Law 2002 contains similar offenses regarding using, possessing, providing, collecting or receiving property for the purposes of terrorism, and otherwise dealing with terrorist property.

Both the Proceeds of Crime (Jersey) Law 1999 and the Terrorism (Jersey) Law 2002 provide for a positive obligation on businesses to report any suspicions of money laundering or terrorist financing.

Depositors Compensation Scheme, 2009

Pursuant to the Banking Business (Depositors Compensation) (Jersey) Regulations 2009, the Jersey Bank Depositors Compensation Scheme ("Jersey DCS") is in effect in Jersey. The law covers all "eligible deposits" and, in the event of the failure of a Jersey bank, provides protection of up to £50,000 for deposits placed in Jersey per person, per banking group, for local and international depositors. The maximum liability of the Jersey DCS is capped at £100 million in any 5 year period.

Data Protection (Jersey) Law, 2018 / Data Protection Authority (Jersey) Law, 2018

The Data Protection (Jersey) Law 2018 ("DPJL"), and its companion statute the Data Protection Authority (Jersey) Law 2018 ("DPAJL"), came into force on May 25, 2018 to coincide with implementation of the EU General Data Protection Regulation (EU) 2016/679 ("GDPR"). The DPJL updated Jersey's data protection framework expressly to mirror the GDPR and ensure that Jersey retained its data protection "adequacy" status with the European Commission.

In outline, the DPJL governs the processing of personal data in Jersey or in relation to Jersey residents; it provides rights to data subjects (i.e. individuals) and places obligations on data controllers and processors of personal data including, among other matters, in relation to subject access requests, transfers of personal data and notification of data breaches. The DPAJL requires any organization which is "established" in Jersey to be registered with the Jersey Office of the Information Commissioner ("JOIC") and to pay an annual charge.

The JOIC is the independent authority responsible for the regulatory and enforcement functions of the DPJL and DPAJL, including the ability to levy fines.

United Kingdom

Regulatory Regime

Butterfield Mortgages Limited provides UK residential property lending services.

The primary legislation governing the provision of Butterfield UK's services is the Financial Services and Markets Act 2000 ("FSMA") and its secondary regulations. FSMA requires that in order to carry on mortgage and investment services in the UK, a firm must be authorized (or exempt) and have the necessary permissions. Butterfield Mortgages Limited is authorized and has permissions to enter into, advise on and administer regulated mortgage contracts.

Because its permissions are limited to mortgage activities, Butterfield Mortgages Limited is regulated by the FCA. The FCA has responsibility for both prudential and conduct of business regulation of Butterfield Mortgages Limited.

Butterfield Mortgages Limited must comply with the FCA handbook which contains detailed rules and guidance in respect of governance and conduct matters. The FCA's Principles for Business require, among other things, that Butterfield Mortgages Limited conducts its business with integrity and due skill, care and diligence and deal with its regulators in an open and cooperative way. In addition, certain persons occupying senior management functions and certifications at Butterfield Mortgages Limited are subject to statements of principle and a code of practice that describes behaviors expected of persons operating in the regulated sector. Butterfield Mortgages Limited is subject to and has implemented the FCA's Senior Management and Certification Regime, the purpose of which is to increase individual accountability of senior management under the UK regulatory system.

Control

FSMA requires any person seeking to obtain (and in certain circumstances increase) control over Butterfield UK to first get approval from the FCA. A person will become a controller if it holds (itself or with another where they are acting together) (i) 20% or more in the shares of Butterfield UK or in any parent undertaking; or (ii) 20% or more of the voting power in Butterfield UK or any parent.

The Companies Act 2006 requires that UK incorporated companies maintain a register of persons who have significant control over them. A person will be considered to have significant control if it holds (itself or with another where they are acting together) 25% or more of the company's shares or voting rights or has the ability to appoint a majority of the board of directors.

Capital

Butterfield UK is subject to capital rules under the FCA's Prudential sourcebook for Mortgage and Home Finance Firms and Insurance Intermediaries handbook ("MIPRU"). The MIPRU capital rules stipulate the minimum level and quality of capital that must be maintained to support the activities carried on.

AML and Financial Crime

Butterfield UK is subject to a range of legislation at a UK level requiring it to take steps to detect and prevent potential money laundering, financial crime or terrorist financing. The FCA and HM Treasury have investigatory powers in relation to suspected breaches.

The principal UK anti-money laundering legislation applicable to the regulated activities of Butterfield UK is The Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 (as amended) ("MLRs 2017") from June 26, 2017. The MLRs 2017 prescribed obligations in relation to know your customer (KYC) information and assessment as well as ongoing monitoring obligations.

Further, Butterfield UK must comply with its obligations under the Proceeds of Crime Act 2002, the Terrorism Act 2000, the Anti-terrorism, Crime and Security Act 2001, the Counter-Terrorism Act 2008 (Schedule 7), certain specific obligations under the Transfer of Funds (Information on the Payer) Regulations 2007 and certain specific obligations in FSMA (in particular with respect to market abuse and insider dealing) and the FCA Handbook. Together, this legislation requires regulated firms to create appropriate and risk-sensitive policies and procedures in relation to customer due diligence procedures and monitoring of transactions, to avoid financing terrorism or money laundering or facilitating either of these, to avoid dealing with certain persons specified by HM Treasury, and to disclose suspicious activity to the relevant regulatory authorities. In addition, the UK and all entities of the Bank must adhere to the Bribery Act 2010 which has broad extra-territorial reach.

Butterfield UK must also comply with legislation of third countries to the extent that such legislation has extra-territorial effect and is applicable to it. Examples of this are the US PATRIOT Act of 2001 and The Foreign Account Tax Compliance Act ("FATCA") of 2010.

Data Protection Act, 2018

The Data Protection Act 2018 ("DPA") implements the EU General Data Protection Regulation (2016/679). Butterfield UK is required to have in place compliant policies and procedures to meet the DPA obligations to deal with data appropriately. The DPA applies to any business or person using or holding personal data on individuals within the EU and UK. Breaches of the legislation are criminal offenses and can result in severe penalties. The Information Commissioner's Office has regulatory and disciplinary powers and breach of the DPA can give rise to financial penalties based on a percentage of annual turnover.

Following the UK leaving the EU on January 31, 2020, the GDPR is incorporated into the UK's domestic law under The European Union (Withdrawal Agreement) Act 2020 that makes legal provision for ratifying the Brexit Withdrawal Agreement of January 24, 2020 and implementing it into the domestic law of the United Kingdom.

Switzerland

Financial Institutions Act

The Swiss Federal Financial Institutions Act ("FinIA") and the implementing ordinance to the Swiss Federal Financial Institutions Act ("FinIO") entered into force on January 1, 2020. FinIA and FinIO set forth the basic provisions relating to the licensing in Switzerland of financial institutions, which includes trustees and (collective) asset managers but excludes banks and insurance companies as they are already subject to specific legislation. Pursuant to FinIA, Swiss trustees acting on a professional basis in Switzerland or from Switzerland, must obtain a license from the Swiss Financial Market Supervisory Authority ("FINMA") to carry on their trustee activities. A Swiss branch or a Swiss representative office of a foreign trustee must also obtain a license from FINMA.

FINMA is responsible for granting the license and for taking any enforcement actions. In order to obtain a license from FINMA, a trustee will first need to affiliate to a Supervisory Organisation, which is licensed and supervised by FINMA. The Supervisory Organisation will conduct the day-to-day supervision and perform regular audits of the affiliated trustees. In order to obtain a license, the applicant must further, inter alia, comply with minimum capital requirements, have an appropriate level of own funds, an appropriate organization, qualified executives and generally meet a "fit and proper" requirement.

In accordance with an obligation for existing trustees under FinIA, Butterfield Trust (Switzerland) Ltd notified FINMA before June 30, 2020 of its intention to apply for a license. Butterfield Trust (Switzerland) Ltd has until December 31, 2022 to affiliate to a Supervisory Organisation, comply with the licensing requirements as set forth under FinIA and apply for a license to FINMA. During such period, it may continue to provide trustee services, provided it remains affiliated to a Self-Regulatory Organization or a Supervisory Organization for anti-money laundering compliance purposes.

Swiss Anti-Money Laundering Act

The Swiss Federal Act on Combating Money Laundering and Terrorist Financing of 10 October 1997 ("AMLA") and the related implementing ordinances apply to financial intermediaries, which include trustees. It governs the combating of money laundering and terrorist financing. It ensures the exercise of due diligence by the financial institutions in the conduct of financial transactions. Pursuant to AMLA, financial institutions must affiliate to a recognized Self-Regulatory Organisation or a recognized Supervisory Organisation (see above under Financial Institutions Act) which shall supervise compliance by financial intermediaries of their duties set out in AMLA. Butterfield Trust (Switzerland) Ltd must comply with its obligations under AMLA and is currently affiliated to Organisme de Surveillance pour Intermédiaires Financiers & Trustees ("SO-FIT"), a Supervisory Organisation licensed and supervised by FINMA.

Swiss Data Protection Act

The Swiss Federal Act on Data Protection of June 19, 1992 ("DPA") and the Ordinance to the Federal Data Protection of June 14, 1993 ("DPO") aim to protect the privacy and the fundamental rights of persons when their data is processed. The DPA and DPO provide for several requirements and limits with respect to data processing in Switzerland as well as the transfer of data outside Switzerland. The data protection legislation applies to any private entity processing data related to individuals or corporate entities. Data processing is defined as any operation with personal data, irrespective of the means applied and the procedure, and in particular the collection, storage, use, revision, disclosure, archiving or destruction of data. The DPA and DPO impose a series of duties on the so-called controller of the database, i.e. the entity that defines the purpose and controls the content of the collected data. The activities of Butterfield Trust (Switzerland) Ltd imply data processing on various data subjects. As a result, it is to comply with the provisions of the DPA when processing data.

The general principles of the Swiss data protection legislation include the obligations to lawfully, accurately and not excessively process data. Further, data processing must be protected by appropriate technical and organizational measures against accidental destruction, loss, theft and any other unauthorized use. The persons or entities whose data are being processed must be granted a right of access to their data if they request so and must have the opportunity to request the correction of the data that is inaccurate.

On September 25, 2020, the Swiss Parliament adopted the revision of the DPA. The Federal Council will decide on the entry into force at a later stage, but this is not expected to occur before the second half of 2022. The revised DPA provides for strengthened individuals' rights, increased transparency in data processing activities and extended governance and process rules for data controllers. The revised DPA also provides for increased fines for violation of duties under the revised DPA. The revisions further bring the DPA more in line with the EU General Data Protection Regulation (EU 2016/679), so that Switzerland may uphold its status as a country adequately protecting personal data from an EU perspective.

Singapore

Butterfield Trust (Asia) Limited holds a trust business license issued by the Monetary Authority of Singapore ("MAS") pursuant to the Trust Companies Act (Chapter 336 of Singapore) ("TCA").

As the integrated financial services regulatory authority in Singapore, the MAS administers (among other financial services related statutes) the TCA and regulates and supervises (among other types of financial institutions) trust business license holders (such as Butterfield Trust (Asia) Limited) in accordance with the TCA and all related subsidiary legislation, notices, guidelines and other regulatory instruments issued by the MAS ("MAS Instruments"). These MAS Instruments cover a wide range of ongoing obligations relating to, inter alia, capital adequacy, audit, conduct of business, confidentiality, anti-money laundering and countering of terrorist financing and also impose approval and/or notification requirements in respect of controllers, directors and key officers.

Under the TCA, the MAS is empowered to conduct inspections and/or investigations of Butterfield Trust (Asia) Limited to ensure that it is in compliance with requirements contained in the MAS Instruments. Where there is a breach, the MAS may pursue a wide range of enforcement sanctions, including private warnings, private or

public reprimands, composition offers (i.e., allowing the offense to be compounded by payment of a fine), prohibition orders, suspension or revocation of licenses, civil penalties and criminal prosecution.

United States

Foreign Account Tax Compliance Act (FATCA)

Under FATCA, US federal tax legislation passed in 2010, a 30% withholding tax will be imposed on "withholdable payments" made to non-US financial institutions (including non-US investment funds and certain other non-US financial entities) that fail (or, in some cases, that have 50% affiliates which are also non-US financial institutions that fail) to provide certain information regarding their US accountholders and/or certain US investors (such as US accountholders and US investors, "US accountholders") to the IRS. For non-US financial institutions that fail to comply, this withholding will generally apply without regard to whether the beneficial owner of a withholdable payment is a US person or would otherwise be entitled to an exemption from US federal withholding tax. "Withholdable payments" generally include, among other items, payments of US-source interest and dividends. Furthermore, FATCA may also impose withholding on non-US source payments by non-US financial institutions that comply with FATCA to non-US financial institutions that fail to comply with FATCA. However, under proposed Treasury regulations, such withholding will not apply to payments made before the date that is two years after the date on which final regulations defining the term "foreign pass thru payment" are published. In general, non-publicly traded debt and equity interests in investment vehicles will be treated as "accounts" and be subject to these reporting requirements. In addition, certain insurance policies and annuities are considered accounts for these purposes.

Some countries, including the Cayman Islands, Guernsey, Jersey, the UK, Singapore, Switzerland and The Bahamas, have entered into, and other countries are expected to enter into, intergovernmental agreements ("IGAs") with the United States to facilitate the type of information reporting required under FATCA. While the existence of IGAs will not eliminate the risk of the withholding described above, these agreements are expected to reduce that risk for financial institutions and investors in countries that have entered into IGAs. IGAs will often require financial institutions in those countries to report some information on their US accountholders to the taxing authorities of those countries, which will then pass the information to the IRS.

The Group closely monitors all present and new legislation that is or will be applicable for its organization, and is continuing to monitor all implications of FATCA and legislation of countries that have entered into IGAs. While monitoring these implications, the Group is and will be in close contact with all of its stakeholders, including its peers and financial industry representative organizations.

The Group has taken all the steps it believes are necessary to comply with current FATCA regulations, including analysis of its group entities and conclusions as to their FATCA classifications, entering into agreements with the US tax authorities (as necessary), identification of reportable accounts, and timely and accurate filing of all required annual FATCA filings, all in accordance with the appropriate IGA. Certain payments to the Group may be subject to withholding under FATCA if, in the future, the Group cannot enter into such agreements or satisfy the requirements thereunder (including as a result of local laws in non-IGA countries prohibiting information-sharing with the IRS, as a result of contracts or local laws prohibiting withholding on certain payments to account holders, policyholders, annuitants or other investors, or as a result of the failure of account holders, policyholders, annuitants or other investors to provide requested information). The possibility of such withholding and the need for US account holders, policyholders, annuitants and investors to provide certain information may adversely affect the sales of certain of the Group's products. In addition, entering into agreements with the IRS and compliance with the terms of such agreements and with FATCA and any regulations or other guidance promulgated thereunder or any legislation promulgated under an IGA may substantially increase the Group's compliance costs.

Office of Foreign Assets Control Regulation

The US Treasury Department's Office of Foreign Assets Control ("OFAC"), administers and enforces economic and trade sanctions against targeted foreign countries and regimes, under authority of various laws, including designated foreign countries, nationals and others. OFAC publishes lists of specially designated targets and countries. OFAC sanctions apply to all transactions that take place in the United States. Transactions that take place outside the United States may become subject to the jurisdiction of the United States and subject to compliance with OFAC sanctions if they involve US persons or payment in US dollars. Such payments typically are cleared through the US Dollar settlement system located in the United States and involve the intermediation of US financial institutions. Although we currently do not have any operations in the United States, our operations may involve transactions with US persons or in US Dollars and as a result, in order to comply with OFAC sanctions, we are responsible for, among other things, blocking any such transactions with designated targets and countries and reporting blocked transactions after their occurrence. Failure to comply with these sanctions could have serious legal and reputational consequences, including causing applicable bank regulatory authorities not to approve merger or acquisition transactions when regulatory approval is required or to prohibit such transactions even if approval is not required.

Anti-Money Laundering and the USA PATRIOT Act

A major focus of worldwide governmental policy on financial institutions in recent years has been aimed at combating money laundering and terrorist financing. In particular, United States anti-money laundering laws and regulations including the USA PATRIOT Act of 2001, applicable to non-US banks with operations in the United States, including banks that engage in transactions outside the United States with US persons or in US Dollars, such as the Bank, impose significant compliance and due diligence obligations. Under these laws and regulations, financial institutions are prohibited from entering into specified financial transactions and account relationships and must use enhanced due diligence procedures in their dealings with certain types of high-risk customers and implement a written customer identification program. Financial institutions must also take certain steps to assist government agencies in detecting and preventing money laundering and report certain types of suspicious transactions. Regulatory authorities routinely examine financial institutions for compliance with these obligations, and failure of a financial institution to maintain and implement adequate programs to combat money laundering and terrorist financing, or to comply with all of the relevant laws or regulations, could have serious legal and reputational consequences for the institution, including causing applicable bank regulatory authorities not to approve merger or acquisition transactions when regulatory approval is required or to prohibit such transactions even if approval is not required. Institutions that violate these obligations can be subject to cease and desist orders, civil money penalties and criminal sanctions.

Future Legislation and Regulation

The above jurisdictions and the other jurisdictions in which we operate may enact legislation from time to time that affects the regulation of the financial services industry or that affect the regulation of financial institutions chartered by or operating in those jurisdictions. These governments and their regulatory agencies also periodically propose and adopt changes to their regulations or change the manner in which existing regulations are applied. The substance or impact of pending or future legislation or regulation, or the application thereof, cannot be predicted, although enactment of the proposed legislation could impact the regulatory structure under which we operate and may significantly increase our costs, impede the efficiency of our internal business processes, require us to increase our regulatory capital and modify our business strategy, and limit our ability to pursue business opportunities in an efficient manner. Our business, financial condition, results of operations or prospects may be adversely affected, perhaps materially, as a result.

Additional Information

The Butterfield Act and our current amended and restated bye-laws have been filed as exhibits to this annual report on Form 20-F. The information contained in these exhibits is incorporated by reference herein.

Information regarding the rights, preferences and restrictions attaching to each class of our common and preferred shares, as well as other information regarding director and shareholder rights and proceedings, is described in the section entitled "Description of Share Capital" in our registration statement on Form F-1 filed with the SEC on February 12, 2017 with the file number 333-216018 and incorporated by reference herein.

C. Organizational Structure

Refer to Item 4.B. "Business Overview".

D. Property, Plants and Equipment

Our corporate headquarters is located at 65 Front Street, Hamilton HM 12, Bermuda. In addition to our corporate headquarters we also maintain offices in the Cayman Islands, Guernsey, Jersey, the UK, The Bahamas, Switzerland, Singapore, Mauritius and Canada. Additionally, we operate three branch locations in Bermuda and four branch locations in the Cayman Islands. Premises are owned in Bermuda and the Cayman Islands, with the remainder being held under commercial leases.

E. Selected Statistical Data

The following tables present select statistical information as required by the new subpart 1400 of Regulation S-K (previously Industry Guide 3).

Distribution of Assets, Liabilities and Shareholders' Equity; Interest Rates and Interest Differential

Average Balance Sheet and Interest Rates

The following table presents average consolidated balance sheets and net interest income for the years indicated:

(in millions of \$)	For the year ended December 31								
	2021			2020			2019		
	Average balance	Interest income (expense)	Average yield/ rate	Average balance	Interest income (expense)	Average yield/ rate	Average balance	Interest income (expense)	Average yield/ rate
Assets									
Cash due from banks — Interest bearing	2,615.4	0.5	0.02 %	2,481.6	7.2	0.29 %	2,818.4	35.9	1.27 %
Securities purchased under agreement to resell	148.1	0.9	0.60 %	132.7	1.4	1.04 %	39.6	1.2	3.04 %
Short-term investments	1,208.7	0.1	0.01 %	916.4	3.6	0.39 %	375.2	4.5	1.20 %
Available-for-sale	3,105.4	48.4	1.56 %	2,346.3	50.6	2.15 %	2,247.3	60.7	2.70 %
Held-to-maturity	2,587.8	53.5	2.07 %	2,166.2	58.6	2.70 %	2,226.3	68.7	3.09 %
Investment in securities ⁽¹⁾	5,693.2	101.9	1.79 %	4,512.5	109.2	2.41 %	4,473.6	129.4	2.89 %
Commercial loans	1,585.8	72.1	4.55 %	1,693.1	83.9	4.94 %	1,412.0	80.9	5.73 %
Consumer loans	3,614.0	149.5	4.14 %	3,368.6	146.8	4.34 %	2,957.5	153.1	5.18 %
Total loans, net of allowance for credit losses ⁽²⁾	5,199.9	221.5	4.26 %	5,061.7	230.7	4.54 %	4,369.5	234.0	5.36 %
Interest-earning assets	14,865.3	324.9	2.19 %	13,104.9	352.0	2.68 %	12,076.4	405.1	3.35 %
Other assets	367.4			395.4			372.7		
Total assets	15,232.7			13,500.3			12,449.1		
Liabilities									
Deposits	10,845.3	(15.5)	(0.14)%	9,710.8	(25.1)	(0.26)%	8,851.5	(51.5)	(0.58)%
Securities sold under agreement to repurchase	—	—	— %	—	—	— %	0.7	—	(2.12)%
Long-term debt	171.7	(9.6)	(5.59)%	173.4	(9.3)	(5.35)%	143.4	(7.9)	(5.49)%
Interest bearing liabilities	11,016.9	(25.1)	(0.23)%	9,884.2	(34.4)	(0.35)%	8,995.5	(59.4)	(0.66)%
Non-interest bearing current accounts	2,895.0			2,363.9			2,147.2		
Other liabilities	295.1			280.6			310.4		
Total liabilities	14,207.0			12,528.6			11,453.1		
Shareholders' equity	1,025.7			971.7			995.9		
Total liabilities and shareholders' equity	15,232.7			13,500.3			12,449.1		
Non-interest bearing funds net of non-interest-earning assets (free balance)	3,848.4			3,220.7			3,080.8		
Net interest margin		299.8	2.02 %		317.6	2.42 %		345.7	2.86 %
Net interest spread			1.95 %			2.33 %			2.73 %
Ratio of average interest earning asset/ interest bearing liabilities			134.9 %			132.6 %			134.2 %

⁽¹⁾ Yields are based on average historical costs and yields on securities held in income tax exempt jurisdictions are not computed on a tax-equivalent yield basis.

⁽²⁾ Interest income and rates on loans include loan fees (December 31, 2021: \$6.7 million; December 31, 2020: \$6.3 million and December 31, 2019: \$4.6 million). Additionally, average non-accrual loans were included in the average loan balances used to determine the average yield on loans in all of the periods presented. Interest income on non-accrual loans is recognized only to the extent it is received in cash. See "Note 2: Significant accounting policies" of our audited consolidated financial statements for further information.

Analysis of Changes in Volume and Rate on Interest Income and Interest Expense

The following table presents the amount of changes in interest income and interest expense from December 31, 2020 to December 31, 2021 and from December 31, 2019 to December 31, 2020, due to changes in both average volume and average rate. Changes not solely due to volume or rate have been allocated to volume.

(in millions of \$)	2021 compared to 2020			2020 compared to 2019		
	Increase/ (Decrease) due to Changes in		Net Increase/ (Decrease)	Increase/ (Decrease) due to Changes in		Net Increase/ (Decrease)
	Volume	Rate		Volume	Rate	
Interest income related to:						
Cash due from banks — Interest bearing	0.04	(6.74)	(6.70)	(0.90)	(27.80)	(28.70)
Securities purchased under agreement to resell	0.09	(0.59)	(0.50)	0.99	(0.79)	0.20
Short-term investments	(0.01)	(3.49)	(3.50)	2.15	(3.05)	(0.90)
Available-for-sale	11.74	(13.94)	(2.20)	2.23	(12.33)	(10.10)
Held-to-maturity	8.61	(13.71)	(5.10)	(1.43)	(8.67)	(10.10)
Total investment in securities ⁽¹⁾	20.35	(27.65)	(7.30)	0.80	(21.00)	(20.20)
Commercial loans	(5.07)	(6.73)	(11.80)	14.14	(11.14)	3.00
Consumer loans	9.76	(7.06)	2.70	18.12	(24.62)	(6.50)
Total loans, net of allowance for credit losses ⁽²⁾	4.69	(13.79)	(9.10)	32.26	(35.76)	(3.50)
Total interest-earning assets	25.16	(52.26)	(27.10)	35.30	(88.40)	(53.10)
Interest expenses related to:						
Deposits	(1.61)	11.21	9.60	(2.26)	28.66	26.40
Securities sold under agreement to repurchase	—	—	—	(0.01)	0.01	—
Long-term debt	0.13	(0.43)	(0.30)	(1.61)	0.21	(1.40)
Total interest bearing liabilities	(1.48)	10.78	9.30	(3.88)	28.88	25.00
Change in net interest income	23.68	(41.48)	(17.80)	31.42	(59.52)	(28.10)

⁽¹⁾ Yields are based on average historical costs and yields on securities held in income tax exempt jurisdictions are not computed on a tax-equivalent yield basis.

⁽²⁾ Interest income and rates on loans include loan fees (December 31, 2021: \$6.7 million; December 31, 2020: \$6.3 million and December 31, 2019: \$4.6 million). Additionally, average non-accrual loans were included in the average loan balances used to determine the average yield on loans in all of the periods presented.

Investment Portfolio

The following table presents an analysis of the weighted average yields for interest bearing debt securities that are not held at fair value through earnings as at December 31, 2021:

	Remaining term to maturity					Total
	Within 1 year	1 to 5 years	After 5 through 10 years	After 10 years	No specific or single maturity	
Available-for-sale						
US government and federal agencies	— %	0.66 %	1.26 %	— %	2.15 %	1.79 %
Non-US governments debt securities	— %	0.87 %	— %	— %	— %	0.87 %
Asset-backed securities - Student loans	— %	— %	— %	— %	1.69 %	1.69 %
Residential mortgage-backed securities	— %	— %	— %	— %	3.22 %	3.22 %
Weighted average yield⁽¹⁾	— %	0.73 %	1.26 %	— %	2.16 %	1.72 %
Held-to-maturity						
US government and federal agencies	— %	— %	— %	— %	2.43 %	2.43 %
Weighted average yield⁽¹⁾	— %	— %	— %	— %	2.43 %	2.43 %
Total Weighted average yield⁽¹⁾	— %	0.73 %	1.26 %	— %	2.30 %	2.03 %

⁽¹⁾ Yields are based on average historical costs and yields on securities held in income tax exempt jurisdictions are not computed on a tax-equivalent yield basis.

Loan Portfolio

Maturity Profile of the Loan Portfolio

The following table presents certain items in our loan portfolio by contractual maturity as at December 31, 2021:

(in millions of \$)	Remaining term to average contractual maturity					Total
	Within 1 year	1 to 5 years	After 5 years through 15 years	After 15 years	No specific maturity ⁽¹⁾	
Commercial loans						
Government	23.8	84.7	151.0	—	—	259.5
Commercial and industrial	75.0	158.4	151.9	—	—	385.3
Commercial overdrafts	105.4	—	—	—	—	105.4
Total Commercial loans	204.2	243.1	302.9	—	—	750.2
Commercial real estate loans						
Commercial mortgage	111.9	53.1	514.7	3.9	—	683.6
Construction	8.1	1.5	—	—	—	9.6
Total Commercial real estate loans	120.0	54.6	514.7	3.9	—	693.2
Consumer loans						
Automobile financing	1.1	19.8	0.7	—	—	21.6
Credit card	72.9	—	—	—	—	72.9
Overdrafts	42.3	—	—	—	—	42.3
Other consumer	26.1	29.7	20.8	1.9	—	78.5
Total Consumer loans	142.4	49.5	21.5	1.9	—	215.3
Total Residential mortgages	622.3	1,230.3	639.0	1,133.4	—	3,625.0
Non-interest bearing items without a contractual maturity⁽¹⁾	—	—	—	—	(15.0)	(15.0)
Total	1,088.9	1,577.5	1,478.1	1,139.2	(15.0)	5,268.7

The following table presents our loan portfolio by maturity and type of interest as at December 31, 2021:

(in millions of \$)	Remaining term to average contractual maturity					Total
	Within 1 year	1 to 5 years	After 5 years through 15 years	After 15 years	No specific maturity ⁽¹⁾	
Loans with fixed interest rates:						
Commercial loans	9.0	78.3	158.7	—	—	246.0
Commercial real estate loans	—	5.0	149.2	—	—	154.2
Consumer loans	1.7	0.9	0.4	—	—	3.0
Residential mortgages	64.8	169.5	120.6	211.7	—	566.6
Total Loans with fixed interest rates	75.5	253.7	428.9	211.7	—	969.8
Loans with floating or adjustable interest rates:						
Commercial loans	195.2	164.8	144.2	—	—	504.2
Commercial real estate loans	120.0	49.6	365.5	3.9	—	539.0
Consumer loans	140.7	48.6	21.1	1.9	—	212.3
Residential mortgages	557.5	1,060.8	518.4	921.7	—	3,058.4
Total loans with floating or adjustable interest rates	1,013.4	1,323.8	1,049.2	927.5	—	4,313.9
Non-interest bearing items without a contractual maturity⁽¹⁾	—	—	—	—	(15.0)	(15.0)
Total loans	1,088.9	1,577.5	1,478.1	1,139.2	(15.0)	5,268.7

⁽¹⁾Included here are items without a contractual maturity such as deferred loans fees and fair value adjustments.

Credit Ratios

The following table presents our credit ratios for the years indicated:

(in millions of \$)	For the year ended December 31		
	2021	2020	2019
Allowance for credit losses to total loans outstanding:			
Allowance for credit losses	28.1	34.1	23.6
Total loans outstanding	5,268.7	5,194.9	5,166.2
	<u>0.5 %</u>	<u>0.7 %</u>	<u>0.5 %</u>
Non-accrual loans to total loans outstanding:			
Non-accrual loans	61.0	72.5	50.4
Total loans outstanding	5,268.7	5,194.9	5,166.2
	<u>1.2 %</u>	<u>1.4 %</u>	<u>1.0 %</u>
Allowance for credit losses to non-accrual loans:			
Allowance for credit losses	28.1	34.1	23.6
Non-accrual loans	61.0	72.5	50.4
	<u>46.0 %</u>	<u>47.0 %</u>	<u>47.0 %</u>
Net charge-offs (recoveries) during the period to average loans outstanding:			
Commercial loans			
Net charge-offs (recoveries) during the period	0.0	3.6	0.4
Average amount outstanding	758.1	852.9	699.4
	<u>0.01 %</u>	<u>0.42 %</u>	<u>0.05 %</u>
Commercial real estate loans			
Net charge-offs (recoveries) during the period	0.0	0.0	0.0
Average amount outstanding	747.0	750.3	631.1
	<u>— %</u>	<u>— %</u>	<u>— %</u>
Consumer loans			
Net charge-offs (recoveries) during the period	-0.1	0.6	1.0
Average amount outstanding	211.1	228.2	213.7
	<u>(0.05)%</u>	<u>0.28 %</u>	<u>0.47 %</u>
Residential Mortgages			
Net charge-offs (recoveries) during the period	2.5	1.7	0.0
Average amount outstanding	3,516.9	3,260.1	2,930.5
	<u>0.07 %</u>	<u>0.05 %</u>	<u>— %</u>
Total loans			
Net charge-offs (recoveries) during the period	2.5	5.9	1.4
Average amount outstanding	5,199.9	5,061.7	4,369.5
	<u>0.05 %</u>	<u>0.12 %</u>	<u>0.03 %</u>

Allowance for credit losses to loans outstanding decreased from 0.7% to 0.5% in 2021 from 2020 due to both the improvement in macroeconomic forecasts impacting future expected credit loss estimates and the reduction in non-performing loans.

Non-accrual loans to total loan outstanding ratio decreased from 1.4% to 1.2% in 2021 from 2020 mainly due to the payoff of residential mortgages and a commercial mortgage in Bermuda which was partially offset by a residential mortgage in the Channel Islands moving into non-accrual.

Net charge-off (recoveries) ratio decreased from 0.12% to 0.05% in 2021 from 2020 mainly due to the 2020 sale of a loan which had previously been provisioned for.

Allocation of the Allowance for Credit Losses

(in millions of \$)	December 31, 2021	
	Amount	Percent of loans in each category to total loans
Balance at End of Period Applicable to:		
Commercial	11.1	14 %
Commercial real estate	1.2	13 %
Consumer	3.0	4 %
Residential Mortgage	12.8	69 %
	28.1	100 %

See "Note 6: Loans" to our audited consolidated financial statements as at December 31, 2021 for the breakdown of allowance for credit losses by each loan category.

Deposits

The following table presents our deposits by category for the years indicated:

(in millions of \$)	For the year ended December 31					
	2021		2020		2019	
	Average balance	Average rate	Average balance	Average rate	Average balance	Average rate
Interest bearing deposits						
Bermuda						
Demand	2,151.8	(0.02)%	1,879.8	(0.03)%	1,946.3	0.07 %
Term	654.5	0.52 %	961.3	0.90 %	1,009.3	1.51 %
Total Bermuda	2,806.3		2,841.1		2,955.6	
Non-Bermuda						
Demand	5,853.8	(0.04)%	5,190.0	0.02 %	4,280.1	0.27 %
Term	2,185.2	0.68 %	1,679.7	0.96 %	1,615.8	1.44 %
Non-Bermuda	8,039.0		6,869.7		5,895.9	
Total interest bearing deposits	10,845.3		9,710.8		8,851.5	
Non-interest bearing demand deposits						
Bermuda	1,810.0		1,511.5		1,417.1	
Non-Bermuda	1,085.0		852.4		730.1	
Total non-interest bearing deposits	2,895.0		2,363.9		2,147.2	

The following table presents the amount of uninsured deposits by reportable segment:

(in millions of \$)	As at December 31	
	2021	2020
Bermuda ⁽¹⁾	4,274.5	4,571.1
Cayman ⁽²⁾	4,612.0	4,108.7
Channel Islands and the UK ⁽³⁾⁽⁴⁾	4,702.8	4,284.8
	13,589.3	12,964.6

⁽¹⁾ The Bermuda Deposit Insurance Scheme covers only BMD deposits up to a maximum of \$25,000 per group of depositor relationships. Eligibility is limited to individuals; sole proprietors; partnerships; unincorporated associations; charities; and companies registered in the Register of Small Businesses maintained by the Bermuda Economic Development Corporation.

⁽²⁾ Cayman currently has no deposit insurance scheme in place.

⁽³⁾ The Guernsey DCS covers deposits up to a maximum of £50,000 per qualifying claimant which is defined as a natural person; the trustee of a Guernsey Retirement Annuity Trust; the executor or administrator of a deceased person's estate; or a Guernsey-registered charity. The total amount of compensation is capped at £100 million in any 5-year period. Claims exceeding this cap will be reduced pro rata.

⁽⁴⁾ The Jersey DCS covers deposits up to a maximum of £50,000 per qualifying depositor per Jersey banking group. Qualifying depositors are defined as private individuals and charities. The total amount of compensation is capped at £100 million in any 5-year period.

The following table presents the amount of uninsured time deposits by reportable segment and time to maturity as at December 31, 2021:

(in millions of \$)	Remaining term to contractual maturity				Total
	Within 3 months	3 to 6 months	6 to 12 months	Over 12 months	
<i>Time deposits in excess of insured limit:</i>					
Bermuda	25.0	10.9	21.6	36.5	94.0
Channel Islands and the UK	113.7	40.1	98.2	0.14	252.1
Total time deposits in excess of insured limit	138.7	51.0	119.8	36.6	346.1
<i>Time deposits in uninsured accounts:</i>					
Bermuda	317.8	105.9	108.7	55.2	587.6
Cayman	367.3	77.3	77.7	2.6	524.9
Channel Islands and the UK	822.7	310.5	361.5	—	1,494.7
Total time deposits in uninsured accounts	1,507.8	493.7	547.9	57.8	2,607.2
Total uninsured time deposits	1,646.5	544.7	667.7	94.4	2,953.3

ITEM 4A: UNRESOLVED STAFF COMMENTS

None.

ITEM 5: OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

Management's Discussion and Analysis of Financial Condition and Results of Operations

This section presents management's perspective on our financial condition and results of operations. The following discussion and analysis is intended to highlight and supplement data and information presented elsewhere in this report, including the consolidated financial statements and related notes and should be read in conjunction with the accompanying tables and our financial statements included in this report. The consolidated financial statements and notes have been prepared in accordance with GAAP. Certain statements in this discussion and analysis may be deemed to include "forward-looking statements" and are based on management's current expectations and are subject to uncertainty and changes in circumstances. Forward-looking statements are not historical facts but instead represent only management's belief regarding future events, many of which by their nature are inherently uncertain and outside of management's control. Actual results may differ materially from those included in these statements due to a variety of factors, including worldwide and local economic conditions, success in business retention and obtaining new business and other factors. Factors that could cause these differences are discussed in the sections titled "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors." For management's considerations and determinations of each non-core item discussed, please see "Reconciliation of Non-GAAP Financial Measures".

Overview

We are a full service bank and wealth manager headquartered in Hamilton, Bermuda. We operate our business through our four reportable segments, three geographical and one other: Bermuda, the Cayman Islands, the Channel Islands and the UK and Other. We offer banking services, comprising of retail and corporate banking, and wealth management, which consists of trust, private banking, and asset management. In our Bermuda and Cayman Islands segments, we offer retail banking and wealth management. In our Channel Islands and the UK segment, we offer corporate banking, wealth management and residential property lending. The Other segment includes our operations in the jurisdictions of The Bahamas, Canada, Mauritius, Singapore and Switzerland. In these jurisdictions we either provide wealth management or operate service centers. These jurisdictions individually and collectively do not meet the quantitative threshold for segmented reporting and are therefore aggregated as a non-reportable operating segment.

The following table details our Net Revenue in total and by segment, as well as our total assets, total loans, total deposits, total AUA (which includes trust and custody AUA) and AUM for the years ended December 31, 2021, December 31, 2020 and December 31, 2019.

	For the year ended December 31		
	2021	2020	2019
Net Revenue			
% of Net Revenue from:			
Bermuda segment	45.2%	47.6%	49.8%
Cayman Islands segment	29.1%	29.1%	30.9%
Channel Islands and the UK segment	20.3%	20.4%	15.2%
Other segment	5.4%	2.9%	4.1%
(in millions of \$)			
Summary Balance Sheet			
Total Assets	15,335.2	14,738.6	
Total Loans	5,240.7	5,160.8	
Total Deposits	13,870.2	13,250.1	
Assets under administration			
Custody and other administration services	36,757.6	32,416.1	
Trust	106,362.3	104,060.4	
Assets under management			
Butterfield Funds	1,757.6	2,028.8	
Other assets under management	3,740.2	3,528.6	

Market Environment

Our business is affected by international, regional and local economic conditions as well as the perception of future economic prospects. The significant macro-economic factors that impact our business include the US and global economic landscapes, unemployment rates, the housing markets and interest rates. With interest rates historically low across the yield curve for most global markets, 2021 began with the expectation of a future rising rate environment underpinned by strengthening economic fundamentals. As COVID-19 vaccinations picked up in the first half of the year, economic growth accelerated as financially healthy consumers resumed travel and leisure activities, and pent-up demand boosted retail sales across most economies. This trend continued throughout most of 2021, ultimately pushing prices for consumer goods, real estate and other financial assets to considerably higher levels. At the end of 2021, central banks around the globe are beginning to remove monetary accommodation to combat increasing inflationary pressures.

COVID-19 continued to impact all of our jurisdictions where, within these small island communities, the Bank plays an important role as an essential services provider, an employer, a source of working capital for companies in need and an active corporate citizen supporting our communities. The Bank continues to mandate social distancing, provide protective equipment to staff, implement split teams when required, and provide broad remote working conditions through its virtual desktop interface, and remains operational to the extent permitted.

Bermuda Segment

Bermuda rebounded economically in 2021 from the 7.3% decline in real GDP in 2020. The Government of Bermuda reported a 4.3% decrease in GDP in the first quarter of 2021 with 2021 full year forecasts predicting growth of 4.8%, although COVID-19 waves in the fall and winter may continue to impact annual growth. The economic growth was largely fueled by the professional services sector, principally insurance and reinsurance, and service firms have adapted well to the hybrid working model of office and home. Employees of this sector also spent more money in the local economy helping to provide some support to retail stores and restaurants as well as hotels through staycations. Tourism improved with higher occupancy levels but still remains well below 2019 levels. Construction was supported by strong demand for home renovations, and real estate sales recovered to 2019 levels with increase of activity from cash buyers in the residential sector. Government finances continued to improve and recent government updates forecast that the budget deficit target for 2021 will be achieved. In addition, Moody's affirmed its stable outlook for Bermuda's sovereign rating in the fourth quarter. It is clear that small and medium sized enterprises continue to struggle. A Chamber of Commerce survey of just over 700 businesses found that 57 had closed permanently and 192 were temporarily closed or on reduced hours. Unemployment remains elevated as 1,900 jobs have been lost since the onset of the pandemic with almost half coming from the hospitality sector due to the closing of two large hotels. In addition, there has been a reduction in airlift capacity to the island which limits travel flexibility. Economic growth in the coming year is expected to remain above the pre-COVID-19 modest trend as economic activity continues to recover. However, a full recovery to 2019 levels is not expected until 2023. See Item 3.D. "Risk Factors - Risks Relating to the Markets in Which We Operate - Adverse economic and market conditions in Bermuda, the Cayman Islands and the Channel Islands and the UK, have in the past resulted in and could in the future result in lower revenue, lower asset quality, increased provisions and lower earnings" and Item 3.D. "Risk Factors - Risks Relating to the Markets in Which We Operate - A decline in tourism in Bermuda or the Cayman Islands could have a material adverse effect on our business, financial condition or results of operations".

	2020	2019R	2018	2017	2016
Bermuda GDP (in millions of BMD \$)	6,882	7,423	7,226	7,142	6,900
% change from prior year	(7.3)%	2.7%	1.2%	3.5%	3.7%
<i>Selected GDP Components:</i>					
Real estate and renting GDP (in millions of BMD \$)	1,043	1,041	1,013	981	929
% change from prior year	0.2%	2.8%	3.3%	5.6%	2.7%
International business GDP (in millions of BMD \$)	1,895	1,835	1,724	1,720	1,718
% change from prior year	3.3%	6.4%	0.2%	0.1%	0.6%

Source: Government of Bermuda, Department of Statistics, Annual Publication - 2020, Gross Domestic Product at current purchaser's prices, Table 4

Caymans Islands Segment

The Cayman Islands experienced its first wave of COVID-19 in Q4 2021 after a prolonged period of low numbers of reported cases. Due to the high vaccination rates in the Cayman Islands, the impact on the healthcare system has been manageable. The borders re-opened to fully vaccinated visitors in Q4 2021, which saw a partial recovery in the tourism sector. Following a 5.8% contraction in GDP in 2020, Cayman's GDP is estimated to have expanded by 1.8% in 2021, driven by financial services, construction and public works projects. Cayman's GDP is projected to grow by 5% in 2022 as tourism continues to recover and GDP is expected to return to pre-pandemic levels by 2023. The unemployment rate dropped slightly from 5.2% in 2020 to 5.0% in 2021 and has remained stable. The Cayman Islands government's prudent fiscal management, evidenced by growing surpluses and overall debt reduction, provided the capacity to take appropriate fiscal measures to support impacted businesses and individuals throughout the pandemic.

	2020	2019R	2018R	2017R	2016
Cayman GDP (in millions of \$)	5,669	6,020	5,517	5,153	4,899
% change from prior year	(5.8)%	9.1%	7.1%	5.2%	3.1%

Source: Economist Intelligence Unit

Channel Islands and UK Segment

2020 was an exceptionally challenging year, with the economies of Guernsey, Jersey and the UK estimated to have suffered contractions of 2.3%, 9.2% and 6.4% respectively. By contrast, 2021 has been characterized by a general improvement in economic activity across the economies, with growth forecasts bringing forward the time at which each jurisdiction is anticipated to move above its pre-pandemic GDP level. In all, it is expected that the Guernsey economy should achieve this by the end of 2021, while the UK should be back to its 2019 level early in 2022 and the Jersey economy soon after.

In terms of COVID-19 response, the Channel Islands have previously introduced a range of restrictions on inbound arrivals and as a consequence, tourism and business-related travel is significantly below 2019 levels, but each economy is gradually returning to normality. Various health containment guidelines and measures have been introduced since the pandemic began, focusing on rapid testing regimes and vaccination programs, together with social distancing measures, encouraging working from home and the use of various lockdown strategies at various points in the cycle – and these have continued during 2021 as necessary. Vaccination levels across the Channel Islands continue to be high among peer nations, and the take up rates of booster shots are now reaching similar levels. Furthermore, in a measured response to the impact of COVID-19, both islands have implemented a range of government support initiatives such as payroll co-funding, government grants and other fiscal measures. Funding of such measures has come through various sources, including the negotiation of revolving credit lines with local banks, although such use has reduced in 2021.

As discussed above, the UK economy has also suffered from the effects of the global pandemic, but with a combination of exceptionally easy monetary conditions and generous fiscal packages provided by the government, the economy has recovered most of the ground lost during 2020. The latest data suggests that GDP grew by 1.1% in the third quarter of 2021 and should reach 6.0% for the full year. Looking forwards, the emergence of the Omicron variant in Q4 2021 has the potential to weigh on the ongoing economic recovery in the near-term, given the uncertainty it has created. However, we expect this to play out through a slightly lower level of positive growth and a slower pace of monetary tightening, rather than a return to economic contraction.

Our operations in the Channel Islands and UK use the Pound Sterling as their functional currency, and are closely linked to economic trends in both the UK and the Eurozone due to the close relationships between the UK and Europe, despite the Channel Islands autonomy from the UK. See Item 3.D. "Risk Factors".

Against this backdrop, our banking businesses in the Channel Islands have benefited from local loan demand from a buoyant housing market coinciding with the launch of the Channel Islands Mortgage product during 2021 whilst our loan offering has continued to be competitive in the UK market, specifically in the Prime Central London property market.

<i>Current/Nominal (in £ Millions)</i>	2020 CE	2019 CE	2018 CE	2017	2016
Guernsey GDP (GVA Market/GBP)	3,178	3,252	3,169	3,101	2,934
Annual Changes (%)	(2.3)%	2.6%	2.2%	5.7%	4.2%

Source: States of Guernsey

	2020	2019R	2018	2017	2016
Jersey GDP (GBP (in £ millions))	4,528	4,988	4,803	4,710	4,669
Annual Changes (%)	(9.2)%	3.9%	2.0%	0.9%	0.2%

Source: States of Jersey

We continue to maintain a cautious stance with a liquid balance sheet, a conservative investment portfolio, and no reliance on wholesale funding. Total liquid cash and investments made up 63.3% of our balance sheet at December 31, 2021, which is up slightly from 62.2% at December 31, 2020.

The Bank continued to support customers and operate as permitted across all jurisdictions in 2021 without any support or concessions from governments or regulators in any of our operating jurisdictions.

2021 Overview

In 2021, our net income increased by \$15.5 million to \$162.7 million from \$147.2 million in 2020. Despite the headwinds of the continued low interest environment following the COVID-19 pandemic on net interest income, the Bank saw an uplift in net income of \$15.5 million driven by an increase in fee income attributable to increased card service contributions and foreign exchange transactional volumes, a decrease in the provision for credit losses due primarily to improving macroeconomic forecasts, and decreases in non-interest expenses due primarily to realizing the benefits from the 2020 COVID-19 driven staff restructuring programs. These staff restructuring programs were considered non-core and contributed to non-core costs decreasing by \$6.4 million in 2021 from \$7.3 million in 2020. Management continued to focus on the diligent management of capital, expenses and risks, and maintaining our strong capital position with CET1 and Total capital ratios of 17.6% and 21.2%, respectively. For the year ended December 31, 2021, the Board declared four quarterly dividends of \$0.44 per quarter totaling \$1.76 for each common share held on record as of the applicable record dates, and repurchased 534,828 common shares from the existing share buy-back program. Subsequent to year end, the Board approved a new share buy-back program authorizing the purchase of up to 2.0 million common shares expiring on February 28, 2023. The Board will continue to evaluate capital planning options and the payment of future dividends as warranted, subject to regulatory requirements. See Item 8.A. "Consolidated Statements and Other Financial Information - Dividend Policy" and Item 3.D. "Risk Factors – General Risk Factors - Holders of our common shares may not receive dividends" elsewhere in this report for further details.

The quality of our assets remained strong and total assets increased year-over-year by \$0.6 billion to \$15.3 billion, driven primarily by increased deposit levels in Cayman and the Channel Islands. Deposits increased by \$0.6 billion to \$13.9 billion whilst loans remained stable at \$5.2 billion. The increase in deposit balances was driven by corporate deposit increases in Cayman and the Channel Islands, and partially offset by expected corporate deposit decreases in Bermuda. Investments increased by \$1.4 billion to \$6.2 billion driven by increased depositor funding and the deployment of assets into the investment portfolio. Overall liquidity remained strong, as measured by cash due from banks, securities purchased under agreements to resell, short-term investments and investments in securities as a percentage of total assets, ending the year at 63.3% compared to 62.2% in the prior year.

Our shareholders' equity decreased marginally year-over-year by \$4.5 million to \$977.5 million, which was a result of negative mark-to-market movements in the value of our fixed income investments as long term US dollar rates have increased, common share buy-backs and retirements throughout the year and partially offset by organic growth through net income net of dividends paid out during the year.

Key contributors to our 2021 results were as follows:

- **Profitability:** Net income increased year-over-year by \$15.5 million, or 10.5%, to \$162.7 million, which was largely attributable to increased fee revenues due to improved economic activity as economies re-opened, a decrease in the provision for credit losses and cost-savings from the prior year COVID-19 driven staff restructuring programs implemented in order to create operating leverage in a low interest rate environment.
- **Net interest margin:** NIM decreased by 40 basis points to 202 basis points compared to 242 basis points in 2020, and the cost of funding decreased by 10 basis point to 11 basis points. The decrease in NIM was due to margin declines across all interest earning asset categories, driven by lower market interest rates and increased paydowns of higher yielding investment positions with re-investment at lower rates; loan yields decreased by 28 basis points to 426 basis points; the investment portfolio yields decreased by 62 basis points to 179 basis points; and yields on cash due from banks, securities purchased under agreements to resell and short-term investments were down 30 basis points to 4 basis points. The cost of funding offset the overall NIM decrease, with expense yields decreasing by 10 basis points to 11 basis points, primarily due to the active repricing of deposits in response to lower market rates.
- **Expenses:** Total non-interest expenses decreased year-over-year by \$10.7 million to \$333.9 million in 2021 due to a \$12.3 million decrease in staff-related costs from reduced headcount as a result of non-core restructuring programs initiated in 2020 and a \$1.3 million decrease in technology and communications spending due to the full depreciation of the Bank's core banking system outpacing costs associated with the new technology projects. This was offset by a \$1.5 million increase in property costs driven by increased property maintenance costs and a \$1.2 million increase in non-service employee benefits expense driven by increased costs from the post-retirement medical benefit plan. Our expenses also included \$1.8 million of non-core expenses which relate to redundancy costs associated with the transfer of Channel Islands banking operations functions from Mauritius to Butterfield's service centers in Canada and Guernsey and professional fees related to the settlement of the US Department of Justice inquiry which commenced in 2013. After removing the effect of these items, core non-interest expenses decreased marginally by \$4.5 million, from \$336.6 million in 2020, to \$332.1 million in 2021.
- **Deposits:** Deposits increased year-over-year by \$0.6 billion to \$13.9 billion as at December 31, 2021. The increase in deposit balances was driven by corporate deposit increases in Cayman and the Channel Islands, and partially offset by expected corporate deposit decreases in Bermuda. Interest bearing deposit costs decreased by 12 basis points to 14 basis points in 2021. With non-interest bearing deposits totaling \$2.8 billion on December 31, 2021, the average cost of deposits for the year decreased by 10 basis points to 11 basis points. Cost of funds decreased due to the active repricing of deposits in response to lower market rates.

- **Loan quality:** As at December 31, 2021, we had gross non-accrual loans of \$61.0 million representing 1.2% of total gross loans, a decrease from \$72.5 million, or 1.4%, of total loans, at December 31, 2020. The decrease in non-accrual loans was driven by the payoff of residential mortgages and a commercial mortgage in Bermuda and partially offset by a residential mortgage in the Channel Islands moving into non-accrual in the fourth quarter of 2021.

2020 Overview

In 2020, our net income decreased by \$29.9 million to \$147.2 million from \$177.1 million in 2019. This decrease was a reflection of the low interest rate environment related to the COVID-19 pandemic which impacted all interest-earning assets. This was partially offset by a decrease in interest expense due to the active repricing of the ABN AMRO (Channel Islands) deposit book, lower rollover deposit costs and lower marketing costs, due to the delayed rollout of our new brand, and travel costs, due to global travel restrictions. The non-core items contributing to the decrease in our net income comprised principally of staff costs related to the cost restructure programs announced in Q3 2020 in order to mitigate the revenue impacts from COVID-19. Management continued to focus on the ABN AMRO (Channel Islands) integration which was completed in September 2020, the diligent management of capital, expenses and risks, and maintaining our strong capital position with CET1 and Total capital ratios of 16.1% and 19.8%, respectively. For the year ended December 31, 2020, the Board declared four quarterly dividends of \$0.44 per quarter totaling \$1.76 for each common share held on record as of the applicable record dates, and completed the existing share buy-back program of 3.5 million common shares. Subsequent to year end, the Board approved a new share buy-back program authorizing the purchase of up to 2.0 million common shares expiring February 2022. The Board will continue to evaluate capital planning options and the payment of future dividends as warranted, subject to regulatory requirements. See Item 8.A. "Consolidated Statements and Other Financial Information - Dividend Policy" and Item 3.D. "Risk Factors – General Risk Factors - Holders of our common shares may not receive dividends" elsewhere in this report for further details.

The quality of our assets remained strong and total assets increased year-over-year by \$0.8 billion to \$14.7 billion, driven primarily by increased deposit levels in Bermuda and the Cayman Islands. Deposits increased by \$0.8 billion to \$13.3 billion whilst loans remained stable at \$5.2 billion. The increase in deposit balances was driven by both corporate and retail depositors in Bermuda and the Cayman Islands, the retail increases driven by the retail loan deferral programs in these segments. Investments increased by \$0.4 billion to \$4.9 billion. Overall liquidity remained strong, as measured by cash due from banks, securities purchased under agreements to resell, short-term investments and investments in securities as a percentage of total assets, ending the year at 62.2% compared to 60.0% in the prior year.

Our shareholders' equity increased year-over-year by \$18.2 million to \$981.9 million, which was a result of organic growth through net income net of dividends paid out during the year, the positive effect of mark-to-market movements in the value of our fixed income investments, partially offset by the common share buy-backs and retirements throughout the year.

Key contributors to our 2020 results were as follows:

- **Profitability:** Net income decreased year-over-year by \$29.9 million, or 16.9%, to \$147.2 million, which was largely attributable to two US Federal Reserve and two Bank of England interest rate cuts to near-zero in March 2020 in response to global synchronized economic stoppages related to the global COVID-19 pandemic. In order to manage the bottom line, the Bank implemented cost restructure programs around the Group which included voluntary separation, early retirement and redundancy costs and which were classified as "non-core".
- **Net interest margin:** NIM decreased by 44 basis points to 242 basis points compared to 286 basis points in 2019, and the cost of funding decreased by 26 basis point to 21 basis points. One of the drivers of the decrease in NIM was a decrease in loan yields by 82 basis points to 454 basis points as a result of the impact of US Federal Reserve and Bank of England rate reductions on the US prime rate referenced Cayman loans and Bank of England base rate referenced Channel Island loans, respectively. The investment portfolio also saw yields decrease by 48 basis points to 241 basis points due to elevated prepayment speeds on the mortgage-backed securities due to the low rate environment, which were then reinvested at lower yields. Yields on cash due from banks, securities purchased under agreements to resell and short-term investments, also impacted by the low rate environment, were down 95 basis points to 34 basis points. The cost of funding offset the overall NIM decrease, with yields decreasing by 26 basis points to 21 basis points due to the active repricing of the ABN AMRO (Channel Islands) deposit book, lower term deposit volumes and lower rollover deposit costs.
- **Expenses:** Total non-interest expenses decreased year-over-year by \$12.3 million to \$344.6 million in 2020 due to a \$9.8 million decrease in staff-related costs from reduced headcount as a result of restructuring programs initiated in 2020; a \$6.7 million decrease in professional and outside services due principally to the costs associated with the ABN AMRO (Channel Islands) acquisition in 2019 and a reduction in the volume of professional and outside services due to efficiency programs implemented in 2020; and a \$3.6 million decrease in marketing costs associated with the delayed rollout of the Bank's re-branding initiative, travel expenses and client event costs. This was offset by a \$5.2 million increase in property costs driven by the full year recognition of ABN AMRO (Channel Islands) as well as extra health and safety related expenditure and planned renovations around the Group and a \$3.7 million increase in income tax expense driven by increased net income in the Channel Islands and the recognition of a deferred tax asset in the UK in 2019. Our expenses also included \$7.3 million of non-core expenses which relate to the cost restructure program, e.g., voluntary separation, early retirement and redundancy costs. After removing the effect of these items, core non-interest expenses increased marginally by \$1.5 million, from \$335.1 million in 2019, to \$336.6 million in 2020.
- **Deposits:** Deposits increased year-over-year by \$0.8 billion as at December 31, 2020. The increase in deposit balances were driven by both corporate and retail depositors in Bermuda and the Cayman Islands, the increase in retail was driven by the retail loan deferral programs in these segments, and offset by expected runoff in the Channel Islands as the deposit book was repriced. Interest bearing deposit costs decreased by 32 basis points to 26 basis points in 2020. With non-interest bearing deposits totaling \$3.0 billion on December 31, 2020, the average cost of deposits for the year decreased by 26 basis points to 21 basis points. Cost of funds decreased primarily due to both lower term deposit volumes and costs and the impact of the aforementioned active deposit repricing in the Channel Islands.
- **Loan quality:** As at December 31, 2020, we had gross non-accrual loans of \$72.5 million representing 1.4% of total gross loans, an increase from \$50.4 million, or 1.0%, of total loans, at December 31, 2019.

Financial Summary

(in millions of \$)	As at December 31		Dollar change	Percent change
	2021	2020		
Assets				
Cash due from banks	2,179.8	3,289.6	(1,109.8)	(33.7)%
<i>Of which cash and demand deposits with banks — non-interest bearing</i>	115.7	133.4	(17.7)	(13.3)%
<i>Of which demand deposits with banks — interest bearing</i>	437.6	433.5	4.1	0.9 %
<i>Of which cash equivalents — interest bearing</i>	1,626.5	2,722.7	(1,096.2)	(40.3)%
Securities purchased under agreements to resell	96.1	197.0	(100.9)	(51.2)%
Short-term investments	1,198.9	823.0	375.9	45.7 %
Investment in securities	6,237.3	4,862.8	1,374.5	28.3 %
<i>Of which equity securities at fair value</i>	0.2	7.3	(7.1)	(97.3)%
<i>Of which available-for-sale ⁽¹⁾</i>	3,473.7	2,661.1	812.6	30.5 %
<i>Of which held-to-maturity⁽²⁾</i>	2,763.3	2,194.4	568.9	25.9 %
Loans, net of allowance for credit losses	5,240.7	5,160.8	79.9	1.5 %
Premises, equipment and computer software, net of accumulated depreciation	138.7	150.8	(12.1)	(8.0)%
Goodwill	25.4	25.6	(0.2)	(0.8)%
Other intangible assets, net	60.8	67.2	(6.4)	(9.5)%
Equity method investments	12.6	12.9	(0.3)	(2.3)%
Other real estate owned, net	0.7	4.1	(3.4)	(82.9)%
Accrued interest and other assets	144.3	144.8	(0.5)	(0.3)%
Total assets	15,335.2	14,738.6	596.6	4.0 %
Liabilities				
Total deposits	13,870.2	13,250.1	620.1	4.7 %
<i>Of which — non-interest bearing</i>	2,820.6	3,012.4	(191.8)	(6.4)%
<i>Of which — interest bearing</i>	11,049.6	10,237.7	811.9	7.9 %
Employee benefit plans	126.2	131.3	(5.1)	(3.9)%
Accrued interest and other liabilities	189.4	203.9	(14.5)	(7.1)%
Long-term debt	171.9	171.5	0.4	0.2 %
Total liabilities	14,357.7	13,756.7	601.0	4.4 %
Total shareholders' equity⁽³⁾⁽⁴⁾	977.5	981.9	(4.4)	(0.4)%
<i>Of which common share capital⁽⁴⁾</i>	0.5	0.5	—	— %
Total liabilities and shareholders' equity	15,335.2	14,738.6	596.6	4.0 %
Common shares outstanding (number)⁽⁴⁾	49.9	50.0	(0.1)	(0.2)%

(1) Amortized cost of AFS debt securities was \$3,495.6 million as at December 31, 2021 and \$2,588.3 million as at December 31, 2020.

(2) Fair value of HTM debt securities was \$2,786.1 million as at December 31, 2021 and \$2,304.8 million as at December 31, 2020.

(3) As at December 31, 2021, the number of outstanding awards of unvested common shares was 1.0 million (December 31, 2020: 0.9 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.

(4) Figures reflect the retirement of 0.5 million shares during the year ended December 31, 2021 (December 31, 2020: 3.5 million).

Summary Income Statement	For the year ended December 31			Dollar change		Percent change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
(in millions of \$, except per share data)							
Interest income							
Loans	221.5	230.7	234.0	(9.2)	(3.3)	(4.0)%	(1.4)%
Investments	101.9	109.2	129.4	(7.3)	(20.2)	(6.7)%	(15.6)%
Deposits with banks and other	1.4	12.1	41.6	(10.7)	(29.5)	(88.4)%	(70.9)%
Interest expense	(25.1)	(34.4)	(59.4)	9.3	25.0	(27.0)%	(42.1)%
Net interest income before provision for credit losses	299.8	317.6	345.7	(17.8)	(28.1)	(5.6)%	(8.1)%
Non-interest income	198.1	183.9	184.0	14.2	(0.1)	7.7 %	(0.1)%
Net revenue	497.9	501.5	529.7	(3.6)	(28.2)	(0.7)%	(5.3)%
Provision for credit recoveries (losses)	3.1	(8.5)	0.2	11.6	(8.7)	(136.5)%	(4,350.0)%
Salaries and other employee benefits	(161.3)	(173.7)	(183.7)	12.4	10.0	(7.1)%	(5.4)%
Other non-interest expenses (including income taxes)	(175.7)	(173.3)	(171.9)	(2.4)	(1.4)	1.4 %	0.8 %
Net income before other gains (losses)	164.0	146.0	174.3	18.0	(28.3)	12.3 %	(16.2)%
Total other gains (losses)	(1.4)	1.2	2.8	(2.6)	(1.6)	(216.7)%	(57.1)%
Net income	162.7	147.2	177.1	15.5	(29.9)	10.5 %	(16.9)%
Non-core items	0.9	7.3	20.8	(6.4)	(13.5)	(87.7)%	(64.9)%
Core net income (Non-GAAP)	163.6	154.5	197.9	9.1	(43.4)	5.9 %	(21.9)%
Core earnings to common shareholders (Non-GAAP)	163.6	154.5	197.9	9.1	(43.4)	5.9 %	(21.9)%
Common dividends paid	(87.3)	(88.9)	(93.6)	1.6	4.7	(1.8)%	(5.0)%
<i>Earnings per common share from continuing operations</i>							
<i>(in US\$)</i>							
Basic	3.28	2.91	3.33	0.37	(0.42)	12.7 %	(12.6)%
Diluted ⁽¹⁾	3.26	2.90	3.30	0.36	(0.40)	12.4 %	(12.1)%

⁽¹⁾ Reflects only "in the money" options and certain unvested share awards, which have a dilutive effect.

Financial Ratios and Other Performance Indicators

We use a number of financial measures to track the performance of our business and guide our management. Some of these measures are defined by, and calculated in compliance with, applicable banking regulations, but such regulations often provide for certain discretion in defining and calculating the measures. These measures allow management to review our core activities, and enable us and our investors to evaluate relevant trends meaningfully when considered in conjunction with (but not in lieu of) measures that are calculated in accordance with GAAP. Non-GAAP measures used in this report are not a substitute for GAAP measures and readers should consider the GAAP measures as well.

The following table shows certain of our key financial measures for the periods indicated. Because of the discretion that we and other banks and companies have in defining and calculating these measures, care should be taken in comparing such measures used by us with similarly titled measures of other banks and companies, as such measures may not be directly comparable.

Many of these measures are non-GAAP financial measures. We believe that each of these measures is useful for investors in understanding trends in our business that may not otherwise be apparent when relying solely on our GAAP-calculated results. For more information on the non-GAAP financial measures presented below, including a reconciliation to the most directly comparable GAAP financial measures, see Item 5.A. "Item 5 - Operating and Financial Review and Prospects - Overview and highlights - Reconciliation of Non-GAAP Financial Measures".

For the year ended December 31

(in %, unless otherwise indicated)	For the year ended December 31		
	2021	2020	2019
Return on average common shareholders' equity ⁽¹⁾	16.8	15.0	19.1
Core return on average tangible common equity ⁽²⁾	18.7	17.3	23.4
Return on average assets ⁽³⁾	1.1	1.1	1.4
Core return on average tangible assets ⁽⁴⁾	1.1	1.1	1.6
Net interest margin ⁽⁵⁾	2.02	2.42	2.86
Efficiency margin ⁽⁶⁾	65.9	67.6	66.4
Core efficiency ratio ⁽⁷⁾	65.5	66.0	62.2
Fee income ratio ⁽⁸⁾	39.5	37.3	34.7
Common equity Tier 1 capital ratio ⁽⁹⁾⁽¹⁰⁾	17.6	16.1	17.3
Tier 1 capital ratio ⁽⁹⁾	17.6	16.1	17.3
Total capital ratio ⁽⁹⁾	21.2	19.8	19.4
Leverage ratio ⁽⁹⁾⁽¹⁰⁾	5.6	5.3	5.9
Tangible common equity/tangible assets ⁽¹⁰⁾	5.8	6.1	6.3
Tangible total equity/tangible assets ⁽¹¹⁾	5.8	6.1	6.3
Non-performing assets ratio ⁽¹²⁾	0.5	0.6	0.4
Non-accrual ratio ⁽¹³⁾	1.2	1.4	1.0
Non-performing loan ratio ⁽¹⁴⁾	1.4	1.8	1.3
Net charge-off (recoveries) ratio ⁽¹⁵⁾	0.1	0.1	—
Core net income attributable to common shareholders ⁽¹⁶⁾⁽¹⁷⁾ (in \$ million)	163.6	154.5	197.9
Core net income per common share fully diluted ⁽¹⁸⁾⁽²⁰⁾ (in \$)	3.28	3.04	3.69
Common equity per share ⁽¹⁹⁾ (in \$)	19.83	19.88	18.40

- (1) ROE measures profitability revealing how much profit is generated with the money invested by common shareholders. ROE represents the amount of net income to common shareholders as a percentage of average common equity and is calculated as net income to common shareholders / average common equity. Net income to common shareholders is net income for the full fiscal year, before dividends paid to common shareholders but after dividends to preference shareholders. Average common equity does not include the preference shareholders' equity.
- (2) Core ROATCE is a non-GAAP financial measure. Core ROATCE measures core profitability as a percentage of average tangible common equity. Core ROATCE is the amount of core income to common shareholders as a percentage of average tangible common equity and is calculated as core earnings to common shareholders / average tangible common equity. Core earnings to common shareholders is net earnings to common shareholders for the full fiscal year (before dividends paid to common shareholders but after dividends to preference shareholders) adjusted to exclude certain items that are included in the financial results presented in accordance with GAAP. Average tangible common equity does not include the preference shareholders' equity or goodwill and intangible assets. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (3) ROA is an indicator of profitability relative to average total assets and is intended to demonstrate how efficient management is at using the assets to generate earnings. The ROA ratio is calculated as net income / average total assets.
- (4) Core ROATA is a non-GAAP financial measure. Core ROATA is an indicator used to assess the core profitability of average tangible assets and is intended to demonstrate how efficiently management is utilizing its tangible assets to generate core net income. Core ROATA is calculated by taking the core income as a percentage of average tangible assets and is calculated as core net income / average tangible assets. Core net income is the net income adjusted to exclude certain items that are included in the financial results presented in accordance with GAAP. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (5) NIM is a performance metric that examines how successful the Bank's investment decisions are compared to its cost of funding assets and is expressed as net interest income as a percentage of average interest-earning assets. NIM is calculated as net interest income before provision for credit losses / average interest-earning assets. Net interest income is the interest earned on cash due from banks, investments, loans and other interest earning assets minus the interest paid for deposits, short-term borrowings and long-term debt. The average interest-earning assets is calculated using daily average balances of interest-earning assets.
- (6) Efficiency margin is a non-GAAP financial measure. Efficiency margin is an indicator used to assess operating efficiencies and is intended to demonstrate how efficiently management is controlling expenses relative to generating revenues. The efficiency margin is calculated by taking the non-interest expenses as a percentage of total net revenue before total other gains (losses) and provisions for credit losses, and is calculated as (non-interest expense - amortization of intangible assets) / (total non-interest income + net interest income before provision for credit losses). For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (7) The core efficiency ratio is a non-GAAP financial measure. The core efficiency ratio is an indicator used to assess operating efficiencies and is intended to demonstrate how efficiently management is controlling expenses relative to generating revenues on our core activities. The core efficiency ratio is calculated by taking the core non-interest expenses as a percentage of total net revenue before provision for credit losses and other gains and losses and is calculated as (core non-interest expenses - amortization of intangible assets) / (core non-interest income + core net interest income before provision for credit losses). Core non-interest expenses exclude certain items that are included in the financial results presented in accordance with GAAP including income taxes and amortization of intangible assets. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (8) The fee income ratio is a measure used to determine the proportion of revenues derived from non-interest income sources. The ratio is calculated as non-interest income / (non-interest income + net interest income after provision for credit losses).
- (9) The Bank's regulatory capital is determined in accordance with Basel III guidelines as issued by the BMA. The total capital ratio measures the amount of the Bank's capital in relation to the amount of risk it is taking. All banks must ensure that a reasonable proportion of their risk is covered by permanent capital. Under Basel III, Pillar I, banks must maintain a minimum total capital ratio of 13.5%, inclusive of all capital buffers. In effect, this means that 13.5% of the RWA must be covered by permanent or near

permanent capital. The risk weighting process takes into account the relative risk of various types of lending and asset placements. The higher the capital adequacy ratio a bank has, the greater the level of unexpected losses it can absorb before becoming insolvent. The tier 1 capital ratio is the ratio of the Bank's core equity capital to its total RWA. RWA is the total of all assets held by the Bank weighted by credit risk according to a formula determined by the BMA which follows the BCBS guidelines in setting formulas for asset risk weights. The CET1 ratio is equivalent to the tier 1 capital ratio except that it only includes common equity in the numerator and we must maintain a minimum CET1 ratio of 10%. Basel III also adopts the new Leverage Ratio regime, which is calculated by dividing tier 1 capital by an exposure measure, and banks must maintain a minimum Leverage Ratio of 5.0%. The 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 and other risks.

- (10) The TCE/TA ratio is a non-GAAP financial measure. The TCE/TA ratio is a measure used to determine how significant of an unexpected loss can be incurred by the Bank before other forms of capital, other than common equity, are impacted. The TCE/TA ratio is calculated as (common equity - intangible assets - goodwill) / tangible assets. Tangible common equity does not include the preference shareholders' equity or goodwill and intangible assets. Tangible assets are the Bank's total assets from continuing operations less goodwill and intangibles. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (11) The TE/TA ratio is a non-GAAP financial measure. The TE/TA ratio is a measure used to determine how much loss the Bank can absorb before subordinated debt capital is impacted. The TE/TA ratio is calculated as (total shareholders' equity - intangible assets - goodwill) / tangible assets. Tangible assets are the Bank's total assets from continuing operations less intangible assets and goodwill. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (12) The NPA ratio is an indicator of the credit quality of the Bank's total assets by expressing the non-performing assets as a percentage of total assets. The NPA ratio is calculated as (gross non-accrual loans - specific allowance for credit losses on non-accrual loans + accruing loans past due 90 days + OREO) / total assets.
- (13) The NACL ratio is an indicator used to assess the credit performance of the Bank's loan portfolio by calculating the non-accrual loans as a percentage of loans. The NACL ratio is calculated as gross non-accrual loans / gross total loans. Note the reference to gross implies the amounts prior to loan allowances for credit losses.
- (14) The NPL ratio is an indicator used to assess the credit performance of the Bank's loan portfolio by calculating the non-performing loans as a percentage of loans. The NPL ratio is calculated as total gross non-performing loans / total gross loans.
- (15) The NCO ratio is an indicator used to assess the net credit loss of the Bank's loan portfolio by calculating the net charge-offs as a percentage of average total loans. The NCO ratio is calculated as net charge-off expense / average total loans. Average total loan is calculated as the average of the month-end asset balances during the relevant period.
- (16) Core net income is a non-GAAP financial measure. Core net income measures net income on a core basis. Core net income is calculated by adjusting net income for income or expense items which are not representative of the ongoing operations of our business. For a reconciliation of core net income to net income, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (17) CEACS is a non-GAAP financial measure. CEACS measures profitability attributable to common shareholders on a core basis. For a reconciliation of CEACS to net income, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (18) Core net income per common share — fully diluted is a non-GAAP financial measure. Core net income per common share — fully diluted measures core profitability attributable to common shareholders on a per share basis. For a reconciliation to net income per share, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".
- (19) Common equity per share is calculated as total common equity / number of common shares issued and outstanding at period end.

Reconciliation of Non-GAAP Financial Measures

The tables below present computations of earnings and certain other financial measures, which exclude certain significant items that are included in the financial results presented in accordance with GAAP.

We focus on core net income in many of these measures and ratios, which we calculate by adjusting net income for income or expense items which are not representative of the ongoing operations of our business, which results in non-core gains, losses and expense measures. Core net income includes revenue, gains, losses and expense items incurred in the normal course of business. We consider the normal course of business to be the general operations of our business lines of banking and wealth management. We believe that expressing earnings and certain other financial measures excluding these non-core items provides a meaningful base for period-to-period comparisons, which management believes will assist investors in analyzing the operating results of the Bank and predicting future performance. Non-core items are determined by the CFO in conjunction with the CEO, and approved by our Board of Directors. Consideration is given as to whether the expense, gain or loss is a result of exceptional circumstances or other decisions made not in the normal course of business. Items which are not in the normal course of business, such as business acquisition costs or impairment losses, or a result of exceptional circumstances, such as business restructuring costs, are considered non-core. These non-GAAP financial measures based on core net income are also used by management to assess the performance of the Bank's business because management does not consider the activities related to the adjustments to be indications of core operations. We believe that presentation of these non-GAAP financial measures will permit investors to assess the performance of the Bank on the same basis as that applied by management. Management and the Board utilize these non-GAAP financial measures as follows:

- Preparation of the Bank's operating budgets;
- Quarterly financial performance reporting; and
- Monthly reporting of consolidated results (management reporting only).

We calculate core net income attributable to common shareholders by deducting preference dividend and guarantee fees from core net income. We calculate core net income per common share by dividing the core net income attributable to common shareholders by the average number of common shares issued and outstanding during the relevant period.

The core efficiency ratio (non-GAAP), which is a measure of productivity, is generally calculated by taking the core non-interest expenses (which is the total non-interest expenses excluding non-core non-interest expenses) as a percentage of total net revenue before provision for credit losses and other gains and losses and is calculated as (core non-interest expenses - amortization of intangible assets) / (core non-interest income + core net interest income before provision for credit losses). Management uses this ratio to monitor performance regarding the efficiency of expense management and believes this measure provides meaningful information to investors.

Tangible common shareholders' equity ratios and tangible total asset ratios have become a focus of some investors in analyzing the capital position of the Bank absent the effects of intangible assets and preference shareholders' equity. The BMA and other banking regulatory bodies assess a bank's capital adequacy based on CET1 capital, the calculation of which is codified in the Basel III framework as implemented by the BMA. Because tangible common shareholders' equity and tangible total assets are not formally defined by GAAP, these measures are considered to be non-GAAP financial measures and other entities may calculate them differently. Since analysts and banking regulators may assess the Bank's capital adequacy using tangible common shareholders' equity or tangible assets, the Bank believes that it is useful to provide investors the ability to assess the Bank's capital adequacy on this same basis. The Bank calculates tangible common equity and tangible total assets on a period-end basis. The Bank also measures

performance relative to core net income over average tangible common shareholders' equity and average tangible assets to monitor performance and efficiency relative to the Bank's capital adequacy.

We believe the non-GAAP financial measures presented in this report provide useful information to management and investors that is supplementary to our financial condition, results of operations and cash flows computed in accordance with GAAP; however, we acknowledge that our non-GAAP financial measures have a number of limitations. As such, these non-GAAP financial measures should not be viewed as a substitute for results determined in accordance with GAAP, and they are not necessarily comparable to non-GAAP financial measures that other companies use.

The following tables provide: (1) a reconciliation of net income (GAAP) to core net income and core net income attributable to common shareholders (non-GAAP), (2) a computation of core net income attributable to common shareholders per common share fully diluted (non-GAAP), (3) a reconciliation of average and total shareholders' equity (GAAP) to average and total equity and average tangible common equity (non-GAAP), (4) a computation of core return to average tangible common equity (non-GAAP), (5) a reconciliation of average total assets (GAAP) to average tangible assets (non-GAAP), (6) a computation of core return on average tangible assets (non-GAAP), (7) a computation of tangible common equity to tangible assets (non-GAAP), (8) a computation of tangible total equity to tangible assets (non-GAAP), (9) a reconciliation of non-interest expenses (GAAP) to core non-interest expenses (non-GAAP), (10) a computation of the efficiency ratio (non-GAAP), and (11) a computation of the core efficiency ratio (non-GAAP).

		For the year ended December 31		
		2021	2020	2019
(in millions of \$, unless otherwise indicated)				
Reconciliation of net income (GAAP) to core net income (non-GAAP)				
Net income	A	162.7	147.2	177.1
Non-core (gains), losses and expenses				
<i>Non-core (gains) losses</i>				
Gain on disposal of a pass-through note investment (formerly a SIV) ⁽¹⁾		—	—	(1.0)
Distribution from equity method investment ⁽²⁾		—	(0.7)	—
Gain on disposal of Visa Inc. Class B shares ⁽³⁾		(0.9)	—	—
Total non-core (gains) losses	B	(0.9)	(0.7)	(1.0)
<i>Non-core expenses</i>				
Early retirement program, redundancies and other non-core compensation costs ⁽⁴⁾		1.5	8.0	16.3
Tax compliance review costs ⁽⁵⁾		0.2	—	—
Business acquisition costs ⁽⁶⁾		—	—	5.5
Provision in connection with tax compliance review ⁽⁵⁾		0.1	—	—
Total non-core expenses	C	1.8	8.0	21.8
Total non-core (gains), losses and expenses	D=B+C	0.9	7.3	20.8
Core net income attributable to common shareholders	E=A+D	163.6	154.5	197.9
Reconciliation of return on equity (GAAP) to core return on average tangible common equity (non-GAAP)				
Core net income attributable to common shareholders	E=A+D	163.6	154.5	197.9
Average common equity	F	965.7	981.0	927.7
Less: average goodwill and intangible assets		(90.0)	(92.3)	(83.2)
Average tangible common equity	G	875.8	888.8	844.5
Return on equity	A/F	16.8 %	15.0 %	19.1 %
Core return on average tangible common equity	E/G	18.7 %	17.3 %	23.4 %
Reconciliation of diluted earnings per share (GAAP) to core earnings per common share fully diluted (non-GAAP)				
Adjusted weighted average number of diluted common shares (in thousands)	F	49.9	50.9	53.7
Earnings per common share fully diluted	A/J	3.26	2.90	3.30
Non-core items per share	D/F	0.02	0.14	0.39
Core earnings per common share fully diluted		3.28	3.04	3.69
Reconciliation of return on average assets (GAAP) to core return on average tangible assets (non-GAAP)				
Total average assets	G	15,261.8	13,618.2	12,471.8
Less: average goodwill and intangible assets		(90.0)	(92.3)	(83.2)
Average tangible assets	H	15,171.9	13,525.9	12,388.5
Return on average assets	A/G	1.1 %	1.1 %	1.4 %
Core return on average tangible assets	E/H	1.1 %	1.1 %	1.6 %

For the year ended December 31

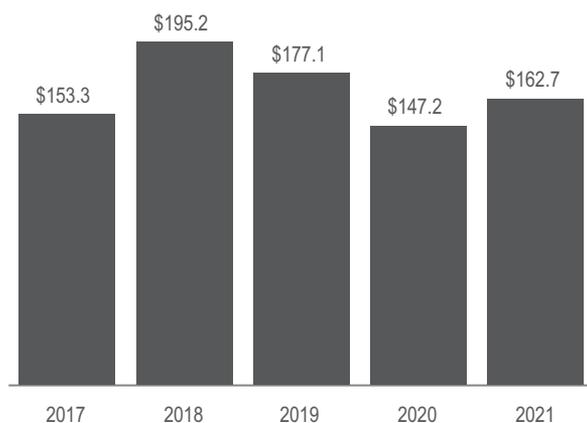
(in millions of \$, unless otherwise indicated)

		2021	2020	2019
Tangible equity to tangible assets				
Shareholders' equity		977.5	981.9	963.7
Less: goodwill and intangible assets		(86.1)	(92.8)	(96.5)
Tangible common equity	I	891.4	889.1	867.2
Total assets		15,335.2	14,738.6	13,921.6
Less: goodwill and intangible assets		(86.1)	(92.8)	(96.5)
Tangible assets	J	15,249.1	14,645.8	13,825.1
Tangible common equity to tangible assets	I/J	5.8 %	6.1 %	6.3 %
Efficiency ratio				
Non-interest expenses		333.9	344.6	356.9
Less: amortization of intangibles		(6.0)	(5.8)	(5.5)
Non-interest expenses before amortization of intangibles	K	327.9	338.8	351.5
Non-interest income		198.1	183.9	184.0
Net interest income before provision for credit losses		299.8	317.6	345.7
Net revenue before provision for credit losses and other gains/losses	L	497.9	501.5	529.7
Efficiency ratio	K/L	65.9 %	67.6 %	66.4 %
Core efficiency ratio				
Non-interest expenses		333.9	344.6	356.9
Less: non-core expenses	M	(1.8)	(8.0)	(21.8)
Less: amortization of intangibles		(6.0)	(5.8)	(5.5)
Core non-interest expenses before amortization of intangibles	N	326.1	330.8	329.7
Core revenue before other gains and losses and provision for credit losses	O	497.9	501.5	529.7
Core efficiency ratio	N/O	65.5 %	66.0 %	62.2 %

- (1) Reflects a gain realized on a liquidation settlement from the Avenir pass-through note, our last remaining structured investment, in 2014. As the Bank no longer holds structured investment products, management determined the gains represented by these liquidation settlements to be non-core. In 2019, the Bank received further distributions on this liquidation settlement.
- (2) Relates to gain on distribution from an equity method investment as a result of the sale of a legacy business interest.
- (3) Relates to gain on disposal of Visa Inc. Class B shares which were received as part of the restructuring of Visa U.S.A. in 2007.
- (4) In 2019, primarily relates to the costs associated with the departure of a senior executive, severance payments relating to the closure of a branch location, and staff exit costs associated with the implementation of a target operating staffing model for the combined Channel Islands segment following the ABN AMRO (Channel Islands) Limited acquisition. In 2020, primarily relates to the efficiency program, including voluntary separation, early retirement and redundancy costs. Management does not consider the costs associated with these projects to be core to the strategy of the business. In 2021, primarily relates to redundancy costs associated with the transfer of Channel Islands banking operations functions from Mauritius to Butterfield's service centers in Canada and Guernsey.
- (5) Relates to the professional fees and final settlement of the US Department of Justice inquiry which commenced in 2013.
- (6) Reflects contract negotiation, due diligence and other legal costs relating to the acquisition of ABN AMRO (Channel Islands) Limited. As above, due to the limited nature of acquisitions, management does not consider the costs associated with these acquisitions to be a part of the normal course of business. Therefore, management considers costs associated with acquisitions, specifically including the costs associated with negotiation and integration of operations, to be non-core.

The following charts show the trajectory of our performance from 2017 to 2021:

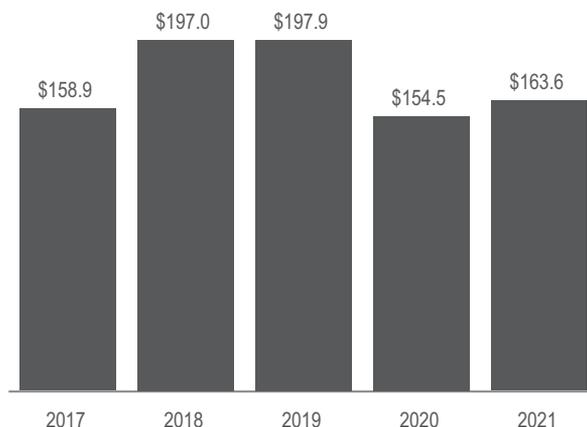
GAAP Net Income to Common (\$ in millions)



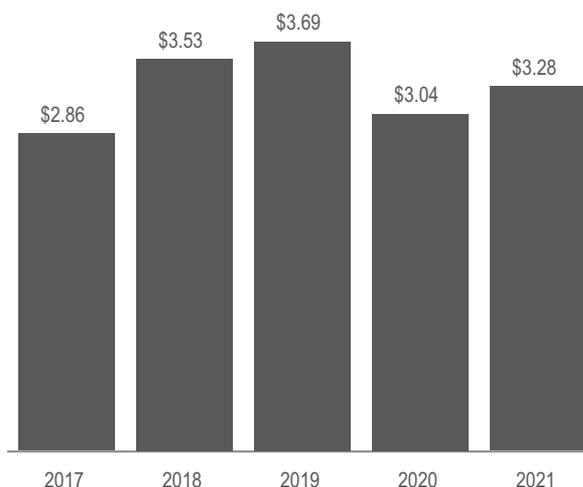
GAAP Earnings per Common Share Fully Diluted



Core Net Income to Common (\$ in millions)¹



Core Earnings per Common Share Fully Diluted²

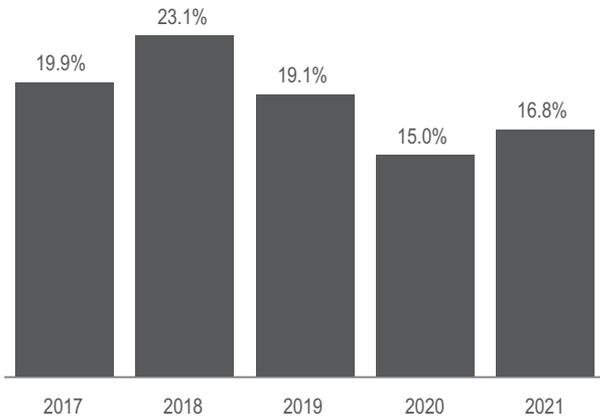


⁽¹⁾ Core Net Income to Common is a non-GAAP financial measure that is calculated by adjusting net income for income or expense items which management considers not to be representative of the ongoing operations of our business and preference share dividends, guarantee fees and premiums paid on preference share buybacks and redemptions. For a reconciliation of Core Net Income to Common to GAAP net income to common, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".

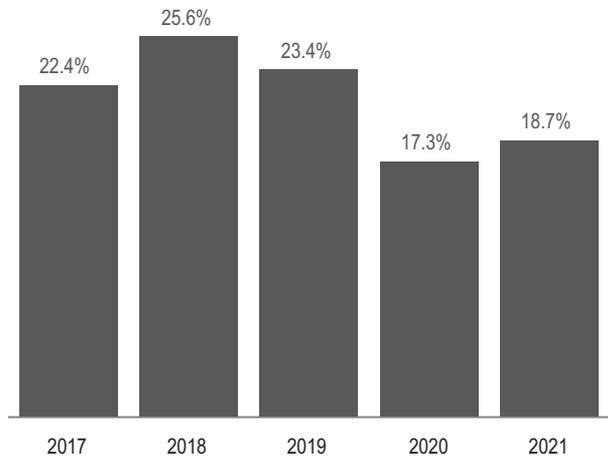
⁽²⁾ Core Earnings per Common Share Fully Diluted is a non-GAAP financial measure that is calculated by dividing Core Earnings to Common by the weighted average shares outstanding. For a reconciliation of Core Earnings per Common Share Fully Diluted to GAAP earnings per share, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".

Our return on equity for 2021 of 16.8% and our Core ROATCE¹ for 2021 of 18.7% were driven by a number of factors, including: significant fee income with historically low capital requirements, low cost deposits, a high yielding loan portfolio, a conservative capital efficient securities portfolio, and our operations in corporate income tax neutral jurisdictions. As a result, our business generated core net income in 2021 well in excess of that needed to execute our organic balance sheet growth strategy.

Return on Equity



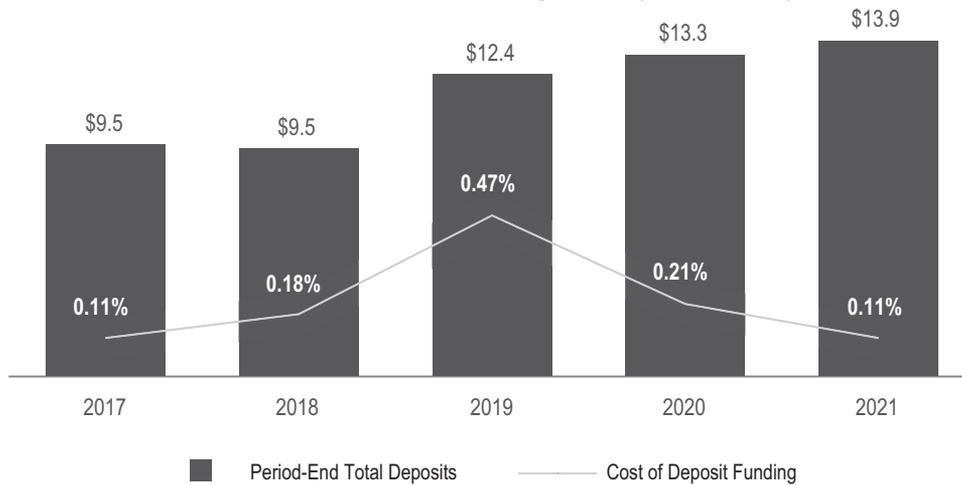
Core ROATCE¹



⁽¹⁾ Core ROATCE is a non-GAAP financial measure that is calculated by dividing core earnings to common shareholders by average tangible common equity. Average tangible common equity does not include the preference shareholders' equity or goodwill and intangible assets. For more information on the non-GAAP financial measures, see Item 5.A. "Operating Results - Reconciliation of Non-GAAP Financial Measures".

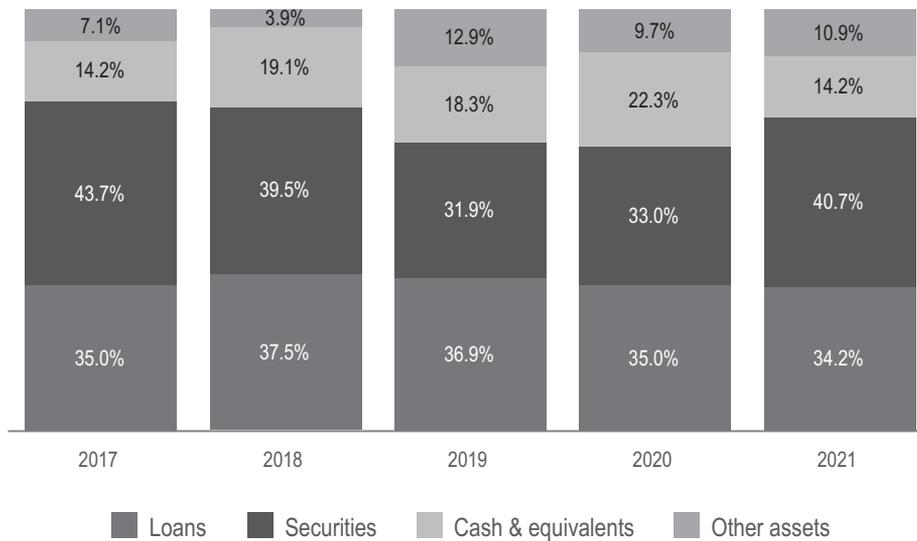
The following chart shows total deposit trends for 2017 to 2021:

Deposit Balance and Funding Costs (\$ in billions)



Historically, the markets in which we operate generate fewer loans than deposits, which has led us to take a conservative approach to managing our balance sheet. We accomplish this by maintaining a large cash balance and investing in high quality and liquid securities. The following chart illustrates our asset composition from 2017 to 2021:

Balance Sheet Composition - Total Assets (\$ in billions)

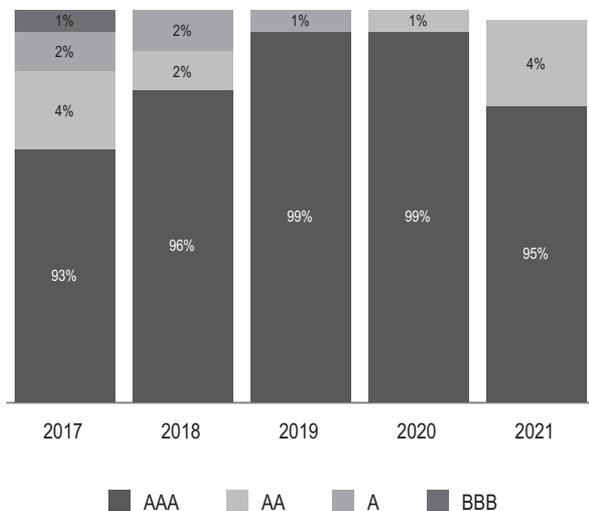


As at December 31, 2021, 14% of our balance sheet was cash and cash equivalents, which included cash and demand deposits with banks, unrestricted term deposits, and treasury bills with a maturity of less than three months.

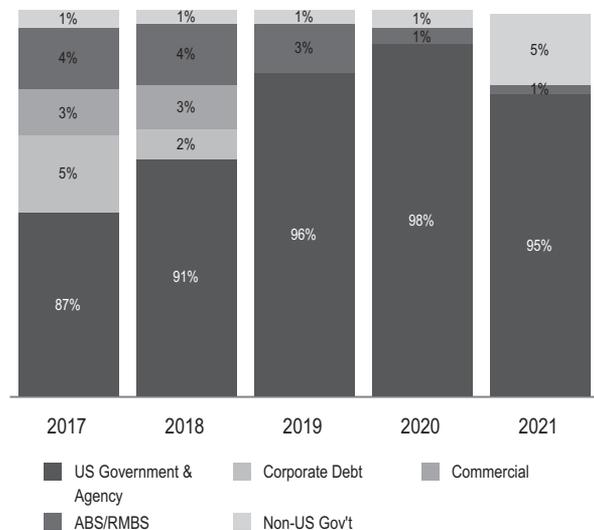
In addition to maintaining a large cash and cash equivalents balance, we also have a large and conservative securities investment portfolio. We have a disciplined investment portfolio selection process and invest in highly rated securities. We also seek to ensure that our portfolio remains liquid across market cycles: 94.7% of our portfolio was invested in US government treasuries and mortgage-backed securities issued by US governmental agencies. Our investment strategy as at December 31, 2021, aims to align the behavioral interest rate risk profile of our assets and liabilities — as at December 31, 2021, the average duration of our AFS investment portfolio was 4.0 years, the average duration of our HTM investment portfolio was 4.5 years, and the average duration of our total investment portfolio was 4.2 years. As at December 31, 2021, the total carrying value of our AFS investment portfolio was \$3.5 billion, and the total carrying value of our HTM investment portfolio was \$2.8 billion.

The following charts show the composition of our investment portfolio by rating and asset type from 2017 to 2021:

Investment Portfolio - Rating



Investment Portfolio - Asset Type



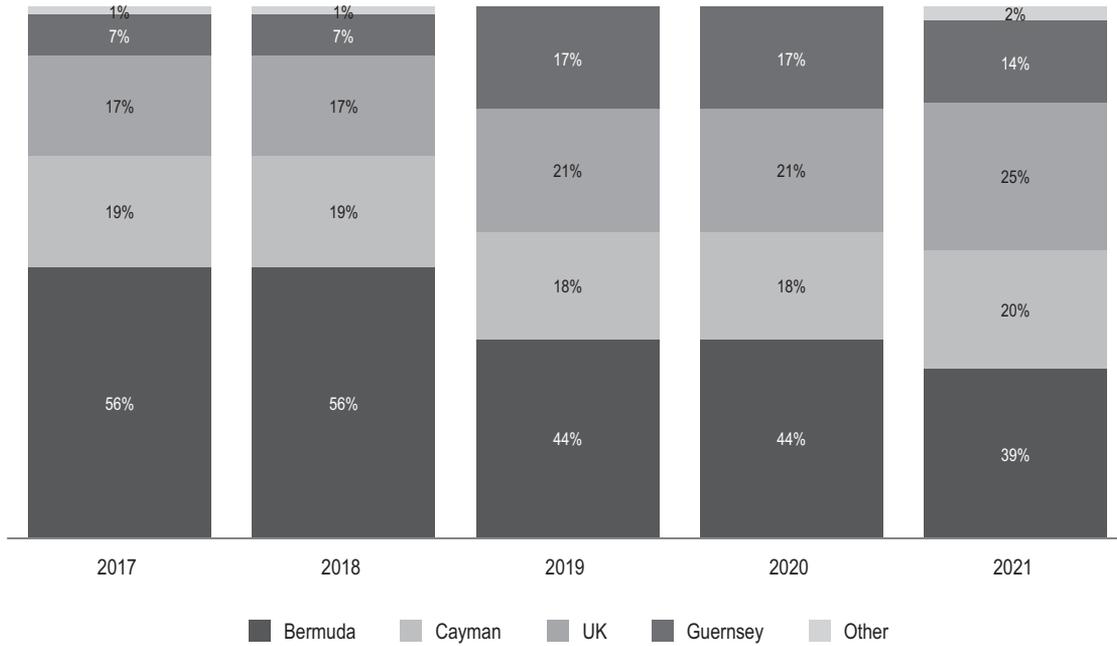
The combination of our significant cash and securities portfolios helps drive our capital efficient balance sheet, with risk-weighted assets equal to 33.3% of our total assets and a Basel III total capital ratio of 21.2%, each as at December 31, 2021.

Our loan underwriting process requires that we complete a full credit assessment of every customer prior to committing to a loan, which we believe has resulted in a high quality loan portfolio. Our lending markets do not have secondary markets for loans and as such we hold all of our originated loans on our balance sheet. In 2020 and 2021,

net charge-offs represented 0.12% and 0.05%, respectively, of average loans. As at December 31, 2021, our non-accrual loan balance was \$61.0 million, or 1.2% of total gross loans, and our loans past due were \$85.0 million or 1.6% of total gross loans, of which 69.3% were full recourse residential mortgages. As at December 31, 2021, our loan portfolio consisted of 82% floating-rate loans and 18% fixed-rate loans generally with contractual rate resets of 3 to 5 years.

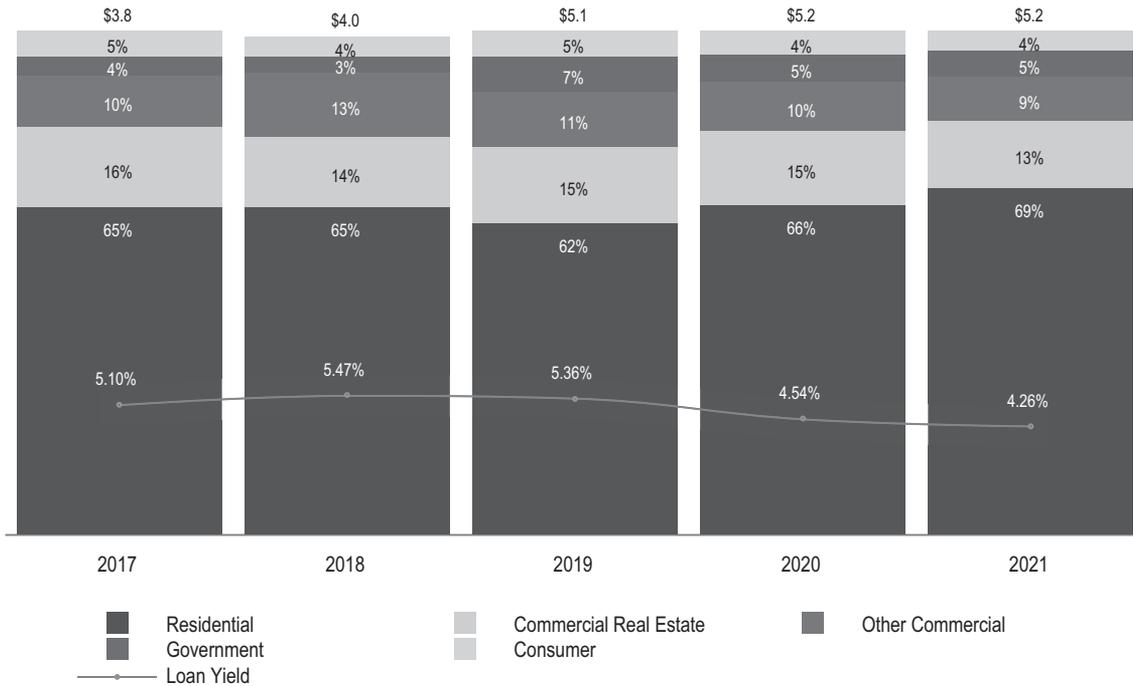
The following chart shows the segment composition of our loan portfolio from 2017 to 2021:

Loan Portfolio Composition by Origination - Geography



Our loan portfolio has exhibited stability over time. The following chart shows loan portfolio trends for 2017 to 2021:

Loan Balance and Yield (\$ in billions)

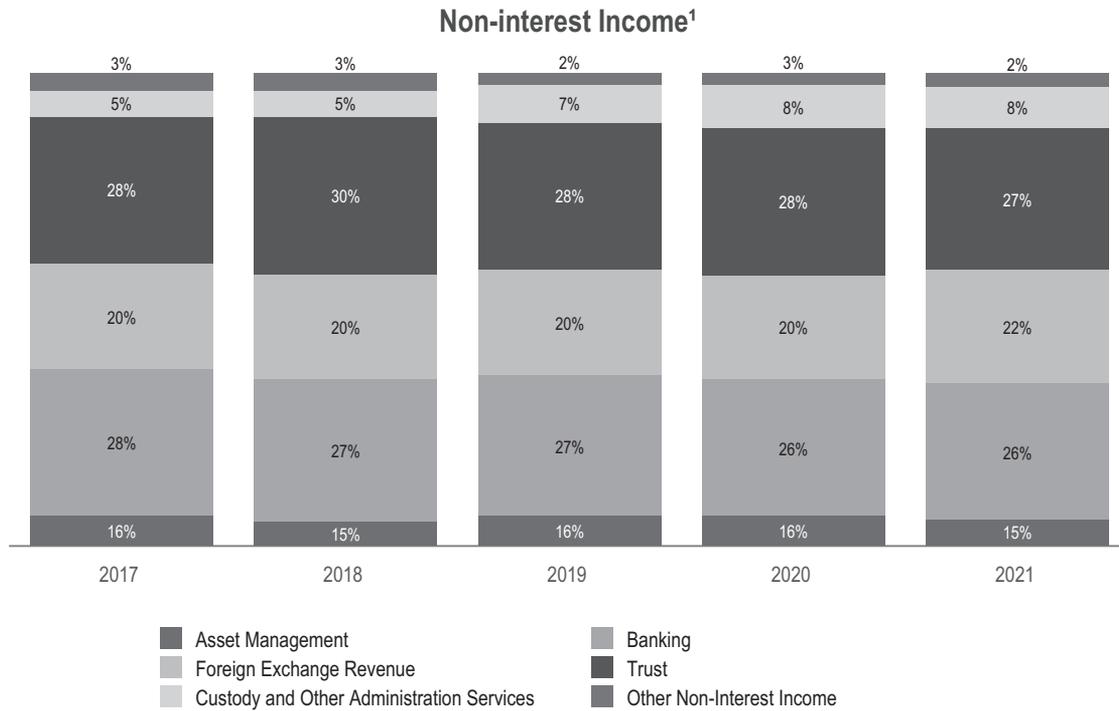


The domestic lending markets in Bermuda, the Cayman Islands, and the Channel Islands have a limited number of participants and significant barriers to entry. 68.8% of our loan balances were residential mortgages as at December 31, 2021. These loans are attractive for a number of reasons. Our mortgages have exhibited predictable cash flows, with historically negligible refinancing activity due to significant transaction costs to refinance in these lending markets. Additionally, our mortgages in these markets have historically benefited from a manual underwriting process, low LTVs (with 74.3% of residential loans below 70% LTV as at December 31, 2021), and a full recourse legal system.

We have also generated balanced sources of non-interest income from a well-diversified customer base. For the five-year period ended December 31, 2021, our non-interest income is evenly split between banking which consists of banking and foreign exchange revenue, and wealth management, which consists of trust, asset management, and custody and other administration services.

Fee income from a typical trust client serviced in our wealth management business line is driven primarily by the size and complexity of our clients' assets and holdings, which are generally diversified across multiple geographies, the performance of these businesses is not typically linked to the performance of the domestic economies of our local markets. Non-interest income represented 39.5% of our total Net Revenue (our fee income ratio) in 2021, and contributed significantly to the Company's high Core ROATCE and excess capital generation as limited capital is required for our fee income business.

The following chart shows our various sources of non-interest income from 2017 to 2021:



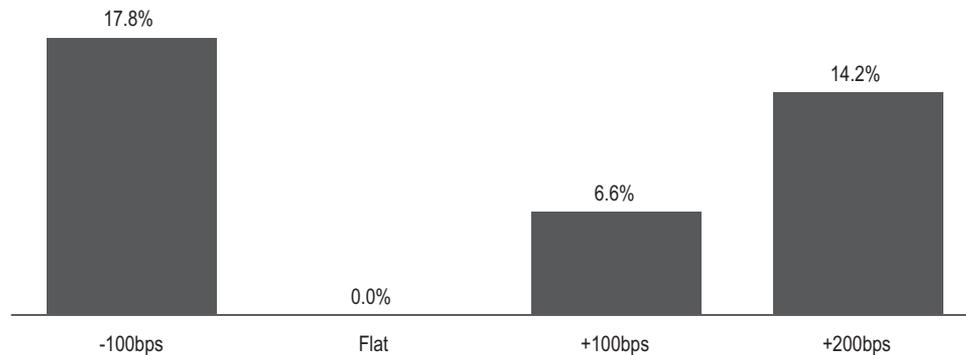
2021 Non-Interest Income: \$198.1 million / 39.5% Fee Income Ratio

⁽¹⁾ Foreign exchange revenue represents income generated from client-driven transactions in the normal course of business. We do not engage in proprietary trading.

Growth Opportunities

We expect that, all else being equal, a rising rate environment would increase our net interest income before provision for credit losses because an increase in our cost of deposits would lag an increase in yield of our cash, securities and loans. In addition, a significant portion of our deposits are non-interest bearing (20% as at December 31, 2021), and as a result, a portion of our funding is only partially sensitive to rising rates. Our non-interest bearing deposit balances have historically exhibited low correlation with market interest rates, a behavior that we attribute in part to a sizable client base that utilizes our bank for custody and clearing services as well as cash management purposes. Potential changes to our net interest income in hypothetical rising and declining rate scenarios, measured over a 12-month period, are presented in the chart below (these projections assume parallel shifts of the yield curves occurring immediately and no changes in other potential variables):

Net Interest Income Sensitivity



A negative 100 basis points interest rate shock reflects an increase in projected 12-month net interest income of 17.8% compared to the flat rate scenario. The income is driven by lower loan and investment yields, which more than offset reduced rates paid on deposits. Mitigating against the loss of income is the potential to charge negative interest rates on deposits (which we currently do in limited instances) and certain loans that have rate floors. Refer to discussion under "Risk Management".

In addition, we are well-positioned as an acquirer of certain businesses, in private trust and banking. Our acquisition strategy seeks to capitalize on opportunities created by international financial institutions and trust companies that wish to simplify their businesses and deploy capital to other markets or business lines. We consider a wide range of potential acquisition opportunities, and we have a well-defined, disciplined approach to identifying potential acquisition targets across numerous criteria including: geography, business alignment, size, timing, quality, buyer universe and financial hurdles. Our focus has been on the private trust business and banking in our core markets where we have expertise, scale and a strong brand.

In April 2016, we acquired HSBC's Bermuda trust business and private banking investment management operations. HSBC also entered into an agreement to refer its existing private banking clients to Butterfield. This acquisition added over \$18.9 billion of trust AUA, \$1.3 billion of AUM, and \$1.6 billion of deposits.

In October 2017, we entered into an agreement to acquire Deutsche Bank's Global Trust Solutions business, excluding its US operations. This transaction added the ongoing management and administration of the GTS portfolio, comprising approximately 1,000 trust structures for approximately 900 private clients in Guernsey, Switzerland, the Cayman Islands, and Singapore. As part of the deal, we also purchased a service company in Mauritius to provide operations and support services to the Cayman and Channel Islands banking and custody businesses. This transaction was completed in March 2018.

In February 2018, we entered into an agreement to acquire Deutsche Bank's banking and custody business in the Cayman Islands, Jersey and Guernsey, which provide services primarily to financial intermediaries and corporate clients. The Bank began to onboard certain customer deposits relating to the acquisition in 2018, and this activity was completed in the first half of 2019.

In April 2019, we entered into an agreement to acquire ABN AMRO (Channel Islands) Limited which provides banking, investment management and custody products to three distinct client groups, including trusts, private clients, and funds in Jersey and Guernsey. The transaction completed in July 2019.

Our relationship-driven business model and international corporate clientele have allowed us to develop a stable deposit base with historically low funding costs. We believe our customers' deposit activity has historically been relatively inelastic to deposit pricing given the nature of corporate activity and competition in retail deposit taking in our segments. From 2017 to 2021, deposits have grown at a CAGR of approximately at +9% in the Cayman Islands and +29% in the Channel Islands and the UK while it has decreased slightly in Bermuda at -3%, taking into account the Deutsche Bank's banking and custody businesses acquisition in February 2018 that added \$0.9 billion of new deposits, and the ABN AMRO (Channel Islands) acquisition in April 2019 that added \$3.5 billion in deposits. As at December 31, 2021, we had \$13.9 billion in deposits at a cost of 0.11%, of which 20% were non-interest bearing demand deposits, 58% were interest bearing demand deposits with a weighted-average cost of 0.04%, and 21% were term deposits with a weighted-average cost of 0.64% and an average contractual or remaining maturity of 131 days. We believe the current market conditions in Bermuda, the Cayman Islands, and the Channel Islands will allow us to continue to benefit from favorable deposit pricing.

Consolidated Results of Operations and Discussion for Fiscal Years Ended December 31, 2021, 2020 and 2019

Net Revenue

2021 vs. 2020

Total net revenue before provision for credit losses and other gains and losses for 2021 was \$497.9 million, down \$3.5 million, or 0.7%, from 2020. Net interest income before provision for credit losses decreased from \$317.6 million in 2020 to \$299.8 million in 2021, a decline of \$17.8 million, or 5.6%, and was due to margin declines across interest earning assets driven by lower global market interest rates. Loan interest income decreased by \$9.1 million to \$221.5 million as yields decreased by 28 basis points due to lower rates, the repayment of a few large commercial facilities and paydowns in the higher-yielding Bermuda residential mortgage portfolio. The average volume of loans outstanding increased by \$138.2 million. Cayman and the Channel Islands and UK segments saw growth in their residential mortgage portfolios, which was partially offset by the repayment of a number of commercial and commercial real estate facilities in Bermuda and the Channel Islands and UK segments during the period. Investment interest income decreased by \$7.3 million to \$101.9 million, the average volume of investments increased by \$1.2 billion, and yields on investments decreased by 62 basis points due to the aforementioned decrease in global market interest rates, increasing prepayment speeds with re-investment at lower rates in the investment portfolio. Deposits with banks interest income decreased by \$10.7 million, or 88.1%, the average volume increased by \$441.6 million which was driven by corporate deposit funding increases in Cayman and the Channel Islands, and partially offset by expected corporate deposit decreases in Bermuda. The total cost of deposits improved by \$9.6 million or 38.3%, reflecting a 10 basis points decrease to 11 basis points. In addition, non-interest income was up by \$14.2 million, or 7.7%, principally attributable to volume-driven increases in both banking and foreign exchange revenue coupled with higher facility non-utilization fees and one-off loan breakage fees.

2020 vs. 2019

Total net revenue before provision for credit losses and other gains and losses for 2020 was \$501.5 million, down \$28.2 million, or 5.3%, from 2019. Net interest income before provision for credit losses decreased from \$345.7 million in 2019 to \$317.6 million in 2020, a decline of \$28.1 million, or 8.1%, and was driven by lower global market interest rates as a result of the COVID-19 pandemic. Loan interest income decreased by \$3.4 million to \$230.7 million as yields decreased by 82 basis points due to base rate decreases across all jurisdictions during the year. The average volume of loans outstanding increased by \$692.2 million as a result of the full year contribution from ABN AMRO (Channel Islands). Loan growth was impacted by the COVID-19 pandemic and the normal portfolio runoff was mostly offset by the loan deferral programs in both Bermuda and the Cayman Islands. Investment interest income decreased by \$20.2 million to \$109.2 million, the average volume of investments increased by \$39.4 million, and yields on investments decreased by 48 basis points due to the aforementioned decrease in global market interest rates, increasing prepayment speeds. Deposits with banks interest income decreased by \$29.5 million, or 70.9%, the average volume increased by \$297.4 million due to increased corporate and retail banking deposits in Bermuda and the Cayman Islands. The total cost of deposits improved by \$26.4 million or 51.2%, reflecting a 26 basis points decrease to 21 basis points. In addition, non-interest income was down by \$0.1 million, or 0.1%, principally attributable to much lower economic activity resulting from COVID-19 related "shelter-in-place" government mandates, impacting card service fee contributions and offset by increases in asset management, foreign exchange, custody and other administration services as a result of the full year contribution from ABN AMRO (Channel Islands).

Net Interest Income Before Provision for Credit Losses

Net interest income is the amount of interest earned on our interest-earning assets less interest paid on our interest bearing liabilities. There are several drivers of the change in net interest income, including changes in the volume and mix of interest-earning assets and interest bearing liabilities, their relative sensitivity to interest rate movements, and the proportion of non-interest bearing sources of funds, such as equity and non-interest bearing current accounts.

The following table presents the components of net interest income for the years ended December 31, 2021, 2020 and 2019:

(in millions of \$)	Year ended December 31								
	2021			2020			2019		
	Average balance (\$)	Interest (\$)	Average rate (%)	Average balance (\$)	Interest (\$)	Average rate (%)	Average balance (\$)	Interest (\$)	Average rate (%)
Assets									
Cash due from banks, securities purchased under agreements to resell, and short-term investments	3,972.2	1.4	0.04 %	3,530.6	12.1	0.34 %	3,233.3	41.6	1.29 %
Investment in securities	5,693.2	101.9	1.79 %	4,512.5	109.2	2.41 %	4,473.6	129.4	2.89 %
Loans	5,199.9	221.5	4.26 %	5,061.7	230.7	4.54 %	4,369.5	234.0	5.36 %
Interest earning assets	14,865.3	324.9	2.19 %	13,104.9	352.0	2.68 %	12,076.4	405.1	3.35 %
Other assets	367.4	—	—	395.4	—	—	372.7	—	—
Total assets	15,232.7	324.9	2.13 %	13,500.3	352.0	2.60 %	12,449.1	405.1	3.25 %
Liabilities									
Deposits	10,845.3	(15.5)	(0.14)%	9,710.8	(25.1)	(0.26)%	8,851.5	(51.5)	(0.58)%
Securities sold under agreement to repurchase	—	—	— %	—	—	— %	0.7	—	(2.12)%
Long-term debt	171.7	(9.6)	(5.59)%	173.4	(9.3)	(5.35)%	143.4	(7.9)	(5.49)%
Interest bearing liabilities	11,016.9	(25.1)	(0.23)%	9,884.2	(34.4)	(0.35)%	8,995.5	(59.4)	(0.66)%
Non-interest bearing current accounts	2,895.0	—	—	2,363.9	—	—	2,147.2	—	—
Other liabilities	295.1	—	—	280.6	—	—	310.4	—	—
Total liabilities	14,207.0	(25.1)	(0.18)%	12,528.6	(34.4)	(0.27)%	11,453.1	(59.4)	(0.52)%
Shareholders' equity	1,025.7	—	—	971.7	—	—	995.9	—	—
Total liabilities and shareholders' equity	15,232.7			13,500.3			12,449.1		
Non-interest bearing funds net of non-interest earning assets (free balance)	3,848.4	—	—	3,220.7	—	—	3,080.8	—	—
Net interest margin		299.8	2.02 %		317.6	2.42 %		345.7	2.86 %

2021 vs. 2020

Net interest income before provision for credit losses of \$299.8 million in 2021 represented a decrease of \$17.8 million (or 5.6%) over our net interest income before provision for credit losses in 2020. Net interest income is generated by our main segments of Bermuda, the Cayman Islands, and Channel Islands and the UK. Interest income decreased by \$27.1 million in 2021, which was driven by lower market interest rates across the yield curve.

Loan interest income decreased in 2021 by \$9.1 million due to lower rates, the repayment of a few large commercial facilities and paydowns in the higher-yielding Bermuda residential mortgage portfolio.

Investment interest income decreased by \$7.3 million, primarily driven by increased paydowns and reinvestment at lower yields in the low market rate environment. This was partially offset by an increase of \$1.2 billion in average investment balances which was driven by both increased depositor funding and the redeployment of funds from cash due from banks. The overall duration of the portfolio at year-end was 4.2 years, an increase of 1.5 years from 2020.

Interest bearing liability costs decreased to 23 basis points, which resulted in a decrease in interest expense by \$9.3 million, attributable to the active repricing of deposits in response to market conditions.

Average free balances for 2021 were \$3.8 billion (2020: \$3.2 billion), including non-interest bearing current accounts of \$2.9 billion (2020: \$2.4 billion), shareholders' equity of \$1,025.7 million (2020: \$971.7 million), net of other assets and other liabilities totaling \$72.3 million (2020: \$114.9 million). See "-Risk Management" below for more information on how interest rate risk is managed.

2020 vs. 2019

Net interest income before provision for credit losses of \$317.6 million in 2020 represented a decrease of \$28.1 million (or 8.1%) over our net interest income before provision for credit losses in 2019. Net interest income is generated by our main segments of Bermuda, the Cayman Islands, and Channel Islands and the UK. Interest income decreased by \$53.1 million in 2020, which was driven by lower market interest rates across the yield curve.

Loan interest income decreased in 2020 by \$3.4 million due primarily to an 82 basis point decrease in yield on floating rate loans as a result of the US Federal Reserve and Bank of England rate cuts in March 2020 which were partially passed on to customers. This was partially offset by a \$0.7 billion increase in average balances which was driven by the full year contribution from ABN AMRO (Channel Islands).

Investment interest income decreased by \$20.2 million, driven by increased prepayment speeds on the US agency securities book and reinvestment at lower yields. This was partially offset by an increase of \$39.4 million in average investment balances, due to the normalization of ABN AMRO (Channel Islands) deposits, which were invested in longer term assets, as well as a re-balancing of a portion of our investment portfolio by selling floating rate notes for fixed in order to lock in fixed rates as a result of the aforementioned US Federal Reserve rate cuts. The overall duration of the portfolio at year-end was 2.7 years, a decrease of 0.8 years from 2019.

Interest bearing liability costs decreased to 35 basis points, which resulted in a decrease in interest expense by \$25.0 million, attributable to active deposit re-pricing on the ABN AMRO (Channel Islands) deposits and lower rates on roll-over maturities due to lower global interest rates.

Average free balances for 2020 were \$3.2 billion (2019: \$3.1 billion), including non-interest bearing current accounts of \$2.4 billion (2019: \$2.1 billion), shareholders' equity of \$971.7 million (2019: \$995.9 million), net of other assets and other liabilities totaling \$113.1 million (2019: \$61.1 million). See "-Risk Management" below for more information on how interest rate risk is managed.

Provision for Credit Losses

2021 vs. 2020

Our net provision for credit losses in 2021 was a release of \$3.1 million compared to a charge of \$8.5 million in 2020. Provisions decreased due to both the improvement in macroeconomic forecasts impacting future expected credit loss estimates and a reduction in non-performing loans.

2020 vs. 2019

Our net provision for credit losses in 2020 was a charge of \$8.5 million compared to a release of \$0.2 million in 2019. Provisions increased due primarily to declining macro-economic forecasts which drive forward-looking expected losses and loans migrating into the past due and non-performing categories.

Other Gains (Losses)

The following table represents the components of other gains (losses) for the years ended December 31, 2021, 2020 and 2019:

(in millions of \$)	For the year ended December 31			Dollar Change		Percent Change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Net gains (losses) on equity securities	0.1	0.7	0.9	(0.6)	(0.2)	(85.7)%	(28.9)%
Net realized gains (losses) on available-for-sale investments	(0.2)	1.2	1.6	(1.4)	(0.4)	(116.7)%	(24.9)%
Net gains (losses) on other real estate owned	(0.1)	(0.1)	—	—	(0.1)	— %	(1,980.0)%
Net other gains (losses)	(1.2)	(0.6)	0.2	(0.6)	(0.8)	100.0 %	(347.5)%
Total other gains (losses)	(1.4)	1.2	2.7	(2.6)	(1.5)	(216.7)%	(55.6)%

Net Gains (Losses) on Equity Securities

A \$0.1 million gain was recorded with respect to equity securities at fair value in 2021, a decrease of \$0.6 million compared to \$0.7 million in 2020 and \$0.9 million in 2019. The balance in 2021 reflected the net realized gain on the sale of seed investments in Butterfield mutual funds. The balance in 2020 reflected lower mark-to-market gains on equity securities, partly due to mark-to-market losses recognized earlier in 2020 due to market volatility as a result of the COVID-19 pandemic. The gains in 2019 reflected higher mark-to-market gains on equity securities.

Net Realized Gains (Losses) on Available-for-Sale Investments

Net realized losses of \$0.2 million were recorded in 2021, with gains of \$1.2 million in 2020 and \$1.6 million in 2019. In 2021, the loss is due to the strategic disposal of lower yielding explicitly guaranteed and implicitly guaranteed US government and federal agency securities. In 2020, the gain is due to the strategic decision to liquidate floating rate and purchase fixed rate US government and federal agency securities. In 2019, the gain is primarily as a result of the rebalancing of our investment portfolio resulting in the sale of our remaining corporate debt and commercial mortgage-backed securities and the sale of a US Treasury security and liquidation proceeds from a former investment as detailed below. In all three years presented, the proceeds from the sale of the above-mentioned investments were used to acquire US government and federal agency securities for either our AFS or HTM portfolios.

Included in this amount in 2019 was a \$1.0 million net realized gain on the receipt of liquidation proceeds from our former investment in the Avenir Pass-through Note, which was formerly a structured investment vehicle. Management considers these gains in 2019 to be non-core.

Net Gains (Losses) on Other Real Estate Owned

Valuation adjustments and realized gains and losses related to real estate held for sale were losses of \$0.1 million in 2021 compared to losses of \$0.1 million in 2020 and \$5.0 thousand in 2019. In 2021, these losses relate to the net revaluation losses on foreclosed property. In 2020, these losses relate to net revaluation losses on two properties. In 2019, these small losses were attributable to the revaluation of properties offset by the gain on the sale of a property in Bermuda.

Net Other Gains (Losses)

Net other losses were \$1.2 million in 2021 compared to net other losses of \$0.6 million in 2020 and net other gains of \$0.2 million in 2019. The losses in 2021 relate to a defined benefit pension plan adjustment which was partially offset by a gain on the disposal of Visa Inc. Class B shares which were received as part of the restructuring of Visa U.S.A. in 2007 and which management considers to be non-core. The losses in 2020 relate to a defined benefit pension plan adjustment offset by a distribution from an equity method investment as a result of the sale of a legacy business interest. The gains in 2019 are principally the result of the sale of a fixed asset.

Non-Interest Income

Non-interest income represents capital efficient and stable revenue sources for the Group. Non-interest income is derived primarily from banking, including cards, foreign exchange commissions, asset management fees as well as trust fees. Our trust fee structure provides for varied pricing that depends primarily on the size of the relationship and the nature of services provided. As a result, it is not always possible to draw a direct relationship between the value of client assets and the level of non-interest income, though the trend of non-interest income generally follows the trend in client asset levels.

Total non-interest income increased by \$14.2 million from \$183.9 million in 2020 to \$198.1 million in 2021. Non-interest income as a percentage of total net revenue increased from 37.3% in 2020 to 39.5% in 2021.

Total non-interest income decreased by \$0.1 million from \$184.0 million in 2019 to \$183.9 million in 2020. Non-interest income as a percentage of total net revenue increased from 34.7% in 2019 to 37.3% in 2020.

The following table presents the components of non-interest income for the years ended December 31, 2021, 2020 and 2019:

(in millions of \$)	For the year ended December 31			Dollar change		Percent change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Asset management	29.9	29.2	28.7	0.7	0.5	2.4 %	1.8 %
Banking	51.9	47.3	49.3	4.6	(2.0)	9.7 %	(4.1)%
Foreign exchange revenue	43.4	37.2	37.0	6.2	0.2	16.7 %	0.5 %
Trust	52.9	50.7	51.2	2.2	(0.5)	4.3 %	(1.1)%
Custody and other administration services	15.2	13.8	12.9	1.4	0.9	10.1 %	7.6 %
Other non-interest income	4.8	5.6	4.8	(0.8)	0.8	(14.3)%	16.4 %
Total non-interest income	198.1	183.9	183.9	14.2	(0.1)	7.7 %	(0.1)%

Asset Management

Asset management revenues are generally based on the market value of assets managed and the volume of transactions and fees for other services rendered. We provide asset management services from our offices in Bermuda, the Cayman Islands, and the Channel Islands. Revenues from asset management were \$29.9 million in 2021, compared to \$29.2 million in 2020, and \$28.7 million in 2019.

The table that follows shows the changes in the year-end values of clients' assets under management, sub-divided between those managed for clients on a discretionary basis and client funds invested in mutual funds that Butterfield manages ("Butterfield Funds"):

(in millions of \$)	Year ended December 31			Dollar Change	
	2021	2020	2019	2020 to 2021	2019 to 2020
Butterfield Funds	1,758	2,029	2,157	(271)	(128)
Other assets under management	3,740	3,529	3,491	211	38
Total assets under management	5,498	5,558	5,648	(60)	(90)

2021 vs. 2020

Asset management fees are generated primarily from management fees earned from Butterfield Funds and discretionary portfolios, as well as custody and brokerage fees. AUM were relatively unchanged at \$5.5 billion as at December 31, 2021, compared to \$5.6 billion as at December 31, 2020. Asset management fees earned increased by \$0.7 million or 2.4% in 2021, compared to 2020. This was driven by an increase in brokerage fees coupled with market growth and new business, primarily in the Channel Islands and Cayman Islands.

2020 vs. 2019

Asset management fees are generated primarily from management fees earned from Butterfield Funds and discretionary portfolios, as well as custody and brokerage fees. AUM were relatively unchanged at \$5.6 billion as at December 31, 2020, compared to December 31, 2019. Asset management fees earned increased by \$0.5 million or 1.8% in 2020, compared to 2019. This was driven by an increase in fees from discretionary portfolios, primarily in the Channel Islands as a result of the full year recognition of ABN AMRO (Channel Islands) income, and was partially offset by a reduction in the Bank's money market fund income due to fee reductions.

Banking

We provide a full range of community, commercial, and private banking services in select jurisdictions. Banking services are offered to individuals and small to medium-sized businesses through branch locations, internet banking, automated teller machines, debit and credit cards, and mobile banking in Bermuda and the Cayman Islands, while private banking services are offered in Bermuda, the Cayman Islands, and Guernsey. Banking revenues reflect loan, transaction processing, and other fees earned in these jurisdictions.

Banking fee revenues increased by 9.7% in 2021 to \$51.9 million, compared to \$47.3 million in 2020, primarily due to volume-driven increases from increased economic activity and higher facility non-utilization and one-off breakage fees.

Banking fee revenues decreased by 4.1% in 2020 to \$47.3 million, compared to \$49.3 million in 2019, primarily due to much lower economic activity resulting from COVID-19 related border closures in Bermuda and the Cayman Islands and "shelter-in-place" government mandates, primarily during the months of April and May. These restrictions impacted card service fee contributions as well as tourism credit card volumes.

Foreign Exchange

We provide foreign exchange services in the normal course of business in all jurisdictions. The major contributors to foreign exchange revenues are Bermuda and the Cayman Islands, accounting for 78% of our foreign exchange revenue (2020: 79%; 2019: 84%). We do not maintain a proprietary trading book. Foreign exchange income is generated from client-driven transactions and totaled \$43.4 million in 2021, compared to \$37.2 million in 2020 and \$37.0 million in 2019. The \$6.2 million increase from 2020 to 2021 was primarily due to volume-driven increases from increased economic activity. The \$0.2 million increase from 2019 to 2020 primarily resulted from the full year effect of the ABN AMRO acquisition, offset by lower volumes this year due to much lower economic activity resulting from COVID-19 related "shelter-in-place" government mandates, primarily during the months of April and May and the loss of some repeat corporate businesses that has not been replaced.

Trust

We provide both personal and institutional fiduciary services from our operations in Bermuda, The Bahamas, the Cayman Islands, Guernsey, Singapore and Switzerland. Revenues are derived from a combination of fixed fees, fees based on the size and complexity of the trust relationship and fees based on time spent in relation to the range of personal trust and company administration services and pension and employee benefit trust services we provide.

In 2021, trust revenues represented 26.7% of our non-interest income, down from 27.5% in 2020. In 2021, trust revenues totaled \$52.9 million, an increase of \$2.2 million or 4.4% over 2020. This increase was driven primarily by higher activity-based fees.

Trust AUA were \$106.4 billion at the end of 2021 compared to \$104.1 billion at the end of 2020, an increase of \$2.3 billion or 2.2%, which is attributable largely to the revaluation of some assets held in the underlying trust structures in Switzerland and offset by the revision of fee agreements for a trust structure in Guernsey.

In 2020, trust revenues represented 27.5% of our non-interest income, down from 27.8% in 2019. In 2020, trust revenues totaled \$50.7 million, a decrease of \$0.5 million or 1.1% over 2019. This decrease was driven primarily by a reduction in the time spent on trust services and lower fixed fees.

Custody and Other Administration Services

Custody fees are generally based on market values of assets in custody, the volume of transactions and flat fees for other services rendered. We provide custody services from our offices in Bermuda, Guernsey, and Jersey. In 2021, revenues were \$15.2 million, an increase of \$1.4 million from 2020 due to the on-boarding of new business. From 2019 to 2020, revenues increased by \$0.9 million due to the full year impact of the ABN AMRO (Channel Islands) acquisition and offset by some fee waivers.

Total AUA for the custody and other administration services business were \$36.8 billion on December 31, 2021, an increase from \$32.4 billion on December 31, 2020 and \$30.3 billion on December 31, 2019.

Other Non-Interest Income

The components of our other non-interest income for the years ended December 31, 2021, 2020 and 2019 are set forth in the following table:

(in millions of \$)	Year ended December 31			Dollar Change		Percent Change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Net share of earnings from equity method investments	0.1	0.6	0.3	(0.4)	0.3	(66.7)%	74.6 %
Rental income	2.2	1.7	1.2	0.5	0.5	29.4 %	44.4 %
Other	2.5	3.3	3.3	(0.8)	—	(24.2)%	0.2 %
Total other non-interest income	4.8	5.6	4.8	(0.8)	0.8	(14.3)%	16.4 %

In 2021, we recorded our net share of earnings from equity method investments as a gain of \$0.1 million, a \$0.4 million decrease due to lower equity pick-up by equity method investments. From 2019 to 2020, equity pickup increased due to higher earnings by equity method investments. Rental income increased by \$0.5 million to \$2.2 million in 2021 and by \$0.5 million from 2019 to 2020 due to increased sub-let income in the Channel Islands. Included in the "Other" category are maintenance fees from leased premises and other miscellaneous income.

Non-Interest Expenses

Expense management continued to be a key focus in 2021, especially as revenue remained under pressure as a result of lower US dollar interest rates. Total non-interest expenses in 2021 were \$333.9 million compared to \$344.6 million in 2020 and \$356.9 million in 2019. These figures include non-core expenses in 2021, 2020 and 2019 of \$1.8 million, \$8.0 million and \$21.8 million, respectively.

After adjusting for these non-core items, 2021 core expenses decreased by \$4.5 million or 1.3% with a corresponding decrease in the core efficiency ratio to 65.5% from 66.0% in 2020. From 2019 to 2020, core non-interest expenses increased by \$1.5 million with a corresponding increase in the core efficiency ratio to 66.0% from 62.2% in 2019 due to the reduction in revenue driven by the low interest rate environment.

In 2021, salaries and other employee benefits accounted for 48.3% of non-interest expenses, with technology and communications and property making up 28.4% combined.

The following table presents the components of non-interest expenses for the years ended December 31, 2021, 2020 and 2019:

(in millions of \$)	Year ended December 31			Dollar Change		Percent Change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Salaries and other employee benefits	161.3	173.7	183.7	(12.3)	(10.0)	(7.1)%	(5.4)%
Technology and communications	63.8	65.2	62.6	(1.3)	2.5	(2.0)%	4.0 %
Property	30.9	29.4	24.2	1.5	5.2	5.0 %	21.5 %
Professional and outside services	21.4	21.3	28.0	0.1	(6.7)	0.6 %	(23.9)%
Indirect taxes	22.1	21.3	21.1	0.8	0.2	3.6 %	1.0 %
Amortization of intangible assets	6.0	5.8	5.5	0.2	0.4	3.3 %	6.8 %
Marketing	4.6	4.4	8.1	0.1	(3.6)	2.7 %	(44.8)%
Non-service employee benefits expense	3.9	2.6	5.6	1.2	(3.0)	47.3 %	(53.3)%
Other non-interest expenses	19.9	20.9	18.2	(1.0)	2.7	(4.7)%	14.6 %
Total non-interest expenses	333.9	344.6	356.9	(10.7)	(12.3)	(3.1)%	(3.4)%
Non-core items (Non-GAAP)	(1.8)	(8.0)	(21.8)	6.2	13.8	(77.5)%	(63.3)%
Core non-interest expenses (Non-GAAP)	332.1	336.6	335.1	(4.5)	1.5	(1.3)%	0.4 %

For a full reconciliation of GAAP net income to core net income, please see Item 5.A. "Operating Results — Reconciliation of Non-GAAP Financial Measures".

Salaries and Other Employee Benefits

Total salaries and other employee benefits costs were \$161.3 million in 2021, a decrease of \$12.3 million compared to 2020. Included in 2021 were \$1.5 million of non-core costs in relation to redundancy costs associated with the transfer of Channel Islands banking operations functions from Mauritius to Butterfield's service centers in Canada and Guernsey. In 2020, \$8.0 million relates to COVID-19 related cost restructure programs (voluntary separation and redundancy costs). In 2019, \$16.0 million relates to severance and early retirement programs.

Core salaries, which exclude these amounts, and other employee benefits costs were \$159.9 million in 2021, down \$5.8 million compared to \$165.7 million in 2020 primarily due to the resulting benefits from previous restructuring programs. From 2019 to 2020, core salaries decreased by \$2.0 million primarily due to a reduction in health insurance and temporary employment services.

Headcount on a full-time equivalency basis at the end of 2021 was 1,277, compared to 1,314 in 2020 and 1,512 in 2019. Staffing levels overall remained fairly constant from 2020 to 2021 although there was some relocation of non-client facing roles across jurisdictions. The decrease from 2019 to 2020 was as a result of cost restructure programs (voluntary separation and redundancy costs).

Technology and Communications

Technology and communication costs reflect expenses relating to the support for our IT infrastructure and decreased from \$65.2 million in 2020 to \$63.8 million in 2021 due to the depreciation of the Bank's core banking system outpacing costs associated with the new technology projects. From 2019 to 2020, technology and communications costs increased by \$2.5 million to \$65.2 million due to higher software maintenance costs, the full year impact of the ABN AMRO acquisition and partially offset by lower corporate travel costs.

Property

Property costs, which reflect occupancy expenses, building maintenance, and depreciation of property, plant and equipment, were \$30.9 million in 2021, an increase of \$1.5 million from \$29.4 million recorded in 2020 driven by the continued investment in property projects and renovations of our Head Office branch in Bermuda.

From 2019 to 2020, property costs increased by \$5.2 million driven by the full year recognition of ABN AMRO (Channel Islands) expenses as well as increased health and safety related expenditure and planned renovations around the Group.

Professional and Outside Services

Professional and outside services primarily include consulting, legal, audit and other professional services. Professional and outside services costs were \$21.4 million in 2021, in line with \$21.3 million in 2020.

In 2019, the total expenses of \$28.0 million included non-core project expenses of \$5.5 million which relates to sale and purchase agreement negotiation, due diligence and other legal costs in connection with the ABN AMRO (Channel Islands) acquisition. Excluding the non-core costs, professional fees for our core business decreased by \$1.4 million from 2019 to 2020.

Indirect Taxes

These taxes reflect taxes levied in the jurisdictions in which we operate, including employee-related payroll taxes, customs duties, and business licenses. In 2021, the expense was \$22.1 million, an increase of \$0.8 million which mainly relates to the elevated deposit and gross asset volumes which impact deposit insurance and financial services tax contributions, increased insurance costs, banking license fees and partially offset by lower payroll taxes due to reduced headcount. From 2019 to 2020, indirect taxes increased by \$0.2 million which mainly relates to the cost restructure program (voluntary separation and redundancy) in 2020. Of the \$22.1 million in indirect taxes, \$17.4 million was paid to the Bermuda government agencies for payroll tax, business licenses, deposit insurance, land taxes, and financial services tax and \$4.7 million was paid to other governments for business licenses, insurance tax, land taxes and work permit fees.

Amortization of Intangible Assets

Intangible assets relate to client relationships acquired from business acquisitions and are amortized on a straight-line basis over their estimated useful lives, not exceeding 15 years. The estimated lives of these acquired intangible assets are re-evaluated annually and tested for impairment. The amortization expense associated with

intangible assets was \$6.0 million in 2021 compared to \$5.8 million in 2020 and \$5.5 million in 2019. Amortization increased \$0.2 million from 2020 to 2021 due to the impact of foreign currency exchange rates and increased by \$0.4 million from 2019 to 2020 as a result of the full year amortization charge on the ABN AMRO (Channel Islands) intangible asset.

Marketing

Marketing expenses reflect costs incurred in advertising and promoting our products and services. Marketing expenses totaled \$4.6 million in 2021 and remained mostly flat compared to 2020. From 2019 to 2020, marketing expenses decreased by \$3.6 million, which is associated with lower costs on the Bank's re-branding initiative, lower travel expenses and client event costs.

Other Non-Interest Expenses

(in millions of \$)	For the year ended December 31			Dollar Change		Percent Change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Stationery & supplies	1.0	1.2	1.7	(0.2)	(0.5)	(13.5)%	(29.3)%
Custodian & handling	3.4	3.0	2.5	0.4	0.5	14.5 %	20.9 %
Charitable donations	1.1	1.6	1.4	(0.4)	0.2	(27.6)%	14.6 %
Professional lines insurance	3.9	3.7	3.4	0.3	0.3	7.3 %	8.9 %
Other expenses	10.4	11.5	9.4	(1.1)	2.1	(9.5)%	22.8 %
Total other non-interest expenses	19.9	20.9	18.2	(1.0)	2.7	(4.7)%	14.6 %

Other non-interest expenses were \$19.9 million in 2021, a decrease of \$1.0 million compared to 2020, driven by lower operational losses and write-offs.

From 2019 to 2020, other non-interest expenses increased by \$2.7 million, driven by the full year recognition of ABN AMRO (Channel Islands) expenses as well as higher operational losses and write-offs in the Channel Islands.

Income Taxes

Each jurisdiction in which we operate is subject to different corporate income tax laws. See Item 3.D. "Risk Factors - Regulatory and Tax-Related Risks". We are incorporated in Bermuda as a local company and, pursuant to Bermuda law, not obligated to pay any direct corporate taxes in Bermuda on either income or capital gains. Our subsidiaries in the Cayman Islands and The Bahamas are not subject to any taxes on either income or capital gains under current laws applicable in the respective jurisdictions. In general, entities in Bermuda and the Cayman Islands are not subject to corporate income taxes but are required to pay higher rates of indirect taxes (included above) such as license fees and, in Bermuda, payroll taxes and import duties.

Our subsidiaries in the UK, Guernsey, Jersey, Switzerland, Canada, Singapore, and Mauritius are subject to the tax laws of those jurisdictions. See "Note 25 Income taxes" in the Audited Consolidated Financial Statements for a reconciliation between the effective income tax rate and the statutory income tax rate.

In 2021, income tax expense netted to an expense of \$3.1 million compared to an expense of \$2.4 million in 2020. The change in income tax expense of \$0.7 million in 2021 (2019 to 2020: \$3.7 million) was driven by an increase in profitability in our Guernsey subsidiary, changes in the deferred tax valuation allowance and offset by the impact of a change in tax rates. The change in income tax expense of \$3.7 million in 2020 was mostly due to a change in the deferred tax valuation allowance resulting in a deferred tax recovery in the UK in 2019, because the UK subsidiary became profitable.

Consolidated Balance Sheet and Discussion

The following table shows the balance sheet as reported as at December 31, 2021 and 2020:

(in millions of \$)	As at December 31		Dollar Change	Percent Change
	2021	2020		
Assets				
Cash due from banks	2,180	3,290	(1,110)	(33.7)%
Securities purchased under agreement to resell	96	197	(101)	(51.3)%
Short-term investments	1,199	823	376	45.7 %
Investment in securities	6,237	4,863	1,374	28.3 %
Loans, net of allowance for credit losses	5,241	5,161	80	1.6 %
Premises, equipment and computer software	139	151	(12)	(7.9)%
Goodwill and intangibles	86	93	(7)	(7.5)%
Other assets	158	162	(4)	(2.5)%
Total assets	15,335	14,739	596	4.0 %
Liabilities				
Total deposits	13,870	13,250	620	4.7 %
Total other liabilities	316	335	(19)	(5.7)%
Long-term debt	172	171	1	0.6 %
Total liabilities	14,358	13,757	601	4.4 %
Common shareholders' equity	977	982	(5)	(0.5)%
Total shareholders' equity	977	982	(5)	(0.5)%
Total liabilities and shareholders' equity	15,335	14,739	596	4.0 %
As at December 31				
2021 2020				
Capital Ratios				
Risk-weighted assets			5,101	5,069
Tangible common equity (TCE)			891	889
Tangible assets (TA)			15,249	14,646
TCE/TA			5.8 %	6.1 %
Common Equity Tier 1			17.6 %	16.1 %
Total Tier 1			17.6 %	16.1 %
Total Capital			21.2 %	19.8 %
Leverage ratio			5.6 %	5.3 %

We maintain a liquid balance sheet and are well capitalized. As at December 31, 2021, total cash due from banks, short-term investments and investment in securities represented \$9.7 billion, or 63.3% of total assets, up slightly from 62.2% at the end of 2020. Shareholders' equity at December 31, 2021 was \$977.5 million, down from \$981.9 million at the end of 2020 due primarily to the movement in unrealized gains (losses) on AFS investments included in AOCIL from an unrealized gain to an unrealized loss position and partially offset by net income for the year net of dividends paid and shares repurchased.

Total assets increased by \$0.6 billion to \$15.3 billion from 2020 to 2021, primarily due to an increase in depositor funding which is reflected in the increase in cash and the investment portfolio.

As at December 31, 2021, our capital ratios were strong, and were significantly in excess of regulatory requirements. The Bank's regulatory capital is determined in accordance with current Basel III guidelines as issued by the BMA.

The TCE/TA ratio at the end of 2021 was 5.8% (2020: 6.1%), while the CET1 and total Tier 1 capital ratios at the end of 2021 were 17.6% (2020: 16.1%) and 17.6% (2020: 16.1%), respectively. These ratios continue to remain in excess of regulatory minimums at December 31, 2021.

Cash Due from Banks, Securities Purchased Under Agreement to Resell and Short-Term Investments

We only place deposits with highly-rated institutions and ensure that there is appropriate geographic and sector diversification in our exposures. Limits are set for aggregate geographic exposures and for every counterparty for which we place deposits. Those limits are monitored and reviewed by our Credit Risk Management division and approved by the Financial Institutions Committee. We define cash due from banks to include cash on hand, cash items in the process of collection, amounts due from correspondent banks and liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in fair value. Such investments are those with less than three months maturity from the date of acquisition and include unrestricted term deposits, certificates of deposit and treasury bills. Investments of a similar nature that are either restricted or have a contractual maturity of more than three months but one year or less are classified as short-term investments. Securities purchased under agreement to resell are treated as collateralized lending transactions, and are referred to as repurchase agreements. We utilize 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 collateral involved is appropriate and by monitoring the value of the securities posted or received as collateral on a daily basis.

As at December 31, 2021, cash due from banks, securities purchased under agreements to resell and short-term investments were \$3.5 billion, compared to \$4.3 billion as at December 31, 2020. The decrease from 2020 to 2021 is primarily a result of redeploying funds into the investment portfolio.

See "Note 3: Cash due from banks", "Note 4: Short-term investments" and "Note 12: Credit related arrangements, repurchase agreements and commitments" to our audited consolidated financial statements as at and for the year ended December 31, 2021 for additional tables and information.

Investment in Securities

Our investment policy requires management to maintain a portfolio of securities that provide the liquidity necessary to cover our obligations as they come due, and mitigate our overall exposure to credit and interest rate risk, while achieving a satisfactory return on the funds invested. The securities in which we invest are limited to securities that are considered investment grade. Securities in our investment portfolio are accounted for as either equity securities at fair value, AFS or HTM. Investment policies are approved by the Board, governed by the Group Asset and Liability Committee and monitored by Group Market Risk, a department of the Group Risk Management division.

Consistent with industry and rating agency designations, we define investment grade as "BBB" or higher. As at December 31, 2021, 100% (2020: 99.8%) of our total investments were investment grade. Of these securities, 100% (2020: 99.8%) are rated "A" or higher.

The following table presents the carrying value of investment securities by balance sheet category as at December 31, 2021 and 2020:

(in millions of \$)	As at December 31		Dollar Change	Percent Change
	2021	2020		
Equity securities at fair value	—	7	(7)	(100.0)%
Available-for-sale	3,474	2,661	813	30.6 %
Held-to-maturity	2,763	2,194	569	25.9 %
Total Investment in Securities	6,237	4,863	1,374	28.3 %

The investments were placed almost exclusively in US government and federal agency securities totaling \$5.9 billion, based upon carrying value, or 94.7% of the total investment portfolio, as at December 31, 2021. Total net unrealized gains of the investment portfolio were \$0.4 million, compared to net unrealized gains of \$185.2 million at the end of 2020. The movement in unrealized gains for the year was primarily due higher long-term US dollar interest rates in 2021 compared to 2020.

Equity securities at fair value totaled \$0.2 million at the end of 2021, a decrease of \$7.0 million driven by the sale of the seed capital invested in mutual funds managed by the Bank. As at December 31, 2021, the remaining equity securities at fair value consisted of real estate mutual funds.

AFS securities totaled \$3.5 billion at the end of 2021, compared to \$2.7 billion at the end of 2020. As at December 31, 2021, 90.5% or \$3.1 billion (2020: 96.4%, or \$2.6 billion) of AFS securities consisted of holdings of securities issued by the US government and federal agencies. As at December 31, 2021, the remaining 9.5%, or \$330.1 million of AFS securities (2020: 3.5% or \$95.1 million) was comprised primarily of guaranteed student loan-backed securities of 0.4%, or \$13.2 million (2020: 0.5%, or \$12.9 million), debt securities issued by non-US governments of 8.3%, or \$289.6 million (2020: 0.8%, or \$22.4 million) and residential mortgage-backed securities of 0.8%, or \$27.3 million (2020: 2.2%, or \$59.7 million). The overall increase in US government and federal agency securities was funded by an increase in depositor funding as well as the redeployment of funds from cash due from banks.

HTM investments were \$2.8 billion as at December 31, 2021 (2020: \$2.2 billion) and consisted entirely of mortgage-backed securities issued by US federal agencies that management does not intend to sell before contractual maturity.

Investment Valuation — Impairment and Credit Loss Considerations

Securities in unrealized loss positions are analyzed as part of management's ongoing assessment of impairment and credit losses. For debt securities, where management does not expect to recover the entire amortized cost basis of the security and intends to sell such securities or it is more likely than not that the Bank will be required to sell the securities before recovering the amortized cost, it recognizes an impairment loss equal to the full difference between the amortized cost basis and the fair value of those securities through the income statement. Following the recognition of impairment, the security's new amortized cost basis is the previous basis less impairment.

When management does not intend to sell or it is more likely than not that the Bank will hold such securities until recovering the amortized cost, management determines whether any credit losses exist. See "Note 2.H: Investments" and "Note 2.J: Allowance for Credit Losses".

While management sold AFS securities in 2021 and 2020, these securities were sold for net loss of \$0.2 million and net gain of \$1.2 million, respectively, and involved selling US agency securities as part of a portfolio rebalancing strategy in order to manage duration and interest rate sensitivity. This also included selling lower yielding explicitly guaranteed US agency securities and purchasing higher yielding implicitly guaranteed US agency securities as well as selling floating rate notes in exchange for fixed rate notes due to the current low interest rate environment. Management does not have the intention or does not foresee a more likely than not scenario where the Bank will be required to sell any further securities which are in an unrealized loss position, and accordingly, management has concluded that these sales are not credit loss indicators for any remaining securities in a loss position as at December 31, 2021.

See Note 5: Investment in securities to our audited consolidated financial statements as at December 31, 2021 for additional tables and information.

Loans

The loan portfolio increased from \$5.16 billion at the end of 2020 to \$5.24 billion as at December 31, 2021. The Cayman Islands and the Channel Islands and UK segments saw growth in their residential mortgage portfolios, which was partially offset by the repayment of a number of commercial and commercial real estate facilities in Bermuda and the Channel Islands and UK segments during the period.

The loan portfolio represented 34.2% of total assets as at December 31, 2021 (2020: 35.0%), while loans as a percentage of total deposits decreased from 38.9% at the end of 2020 to 37.8% at the end of 2021.

Allowance for credit losses as at December 31, 2021 totaled \$28.1 million, a decrease of \$6.0 million from the prior year. The movement was due primarily to the improvement in macroeconomic forecasts impacting future expected credit loss estimates and the reduction in non-performing loans.

Gross non-accrual loans totaled \$61.0 million as at December 31, 2021, \$11.4 million lower than \$72.5 million as at December 31, 2020, and represented 1.2% of the total loan portfolio as at December 31, 2021, compared to 1.4% as at December 31, 2020. The decrease in non-accrual loans was driven by the payoff of residential mortgages and a commercial mortgage in Bermuda and partially offset by a residential mortgage in the Channel Islands moving into non-accrual in the fourth quarter of 2021. In 2021, we held OREO amounting to \$0.7 million (2020: \$4.1 million), a decrease of \$3.4 million due to the sale of commercial real estate in Bermuda.

Overall, the credit quality of the Bank's lending portfolio saw an improvement from December 31, 2020 to December 31, 2021, driven by improved credit metrics on a number of large commercial real estate loans as well as paydowns in the portfolio.

Government

Loans to governments were \$259.6 million, which was a \$19.8 million decrease from 2020, due primarily to the repayment of a government agency facility in Bermuda.

Commercial

The commercial and industrial loan portfolio includes loans and overdraft facilities advanced primarily to corporations and small and medium-sized entities, which are generally not collateralized by real estate and where loan repayments are expected to flow from the operation of the underlying businesses.

Commercial real estate loans are offered to real estate investors, developers and builders based primarily in Bermuda and the Cayman Islands. To manage our credit exposure on such loans, the principal collateral is real estate held for commercial purposes and is supported by a registered mortgage. Cash flows from the properties, primarily from rental income, are generally supported by non-cancellable long-term leases to high quality international businesses. These cash flows are generally sufficient to service the loan. The portfolio decreased by \$67.0 million to \$693.2 million at December 31, 2021.

Commercial loans outstanding as at December 31, 2021 were \$478.4 million, which represented a decrease of \$41.9 million from the previous year as repayments continued to exceed new loan growth.

Residential

The residential mortgage portfolio comprises mortgages to clients with whom we are seeking to establish (or already have) a comprehensive financial services relationship. It includes mortgages to individuals and corporate loans secured by residential property.

All mortgages were underwritten utilizing our stringent credit standards. See Item 5.A. "Operating Results". Residential loans consist of conventional home mortgages and equity credit lines.

As at December 31, 2021, residential mortgages totaled \$3.6 billion (or 68.8% of total gross loans), a \$218.5 million increase from December 31, 2020. This increase was attributed mainly to growth in both the Cayman Islands and the Channel Islands and UK mortgage books.

Other Loan Portfolios

We provide loans, as part of our normal banking business, in respect of automobile financing, consumer financing, credit cards, commercial financing, loans to financial institutions and overdraft facilities to retail, corporate and private banking clients in the jurisdictions in which we operate. As at December 31, 2021, other consumer loans totaled \$214.8 million (or 4.1% of total gross loans), a \$16.0 million decrease from December 31, 2020. This was due to lower unsecured loan utilization resulting from the COVID-19 pandemic.

See "Note 6: Loans" and "Note 7: Credit risk concentrations" to our audited consolidated financial statements as at December 31, 2021 for more information on our loan portfolio and contractual obligations and arrangements.

Deposits

Deposits are our principal funding source for use in lending, investments and liquidity. We are a deposit-led bank and do not require the use of wholesale or institutional markets to fund our loan business. See Item 5.A. "Operating Results - Liquidity Risk" and " - Credit Risk". Deposit balances at the end of reporting periods can fluctuate due to significant balances that flow in and out from private trust, fund and insurance clients to meet quarter-end operational requirements.

The table below shows the year-end and average total deposit balances by jurisdiction for the year ended and as at December 31, 2021 and 2020:

(in millions of \$)	As at December 31		Dollar change	Average balance		Dollar change
	2021	2020		2021	2020	
Bermuda	4,511	4,813	(302)	4,616	4,353	263
Cayman Islands	4,612	4,109	503	4,400	3,585	815
Channel Island and the UK	4,747	4,329	418	4,724	4,138	586
Total deposits	13,870	13,250	620	13,740	12,075	1,665

Average total deposits increased by \$1.7 billion to \$13.7 billion in 2021. On a year-end basis, total deposits were up to \$0.6 billion from \$13.3 billion at the end of 2020. The increase in deposit balances was driven by corporate deposit increases in Cayman and the Channel Islands, and partially offset by expected corporate deposit decreases in Bermuda.

Demand deposits, which include checking accounts (both interest bearing and non-interest bearing), savings and call accounts, totaled \$10.9 billion, or 78.8% of total deposits at the end of 2021, compared to \$10.6 billion or 79.9%, at the end of 2020. Term deposits increased by \$0.3 billion to \$2.9 billion compared to the prior year. The cost of funds on deposits decreased from 21 basis points in the full year ended 2020 to 11 basis points in 2021 primarily due to the active repricing of deposits in response to market conditions. Average non-interest bearing deposits increased to \$2.9 billion from \$2.4 billion in 2020.

Included in total deposits are deposits from banks of \$26.4 million at the end of 2021, up from \$25.1 million at the end of 2020.

See "Note 10: Deposits" to our audited consolidated financial statements as at December 31, 2021 for additional tables and information.

Borrowings

We have no issuances of certificates of deposit ("CD"), commercial paper ("CP") or senior notes outstanding and have no CD or CP issuance programs. We use funding from the inter-bank market as part of interest rate risk and liquidity management. As at December 31, 2021, deposits from banks totaled \$26.4 million, \$1.3 million higher than the prior year.

Employee Future Benefits

We maintain trustee pension plans including non-contributory defined benefit plans and a number of defined contribution plans, and provide post-retirement healthcare benefits to our qualifying retirees. The defined benefit provisions under the pension plans are generally based upon years of service and average salary during the final years of employment. The defined benefit pension and post-retirement healthcare plans are not open to new participants, are non-contributory and thus the funding required is provided by us, based upon the advice of an independent actuary. The defined benefit pension plans are in the Bermuda, Guernsey and UK jurisdictions, and the defined benefit post-retirement medical plan is in Bermuda. The Bank also has a residual obligation in addition to its defined contribution plan in Mauritius.

Effective December 31, 2011, the Bermuda defined benefit pension benefits were amended to freeze credited service and final average earnings for remaining active members. Effective January 2012, all the participants of the Bermuda defined benefit pension plan are inactive and in accordance with GAAP, the net actuarial loss of the Bermuda defined benefit pension plan is amortized over the estimated average remaining life expectancy of the inactive participants of 22.8 years. Prior to all Bermuda participants being inactive, the net actuarial loss of the Bermuda defined benefit pension plan was amortized to net income over the estimated average remaining service period for active members of 4.5 years.

Effective September 30, 2014, the defined benefit pension benefits of our Guernsey operations were amended to freeze credited service and final average earnings for remaining active members. The benefits amendment resulted in a further reduction in the Guernsey defined benefit pension liability of \$4.6 million as at September 30, 2014.

Effective October 2014, all of the participants of the Guernsey defined benefit pension plan are inactive and in accordance with GAAP, the net actuarial loss of the Guernsey defined benefit pension plan will be amortized over the estimated average remaining life expectancy of the inactive participants of 39 years. Prior to all Guernsey participants being inactive, the net actuarial loss of the Guernsey defined benefit pension plan was amortized to net income over the estimated average remaining service period for active members of 15 years.

For the year ended December 31, 2014, numerous changes in the plan provisions were made to align the plan provisions with our administrative practices resulting in a further increase in the Bermuda defined benefit post-retirement healthcare plan liability of \$7.9 million. We amortize prior service credit resulting from plan amendments that occurred when plan members were active employees, on a linear basis over the expected average remaining service period (to full eligibility) of active members expected to receive benefits under the plan. Such remaining service periods are as follows: 3.1 years for the 2010 plan amendments and 4.6 years for the 2011 plan amendments. Plan amendments occurring in 2014 resulted in the recognition of new prior service cost on December 31, 2014 on a plan for which substantially all members are now inactive and, in accordance with GAAP, we have elected to amortize this new prior service cost on a linear basis over 21 years, which is the average remaining life expectancy of members eligible for benefits under the plan at the time of the amendments.

As at December 31, 2021, we had a net obligation for employee future benefits in the amount of \$126.2 million, down \$5.0 million (3.8%) from \$131.3 million at the end of 2020. The decrease was driven primarily by experienced gains from increases in discount rate assumptions used to measure the obligation as well as actual return on pension plan assets in 2021 being greater than expected.

See "Note 11: Employee benefit plans" to our audited consolidated financial statements as at December 31, 2021 for additional tables and information.

Long-Term Debt, Interest Payments and Maturities

We had outstanding issuances of long-term debt with a carrying value of \$171.9 million as at December 31, 2021 and \$171.5 million as at December 31, 2020, all issued in US Dollars. On June 11, 2020, the Bank issued US \$100 million of Subordinated Lower Tier II capital notes. The notes were issued at par and due on June 15, 2030. The issuance was by way of a registered offering with US institutional investors. The notes are listed on the BSX in the specialist debt securities category. The proceeds of the issue were used, amongst other, to repay the entire amount of the US \$45 million outstanding subordinated notes series 2005-B which matured on July 2, 2020 and the entire amount of the US \$25 million outstanding subordinated notes series 2008-B which were eligible for redemption. As at December 31, 2021, all of our outstanding long-term debt was eligible for inclusion in our Tier 2 regulatory capital base, limited to 50% of Tier 1 capital.

The following table presents the contractual maturity, interest rates and principal outstanding as at December 31, 2021:

Long-term debt (in millions of \$)	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
2018 issuance	June 1, 2023	June 1, 2028	5.25%	3 months US\$ LIBOR + 2.255%	75.0
2020 issuance	June 15, 2025	June 15, 2030	5.25%	3 months US\$ SOFR + 5.060%	100.0
Unamortized debt issuance costs					(3.1)
Total					171.9

See "Note 19: Long-term debt" to our audited consolidated financial statements as at December 31, 2021 for additional information.

Other Liabilities

Other liabilities include operating lease liabilities, derivative liabilities, current employee salaries and benefits payable and related payroll tax, as well as sundry liabilities. Other liabilities decreased by \$14.5 million to \$189.4 million as at December 31, 2021. The decrease was a result of decreased mark-to-market losses on derivatives and offset by higher sundry liabilities.

Leases

In the normal course of operation, the Bank enters into leasing agreements either as the lessee or the lessor, mostly for office and parking spaces as well as for small office equipment. The Bank recognizes right-of-use assets and lease liabilities for operating 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 rate. The Bank has used the rate of its June 11, 2020 debt issuance as the current incremental borrowing rate.

The terms of the existing leases, including renewal options that are reasonably certain to be exercised, extend up to the year 2035. Certain lease payments will be adjusted during the related leases' terms based on movements in the relevant consumer price index.

See "Note 13: Leases" to our audited consolidated financial statements as at December 31, 2021 for additional information.

Repurchase Agreements

We also obtain funds from time to time from the sale of securities to institutional investors under repurchase agreements. In a repurchase agreement transaction, we will generally pledge investment securities as collateral in a borrowing transaction, agreeing to repurchase the identical security on a specified later date, generally not more than 90 days, at a price greater than the original sales price. The difference between the sale price and repurchase price is the cost of the use of the proceeds, or interest expense. The investment securities underlying these agreements may be delivered to securities dealers who arrange such transactions as collateral for the repurchase obligation. Repurchase agreements represent a cost competitive funding source and also provide liquidity on agency paper for us. However, we are subject to the risk that the borrower of the securities may default at maturity and not return the collateral. In order to minimize this potential risk when entering into such transactions, we generally deal with large, established investment brokerage firms with whom we have master repurchase agreements. Repurchase transactions are accounted for as collateralized financing arrangements rather than as sales of such securities, and the obligation to repurchase such securities is reflected as a liability in our consolidated financial statements. As at December 31, 2021 and 2020, there were no repurchase agreements outstanding.

Shareholders' Equity

Shareholders' equity decreased during the year ended December 31, 2021 by \$4.5 million to \$977.5 million.

Increases totaling \$197.4 million included:

- \$162.7 million of net income for the year;
- \$19.2 million from adjustments to employee benefit plans;
- \$15.2 million for share-based compensation and settlements; and
- \$0.3 million of other adjustments.

The increases were offset by the following decreases of \$201.9 million:

- \$87.3 million of common share dividends;
- \$19.8 million from net increases in treasury shares; and
- \$94.8 million from net change in unrealized gains (losses) on AFS investments.

Segment Overview

The Bank is managed by the Chairman and CEO on a geographic basis. The Bank presents four reportable segments, three geographical and one other: Bermuda, the Cayman Islands, Channel Islands and the UK, and Other. The Other segment is composed of several non-reportable operating segments that have been aggregated in accordance with GAAP. Each reportable segment has a managing director who reports to the Chairman and CEO. The Chairman and CEO and the segment managing director have final authority over resource allocation decisions and performance assessment.

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 expenses. Loan participation revenue and expenses are allocated pro-rata based on the percentage of the total loan funded by each jurisdiction participating in the loan.

Bermuda (Including Head Office)

For more than 150 years, Bermuda has served as home to our headquarters and remains our largest jurisdiction in terms of number of employees and business volume. The following table provides certain financial information for our Bermuda segment for the years ended December 31, 2021, 2020 and 2019.

Summary Income Statement	For the year ended December 31			Dollar change		Percent change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
(in millions of \$)							
Net interest income	146.0	159.6	183.9	(13.6)	(24.3)	(8.5)%	(13.2)%
Provision for credit recoveries (losses)	2.2	(8.8)	(3.1)	11.0	(5.7)	125.0 %	(183.9)%
Non-interest income	84.6	85.2	89.1	(0.6)	(3.9)	(0.7)%	(4.4)%
Net revenue before other gains (losses)	232.8	236.0	269.9	(3.2)	(33.9)	(1.4)%	(12.6)%
Operating expenses	(186.8)	(192.8)	(209.4)	6.0	16.6	(3.1)%	(7.9)%
Net income before other gains (losses)	46.0	43.2	60.5	2.8	(17.3)	6.5 %	(28.6)%
Total other gains (losses)	0.9	2.0	2.2	(1.1)	(0.2)	(55.0)%	(9.1)%
Net income	46.9	45.2	62.7	1.7	(17.5)	3.8 %	(27.9)%

Summary Balance Sheet	As at December 31			
	2021	2020	Dollar change	Percent change
(in millions of \$)				
Total deposits	4,511	4,813	(302)	(6.3)%
Loans, net of allowance for credit losses	2,023	2,077	(54)	(2.6)%
Total assets	5,728	5,925	(197)	(3.3)%
Assets under administration				
Custody and other administration services	16,099	16,071	28	0.2 %
Trust	54,452	53,512	940	1.8 %
Assets under management				
Butterfield Funds	1,531	1,811	(280)	(15.5)%
Other assets under management	2,272	2,152	120	5.6 %
Total assets under management	3,803	3,963	(160)	(4.0)%
Number of employees	413	449	(36)	(8.0)%

2021 vs. 2020

Net income before other gains and losses was \$46.0 million for the year ended December 31, 2021, up by \$2.8 million from \$43.2 million in the prior year. This increase is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses decreased by \$13.6 million to \$146.0 million in 2021, due primarily to the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic, which was partially offset by lower deposit costs.

There is a provision for credit recoveries of \$2.2 million in 2021 compared to a provision for credit losses of \$8.8 million in 2020. The movement is due to both the improvement in macroeconomic forecasts impacting future expected credit loss estimates and a reduction in non-performing loans.

Non-interest income decreased by \$0.6 million to \$84.6 million in 2021. This was primarily due to lower administration fees on loan participations; lower asset management fees and reduced dividends as a result of the liquidation of a private equity investment. These decreases were partially offset by increases in foreign exchange revenue, trust income and custody income from higher volumes, increased fees and onboarding of new clients during the year, respectively.

Operating expenses decreased by \$6.0 million to \$186.8 million in 2021 which was driven by the decrease in staff related costs due primarily to the resulting benefits from previous restructuring programs and partially offset by increases in property maintenance costs and non-service employee benefits expense due to increased costs from the post-retirement medical benefit plan.

Total assets as at December 31, 2021 were \$5.7 billion, down \$0.2 billion from December 31, 2020. Total deposits were \$4.5 billion in December 31, 2021, down \$0.3 billion from December 31, 2020, and loan balances at December 31, 2021 were relatively flat at \$2.0 billion.

Client AUA for the trust and custody businesses as at December 31, 2021 were \$54.5 billion and \$16.1 billion, respectively, while assets under management were \$3.8 billion. This compares with \$53.5 billion, \$16.1 billion and \$4.0 billion, respectively, as at December 31, 2020.

2020 vs. 2019

Net income before other gains and losses was \$43.2 million for the year ended December 31, 2020, down by \$17.3 million from \$60.5 million in the prior year. This decrease is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses decreased by \$24.3 million to \$159.6 million in 2020, due primarily to the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic, which was partially offset by lower deposit costs.

Provision for credit losses was up by \$5.7 million to \$8.8 million in 2020. The increase is due to the implementation of the new CECL model, COVID-19 driven negative macroeconomic forecasts impacting the future expected credit loss estimate and loans migrating into the past due and non-performing categories.

Non-interest income decreased by \$3.9 million to \$85.2 million in 2020. This was primarily due to lower economic activity resulting from COVID-19 related "shelter-in-place" government mandates, primarily during the months of April and May, impacting card service fee contributions and foreign exchange transactional volumes. Asset management fees were impacted from Q3 2020 due to fees on the Bank's money market fund being reduced to offset low short term market rates.

Operating expenses decreased by \$16.6 million to \$192.8 million in 2020 driven by a decrease in salary and other employee benefit costs, due to both higher restructuring costs and the costs associated with the departure of a senior executive in 2019; decreased professional and other outside services costs, due principally to the costs associated with the ABN AMRO (Channel Islands) acquisition in 2019 which were booked at the Head Office level and a reduction in the volume of professional and outside services due to vendor management cost reduction programs implemented in 2020; reduced marketing costs from the delay of rebranding and reduced travel expenditure due to COVID-19; and partially offset by an increase in property costs due to extra health and safety related expenditure and planned renovations.

Total assets as at December 31, 2020 were \$5.9 billion, up \$0.7 billion from December 31, 2019. Total deposits were \$4.8 billion in December 31, 2020, up \$0.4 billion from December 31, 2019, and loan balances at December 31, 2020 were unchanged at \$2.1 billion.

Client AUA for the trust and custody businesses as at December 31, 2020 were \$53.5 billion and \$16.1 billion, respectively, while assets under management were \$4.0 billion. This compares with \$44.4 billion, \$15.2 billion and \$4.0 billion, respectively, as at December 31, 2019.

Cayman Islands

We are a leading financial services provider in the Cayman Islands, offering a comprehensive range of personal and corporate financial services. In addition to our strong retail presence, we are focused on the provision of wealth management services including private banking, asset management and trust services.

We have continued to enhance our client delivery channels and online and mobile banking platform upgrades. With four Banking Centers in desirable locations and 17 ATMs strategically located in Grand Cayman, we continue to be a leading provider of financial services locally. The following table provides certain financial information for our Cayman Islands segment for the years ended December 31, 2021, 2020 and 2019.

Summary Income Statement	For the year ended December 31			Dollar change		Percent change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
(in millions of \$)							
Net interest income	91.0	95.4	114.6	(4.4)	(19.2)	(4.6)%	(16.8)%
Provision for credit recoveries (losses)	1.4	0.5	1.9	0.9	(1.4)	180.0 %	(73.7)%
Non-interest income	58.1	49.3	51.9	8.8	(2.6)	17.8 %	(5.0)%
Net revenue before other gains (losses)	150.5	145.2	168.4	5.3	(23.2)	3.7 %	(13.8)%
Operating expenses	(58.9)	(62.6)	(61.1)	3.7	(1.5)	(5.9)%	2.5 %
Net income before other gains (losses)	91.5	82.6	107.3	8.9	(24.7)	10.8 %	(23.0)%
Total other gains (losses)	0.2	0.4	0.6	(0.2)	(0.2)	(50.0)%	(33.3)%
Net income	91.7	83.0	107.9	8.7	(24.9)	10.5 %	(23.1)%

Summary Balance Sheet	As at December 31			
	2021	2020	Dollar change	Percent change
(in millions of \$)				
Total deposits	4,612	4,109	503	12.2 %
Loans, net of allowance for credit losses	1,137	1,124	13	1.2 %
Total assets	4,973	4,480	493	11.0 %
Assets under administration				
Custody and other administration services	4,396	3,159	1,237	39.2 %
Trust	8,008	7,611	397	5.2 %
Assets under management				
Butterfield Funds	163	170	(7)	(4.1)%
Other assets under management	702	625	77	12.3 %
Total assets under management	866	795	71	8.9 %
Number of employees	241	236	5	2.1 %

2021 vs. 2020

Net income before other gains and losses for the year ended December 31, 2021 was \$91.5 million, up by \$8.9 million from \$82.6 million in 2020. This increase is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses was \$91.0 million in 2021, down by \$4.4 million compared to 2020. The decrease from 2020 to 2021 was due primarily to the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic and was partially offset by lower deposit costs.

Provision for credit recoveries of \$1.4 million in 2021 represented an increase of \$0.9 million compared to credit recoveries of \$0.5 million in 2020. The favorable variance was mainly due to the completion of a large condominium development and repayment of the associated construction loan during the year.

Non-interest income was \$58.1 million, up \$8.8 million from 2020 driven by increased economic activity impacting card service fee contributions and foreign exchange transactional volumes coupled with higher non-utilization fees on certain credit facilities.

Operating expenses decreased by \$3.7 million from 2020 to \$58.9 million in 2021, driven by a decrease in staff related costs due primarily to the resulting benefits from previous restructuring programs and lower technology and communications costs due to lower depreciation costs which is outpacing the new system roll-out. This was partially offset by an increase in professional and outside services due to higher intercompany charges from increased utilization of our Canadian service center.

Total assets as at December 31, 2021 were \$5.0 billion, up \$0.5 billion from December 31, 2020, reflecting higher depositor funding levels. Net loans were relatively stable at \$1.1 billion at December 31, 2021 with growth in residential mortgage lending offsetting repayments from commercial facilities.

Client AUA for the trust and custody businesses were \$8.0 billion and \$4.4 billion, respectively, while AUM were \$0.9 billion at December 31, 2021. This compares with \$7.6 billion, \$3.2 billion and \$0.8 billion, respectively, on December 31, 2020.

2020 vs. 2019

Net income before other gains and losses for the year ended December 31, 2020 was \$82.6 million, down by \$24.7 million from \$107.3 million in 2019. This decrease is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses was \$95.4 million in 2020, down by \$19.2 million compared to 2019. The decrease from 2019 to 2020 was due primarily to the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic and was partially offset by lower deposit costs.

Provision for credit losses was a recovery of \$0.5 million in 2020, representing a decrease of \$1.4 million compared to a credit recovery of \$1.9 million in 2019. This decrease was mainly due to lower credit recoveries in 2020 as a result of the net specific provision release driven by a small government loan-to-debt conversion in 2019.

Non-interest income was \$49.3 million, down \$2.6 million from 2019 driven by lower economic activity resulting from COVID-19 related "shelter-in-place" government mandates, primarily during the months of April and May, impacting card service fee contributions and foreign exchange transactional volumes.

Operating expenses increased by \$1.5 million from 2019 to \$62.6 million in 2020, driven primarily by an increase in professional and outside services due to higher intercompany charges from the Halifax service center; an increase in property costs due to extra health and safety related expenditure; an increase in IT sourcing and communication costs; and partially offset by reduced marketing costs from the delay of rebranding and reduced travel expenditure due to COVID-19.

Total assets as at December 31, 2020 were \$4.5 billion, up \$0.6 billion from December 31, 2019, reflecting higher depositor funding levels. Net loans were relatively flat at \$1.1 billion at December 31, 2020.

Client AUA for the trust and custody businesses were \$7.6 billion and \$3.2 billion, respectively, while AUM were \$0.8 billion at December 31, 2020. This compares with \$7.7 billion, \$2.6 billion and \$0.8 billion, respectively, on December 31, 2019.

Channel Islands and the UK

The Channel Islands and UK segment includes the jurisdictions of Guernsey, Jersey (both in the 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, corporate banking and treasury services, internet banking, wealth management, mortgage lending and fiduciary services. In 2021, the segment entered the local mortgage market offering various products to local residents. The UK jurisdiction provides mortgages for high-value residential properties. The following table provides certain financial information for our Channel Islands and the UK segment for the years ended December 31, 2021, 2020 and 2019.

Summary Income Statement (in millions of \$)	For the year ended December 31			Dollar change		Percent change	
	2021	2020	2019	2020 to 2021	2019 to 2020	2020 to 2021	2019 to 2020
Net interest income	62.8	62.7	47.2	0.1	15.5	0.2 %	32.8 %
Provision for credit recoveries (losses)	(0.5)	(0.2)	1.4	(0.3)	(1.6)	150.0 %	(114.3)%
Non-interest income	45.3	40.7	34.3	4.6	6.4	11.3 %	18.7 %
Net revenue before other gains (losses)	107.6	103.2	82.9	4.4	20.3	4.3 %	24.5 %
Operating expenses	(81.7)	(82.2)	(74.2)	0.5	(8.0)	(0.6)%	10.8 %
Net income before other gains (losses)	25.9	21.0	8.7	4.9	12.3	23.3 %	141.4 %
Total other gains (losses)	(2.4)	(1.2)	—	(1.2)	(1.2)	100.0 %	100.0 %
Net income	23.5	19.8	8.7	3.7	11.1	18.7 %	127.6 %

Summary Balance Sheet

As at December 31

(in millions of \$)	2021	2020	Dollar change	Percent change
Total deposits	4,747	4,329	418	9.7 %
Loans, net of allowance for credit losses	2,171	2,046	125	6.1 %
Total assets	5,235	4,827	408	8.5 %
Assets under administration				
Custody and other administration services	16,263	13,186	3,077	23.3 %
Trust	10,374	19,226	(8,852)	(46.0)%
Assets under management				
Butterfield Funds	64	48	16	33.3 %
Other assets under management	766	752	14	1.9 %
Total assets under management	830	800	30	3.8 %
Number of employees	369	363	6	1.7 %

2021 vs. 2020

Our Channel Islands and UK segment posted net income before gains and losses of \$25.9 million in 2021, an increase of \$4.9 million when compared to 2020. This increase is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses reflected an increase of \$0.1 million to \$62.8 million in 2021, compared to \$62.7 million in 2020. Favorable GBP/USD foreign exchange rates throughout 2021 more than offset the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic and which were partially offset by lower deposit costs.

Provision for credit losses was up \$0.3 million to \$0.5 million in 2021, due to an increased provision on a residential mortgage which moved into non-accrual status.

Non-interest income increased by \$4.6 million to \$45.3 million in 2021, due to increases in foreign exchange revenue, asset management fees and custody income driven by a combination of higher volumes, increased fees and onboarding of new clients during the year.

Operating expenses of \$81.7 million in 2021 were \$0.5 million lower than 2020, driven by a decrease in staff related costs due primarily to the resulting benefits from previous restructuring programs and lower operational losses and write-offs. This was partially offset by an increase in professional and outside services due to higher intercompany charges from increased utilization of our Canada and Mauritius service centers and higher legal and professional fees.

Total other gains (losses) for 2021 increased by \$1.2 million compared to 2020 due to a defined benefit pension plan adjustment.

Total assets of \$5.2 billion as at December 31, 2021, an increase from \$4.8 billion as at December 31, 2020 reflecting higher depositor funding levels. Net loans increased \$0.1 billion to \$2.2 billion at December 31, 2021 driven primarily by the growth in the residential mortgage portfolios.

As at December 31, 2021, client AUA for the trust and custody businesses were \$10.4 billion and \$16.3 billion, respectively, while AUM were \$0.8 billion. This compares with \$19.2 billion, \$13.2 billion and \$0.8 billion, respectively, as at December 31, 2020. The decrease in AUA for trust is mainly due to the revision of fee agreements for a trust structure in Guernsey. The increase in AUA for custody is mainly due to the on-boarding of new business while AUM remains stable.

2020 vs. 2019

Our Channel Islands and UK segment posted net income before gains and losses of \$21.0 million in 2020, an increase of \$12.3 million when compared to 2019. This increase is due principally to the following movements in net interest income, provision for credit losses, non-interest income and operating expenses:

Net interest income before provision for credit losses increased by \$15.5 million to \$62.7 million in 2020, compared to \$47.2 million in 2019, primarily due to the full year impact of the ABN AMRO acquisition, the impact of planned deposit repricing and lower deposit volumes from a reduction in primarily Euro deposits. This was partially offset by the impact of lower market rates across the yield curve as a result of the COVID-19 pandemic.

Provision for credit losses was an expense of \$0.2 million, compared to a recovery of \$1.4 million in 2019 due to the reversal of the Brexit economic factor provision in 2019.

Non-interest income increased by \$6.4 million to \$40.7 million in 2020, due to the full year impact of the ABN AMRO acquisition and partially offset by lower trust income from lesser time spent and loss of business.

Operating expenses of \$82.2 million in 2020 were \$8.0 million higher than 2019, principally due to the full year impact of the ABN AMRO acquisition; higher operational losses and write-offs and partially offset by higher restructuring costs incurred in 2019 compared to 2020.

Total other gains (losses) for 2020 increased \$1.2 million compared to 2019 due to a defined benefit pension plan adjustment.

Total assets of \$4.8 billion as at December 31, 2020, a decrease from \$5.1 billion as at December 31, 2019 primarily from a planned reduction of Euro deposit levels associated with the ABN AMRO (Channel Islands) acquisition.

As at December 31, 2020, client AUA for the trust and custody businesses were \$19.2 billion and \$13.2 billion, respectively, while AUM were \$0.8 billion. This compares with \$20.4 billion, \$12.5 billion and \$0.8 billion, respectively, as at December 31, 2019.

Off Balance Sheet Arrangements

Assets Under Administration and Assets Under Management

In the normal course of business, we hold AUA and AUM in a fiduciary or agency capacity for our clients. In accordance with GAAP, these assets are not our assets and are not included in our consolidated balance sheets.

Credit-Related Arrangements

We enter into standby letters of credit, letters of guarantee and contractual commitments to extend credit in the normal course of business, which are not required to be recorded on the balance sheet. Since many commitments expire unused or only partially used, these arrangements do not necessarily reflect future cash requirements. Management believes there are no material commitments to extend credit that represent risks of an unusual nature.

Standby letters of credit and letters of guarantee are issued at the request of our clients in order to secure a client's payment or performance obligations to a third party. These guarantees represent our irrevocable obligation 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 client. 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.

Credit risk is the principal risk associated with these instruments. The contractual amounts of these instruments represent the credit risk should the instrument be fully drawn upon and the client defaults. To control the credit risk associated with issuing letters of credit and letters of guarantee, we subject such activities to the same credit quality and monitoring controls as our lending activities. The types and amounts of collateral security we hold for these standby letters of credit and letters of guarantee are generally represented by our deposits or a charge over assets held in mutual funds. We are obligated to meet the entire financial obligation of these agreements and in certain cases are able to recover the amounts paid through recourse against the collateral security.

Risk Management

Risk Oversight and Management

General

The principal types of risk inherent in our business are market, liquidity, credit and operational risks.

Organizational Structure

The Board has overall responsibility for determining the strategy for risk management, setting the Bank's risk appetite and ensuring that risk is monitored and controlled effectively. It accomplishes its mandate through the activities of two dedicated committees:

The Risk Policy and Compliance Committee ("RPCC"): This committee of the Board assists the Board in fulfilling its responsibilities by overseeing the Group's risk profile and its performance against approved risk appetites and tolerance thresholds. Specifically, the committee considers the sufficiency of the Group's policies, procedures and limits related to the identification, measurement, monitoring and control of activities that give rise to credit, market, liquidity, interest rate, operational, regulatory, compliance, climate and reputational risks, as well as overseeing its compliance with laws, regulations and codes of conduct.

The Audit Committee: This committee reviews the overall adequacy and effectiveness of the Group's system of internal controls and the control environment, including in respect of the risk management process. It reviews recommendations arising from internal and independent audit review activities and management's response to any findings raised.

Both the RPCC and Audit Committee are supported in the execution of their respective mandates by the dedicated Audit, Compliance and Risk Policy Committees for our UK, Guernsey, Jersey, Cayman Islands and The Bahamas operations, which oversee the sufficiency of local risk management policies and procedures and the effectiveness of the system of internal controls that are in place. These committees are chaired by non-executive directors drawn from the boards of directors for each segment.

The Group executive management team is led by the Chairman and CEO and includes the members of executive management reporting directly to the Chairman and CEO. The executive management team is responsible for setting business strategy and for monitoring, evaluating and managing risks across the Group. It is supported by the following management committees:

The Group Risk and Compliance Committee ("GRCC"): This committee comprises executive and senior management team members and is chaired by the Group Chief Risk Officer. It provides a forum for the strategic assessment of risks assumed across the Group as a whole based on an integrated view of credit, market, liquidity, legal, regulatory and financial crime compliance, fiduciary, operational, cybersecurity, climate, insurance, pension, investment, capital and reputational risks, ensuring that these exposures are consistent with the risk appetites and tolerance thresholds promulgated by the Board and oversees the compliance of regulatory obligations arising under applicable laws, rules and regulations. It is responsible (i) for reviewing, evaluating and recommending the Group's Risk Appetite Framework, the results of the Capital Assessment and Risk Profile and recovery and resolution planning processes (including all associated stress testing performed) and the Group's key risk policies to the Board for approval; (ii) for reviewing and evaluating current and proposed business strategies in the context of our risk appetites; and (iii) for identifying, reviewing and advising on current and emerging risk issues and associated mitigation plans; and (iv) for reviewing the Group's compliance with external regulations and internal policies.

The Group Asset and Liability Committee ("GALCO"): This committee comprises executive and senior management team members and is chaired by the Group CFO. The committee is responsible for liquidity, interest rate and foreign exchange rate risk management and other balance sheet issues. It also oversees key policies and the execution of the Group's investment and capital management strategies and monitors the associated risks assumed. It is supported in the execution of its mandate by the work undertaken by the dedicated Asset & Liability Committees in each of the Bank's segments.

The Group Credit Committee ("GCC"): This committee comprises executive and senior management and is chaired by the Group Chief Risk Officer. The committee is responsible for a broad range of activities relating to the monitoring, evaluation and management of credit risks assumed across the Group at both transaction and portfolio levels. It is supported in the execution of its mandate by the Financial Institutions Committee ("FIC"), a dedicated sub-committee that is responsible for the evaluation and approval of recommended inter-bank and counterparty exposures assumed in the Group's treasury and investment portfolios, and by the activities of the jurisdictional Credit Committees, which review and approve transactions within delegated authorities and recommends specific transactions outside of these limits to the GCC for approval.

The Provisions and Impairments Committee: This committee comprises executive and senior management team members and is chaired by the Group Chief Risk Officer. The committee is responsible for approving significant provisions and other impairment charges. It also oversees the overall credit risk profile of the Group in regards to non-accrual loans and assets. It is supported in the execution of its mandate by jurisdictional credit committees and the GCC, which make recommendations to this committee.

Risk Management

We manage our exposure to risk through a three "lines of defense" model.

The first "line of defense" is provided by our jurisdictional business units, which retain ultimate responsibility for the risks they assume and for bearing the cost of risks associated with these exposures.

The second "line of defense" is provided by our Risk Management and Compliance groups, which work in collaboration with our business units to identify, assess, mitigate and monitor the risks associated with our business activities and strategies. They do this by:

- making recommendations to the GRCC regarding the constitution of the Risk Appetite Framework;
- setting risk strategies that are designed to manage risk exposures assumed in the course of pursuing our business strategies and aligning them with agreed appetites;
- establishing and communicating policies, procedures and limits to control risks in alignment with these risk strategies;
- measuring, monitoring and reporting on risk levels;
- opining on specific transactions that fall outside delegated risk limits; and
- identifying and assessing emerging risks.

The functions within the Risk Management and Compliance groups that support our risk management activities are outlined below.

Group Market Risk — This unit provides independent oversight of the measurement, monitoring and control of liquidity and funding risks, interest rate and foreign exchange risks as well as the market risks associated with our investment portfolios. It also monitors compliance with both regulatory requirements and our internal policies and procedures relating to the management of these risks.

Group Credit Risk Management — This unit is responsible for the adjudication and oversight of credit risks associated with our retail and commercial lending activities and the management of risks associated with our investment portfolios and counterparty exposures. It also establishes the parameters and delegated limits within which credit risks may be assumed and promulgates guidelines on how exposures should be managed and monitored.

Group Operational Risk — This unit assesses the effectiveness of our procedures and internal controls in managing our exposure to various forms of operational risk, including those associated with new business activities and processes and the deployment of new technologies. It is also responsible for our incident management processes and reviews the effectiveness of our loss data collection activities.

Group Compliance — This unit provides independent analysis and assurance of our compliance with applicable laws, regulations, codes of conduct and recommended best practices, including those associated with the prevention of financial crime, including money laundering and terrorist financing. It is also responsible for assessing our potential exposure to upstream risks and for providing guidance on the preparations that should be made in advance of these changes coming into effect. The Group Head of Compliance and Operational Risk reports directly to the Chairman and CEO.

The third "line of defense" is provided by our Group Internal Audit function, which performs oversight and ongoing review, and challenges the effectiveness of the internal controls that are executed by the business, Risk Management and Compliance. The Group Head of Internal Audit has a dual reporting line to both the Chair of the Audit Committee and the Chairman and CEO.

Regulatory Review Process

Our banking, trust and investment business activities in Bermuda are monitored by the BMA as the lead regulator. One of the principal objectives of the BMA is to supervise, regulate and inspect Bermuda-based financial institutions to ensure their financial stability and soundness.

In addition to conducting on-site reviews, the BMA utilizes a comprehensive quarterly statistical return system that enables off-site monitoring. The statistical system is consistent with Basel Committee Standards, and provides the BMA with a detailed breakdown of a bank's balance sheet and profit-and-loss accounts on both a consolidated and unconsolidated basis. This information enables the BMA to monitor the soundness of a bank's financial position and ensure that it meets certain capital requirements. For more information, see Item 4.B. "Business Overview - Supervision and Regulation - Bermuda - Supervision and Monitoring by the BMA".

Each of our regulated entities is separately monitored by the local regulatory authority in that jurisdiction to ensure its financial stability and soundness.

The Risk Appetite Framework

The Risk Appetite Framework is the cornerstone of our approach to risk management. Developed by executive management and approved formally by the Board, it outlines the appropriateness of taking on certain risks in the pursuit of our strategic objectives and defines those that should be avoided. It also provides management with a clear mandate regarding the amount and type of risk that it may accept and establishes minimum expectations regarding the practices and behaviors that should be brought to bear in managing the exposures assumed. It is aligned with the interests of our stakeholders and informs our business planning processes.

Our framework comprises the following elements:

(1) Broad categories of risk: outsourcing; credit; market; liquidity; regulatory compliance; financial crime compliance; fiduciary; governance; operational; people; climate; cyber and information security; technology; investment; tax reporting; strategy; financial reporting; correspondent banking; reputational and change. These represent the various risks that the Group assumes across the entirety of its operations in the pursuit of its strategic goals.

(2) A declared risk appetite. To ensure consistency in our risk conversations, these have been distilled into the three options set out in the following table, with each appetite designed to convey a clear strategic direction in terms of the risk/reward profile assumed:

Appetite	Definition	Profile
Conservative	Areas in which the Group avoids risk, or acts to minimize or eliminate the likelihood that the risk will occur, because we have determined the potential downside costs are intolerable; we must maintain a very strong control environment.	Our processes and controls are defensive and focus on detection and prevention.
Balanced	Areas in which the Group must constantly strike a balance between the potential upside benefits and potential downside costs of a given decision.	Exposures are only assumed when the risk can be quantified accurately and is assessed as being acceptable.
Tolerant	Areas in which the Group has a preference for disciplined risk-taking because we have determined the potential upside benefits outweigh the potential costs.	Exposures can be estimated reliably and structures, systems and processes are in place to manage them.

(3) A statement of our governing principles relating to each risk category. This establishes the characteristics of the risks that the Bank is willing to assume and the management behaviors that we should exhibit when doing so.

(4) Specific performance measures and tolerance thresholds in respect of each risk category, combining quantitative and qualitative targets (which are designed to reflect both forward-looking as well as historical perspectives), designed to provide executive management and the Board with an indication of the "direction" of our exposure relative to our declared risk appetite and an early warning of material adverse developments requiring remedial action.

Application of the Risk Appetite Framework

The limits, targets and thresholds used to measure performance continue to be refined by the Group Risk Management and Compliance functions in an effort to express as complete a "picture" as possible of our exposure to a given risk, relative to the stated appetite. All changes proposed pass through a formal review and approval process at both the executive management and Board levels prior to their adoption. Through this approach, the risk appetite framework sets the tone for our risk culture across the Group as a whole, influencing behaviors at all levels of the organization and reinforcing accountability for decisions taken. Many of our jurisdictional offices have developed subsidiary risk appetite frameworks in conjunction with their local risk management functions. This ensures appropriate coverage of local risk factors and the establishment of proportional tolerance thresholds. The Group Risk Management and Compliance functions have reviewed these frameworks prior to their adoption and have modified any appetites proposed that are considered to be inconsistent with the overall Group approach.

Market Risks

Interest Rate Risk Management

Our primary market risk is interest rate risk, which is defined as the risk of loss of net interest income or changes in net interest margin because of changes in interest rates. Interest rate risk for the Bank is confined to the banking book as the bank does not engage in proprietary trading.

We seek to measure and manage the potential impact of interest rate risk. Interest rate risk occurs when interest earning assets and interest bearing liabilities mature or re-price at different times, on a different basis or in unequal amounts. Interest rate risk also arises when our assets, liabilities and off-balance sheet contracts each respond differently to changes in interest rates, including as a result of explicit and implicit provisions in agreements related to such assets and liabilities and in off-balance sheet contracts that alter the applicable interest rate and cash flow characteristics as interest rates change. The two primary examples of such provisions that we are exposed to are the duration and rate sensitivity associated with indeterminate-maturity deposits (e.g., interest bearing call accounts) and the rate of prepayment associated with fixed-rate lending and mortgage-backed securities. Interest rates may also affect loan demand, credit losses, mortgage origination volume and other items affecting earnings.

Our management of interest rate risk is overseen by the RPCC, which outlines reporting and measurement requirements. In particular, this infrastructure sets limits and management targets, calculated for various metrics, including our economic value sensitivity, our economic value of equity and net interest income simulations involving parallel shifts in interest rate curves, steepening and flattening yield curves, and various prepayment and deposit duration assumptions. Our Risk Management infrastructure also requires a periodic review of all key assumptions used, such as identifying appropriate interest rate scenarios, setting loan prepayment rates based on historical analysis, non-interest bearing and interest bearing demand deposit durations based on historical analysis, and the targeted investment term of capital.

The principal objective of our interest rate risk management is to maximize profit potential while minimizing exposure to changes in interest rates. Our actions in this regard are taken under the guidance of GALCO. The committee is actively involved in formulating the economic assumptions that we use in our financial planning and budgeting processes and establishes policies which control and monitor the sources, uses and pricing of funds. From time to time, we utilize hedging techniques to reduce interest rate risk. GALCO uses interest income simulations and economic value of equity analysis to measure inherent risk in our balance sheet at specific points in time.

Appetite for interest rate risk is documented in the Group's policies on market risk and investments. This includes the completion of stress testing on at least a quarterly basis of the impact of an immediate and sustained shift in interest rates of +/- 200 basis points on net interest income, economic value of equity and the ratio of tangible total equity to average assets. If any of the parameters established by policy are exceeded, GALCO will provide a plan to executive management to bring the exposure back within tolerance under advice to the Board. The plan does not have to bring the exposure back within limit immediately, but must adjust the exposure within Board and management approved timeframes.

We also use derivatives in the asset and liability management of positions to minimize significant unplanned fluctuations in earnings that are caused by interest rate volatility. Our derivative contracts principally involve over-the-counter transactions that are privately negotiated between the Group and the counterparty to the contract. Derivative instruments that are used as part of our interest rate risk management strategy include interest rate swaps. 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.

Interest Rate Risk

The following table sets out the assets, liabilities and shareholders' equity and off-balance sheet instruments on the date of the earlier of contractual maturity, expected maturity and repricing date. Use of these tables to derive information about our 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 differ from contractual maturities because borrowers may have the right to prepay obligations before the underlying mortgages mature.

December 31, 2021 (in \$ millions)	Earlier of contractual maturity or repricing date						Total	Total fair value ⁽¹⁾
	Within 3 months	3 to 6 months	6 to 12 months	1 to 5 years	After 5 years	Non-interest bearing		
Assets								
Cash and deposits with banks	2,064	—	—	—	—	116	2,180	2,180
Securities purchased under agreement to resell	96	—	—	—	—	—	96	96
Short-term investments	842	252	105	—	—	—	1,199	1,199
Investments ⁽²⁾	14	9	14	1,173	5,027	—	6,237	6,260
Loans ⁽³⁾	4,208	22	91	705	182	33	5,241	5,265
Other assets	—	—	—	—	—	382	382	382
Total assets	7,224	283	210	1,878	5,209	531	15,335	15,382
Liabilities and shareholders' equity								
Demand deposits	8,077	—	27	—	—	2,821	10,925	10,925
Term deposits ⁽⁴⁾	1,658	587	602	98	—	—	2,945	2,949
Other liabilities	—	—	—	—	—	316	316	316
Subordinated capital ⁽⁴⁾	—	—	—	172	—	—	172	159
Shareholders' equity	—	—	—	—	—	977	977	1,033
Total liabilities and shareholders' equity	9,735	587	629	270	—	4,114	15,335	15,382
Interest rate sensitivity gap	(2,511)	(304)	(419)	1,608	5,209	(3,583)	—	—
Cumulative interest rate sensitivity gap	(2,511)	(2,815)	(3,234)	(1,626)	3,583	—	—	—

⁽¹⁾ See Item 5.A. "Operating Results - Critical Accounting Policies and Estimates - Fair Values" and "Note 17: Fair value measurements" of the audited consolidated financial statements for further detail on the determination of fair value.

⁽²⁾ Investments include (i) HTM, which are carried at their amortized cost on the consolidated balance sheet, and (ii) equity securities and AFS investments, each of which are carried at fair value on the consolidated balance sheet. The fair value columns presents all classifications at their fair value.

⁽³⁾ Loans are carried on the consolidated balance sheet as the principal amount outstanding, net of allowance for credit losses, unearned income, fair value adjustments arising from hedge accounting and net deferred loan fees.

⁽⁴⁾ Term deposits and subordinated capital are carried on the consolidated balance sheet as the principal outstanding.

Asset/Liability Management and Interest Rate Risk

The principal objective of our asset and liability management function is to evaluate the interest rate risk within the balance sheet and pursue a controlled assumption of interest rate risk while maximizing net income and preserving adequate levels of liquidity funding and capital.

As a financial institution, our primary component of market risk is interest rate volatility. Fluctuations in interest rates will ultimately impact both the level of income and expense recorded on most of our assets and liabilities, and the fair value of all interest earning assets and interest bearing liabilities, other than those which have a short term to maturity. Interest rate risk is the potential of economic losses due to future interest rate changes. These economic losses can be reflected as a loss of future net interest income and/or a loss of current fair values. The objective is to measure the effect on net interest income and to adjust the balance sheet to minimize the inherent risk while at the same time maximizing income.

We manage our exposure to interest rates primarily by structuring our balance sheet in the ordinary course of business. We do not typically enter into derivative contracts for the purpose of managing interest rate risk, but we may elect to do so in the future. Based upon the nature of our operations, we are not subject to foreign exchange or commodity price risk. Our exposure to holdings categorized as "trading positions" falls below the *de minimis* threshold established of 5% (ratio of total trading book open position compared to the sum of on- and off-balance sheet assets that are not part of the trading book).

We use an interest rate risk simulation model to test the interest rate sensitivity of net interest income and the balance sheet. Instantaneous parallel rate shift scenarios are modeled and utilized to evaluate risk and establish exposure limits for acceptable changes in net interest margin. These scenarios, known as rate shocks, simulate an instantaneous change in interest rates and use various assumptions, including, but not limited to, prepayments on securities, deposit decay rates, pricing decisions on loans and deposits, reinvestment and replacement of asset and liability cash flows. We also analyze the economic value of equity as a secondary measure of interest rate risk. This is a complementary measure to net interest income where the calculated value is the result of the fair value of assets less the fair value of liabilities. The economic value of equity is a longer-term view of interest rate risk because it measures the present value of all future cash flows. The impact of changes in interest rates on this calculation is analyzed for the risk to our future earnings and is used in conjunction with the analysis on net interest income.

The following table summarizes the simulated change in net interest income versus unchanged rates as at December 31, 2021 and December 31, 2020:

	For the year ended			
	December 31, 2021		December 31, 2020	
	Following 12 Months	Months 13 - 24	Following 12 Months	Months 13 - 24
+300 basis points	21.6 %	24.8 %	33.2 %	42.1 %
+200 basis points	14.2 %	16.6 %	22.6 %	29.3 %
+100 basis points	6.6 %	8.1 %	11.5 %	15.4 %
Flat rates	0.0 %	0.0 %	0.0 %	0.0 %
-100 basis points	17.8 %	15.7 %	11.9 %	8.4 %

The following table presents the change in our economic value of equity as at December 31, 2021 and December 31, 2020, assuming immediate parallel shifts in interest rates:

	For the year ended	
	December 31, 2021	December 31, 2020
+300 basis points	(7.4)%	4.5 %
+200 basis points	(5.2)%	5.0 %
+100 basis points	(2.0)%	4.2 %
Flat rates	0.0 %	0.0 %
-100 basis points	(0.6)%	2.8 %

The differences between the change in our net interest income and economic value of equity assuming immediate parallel shifts in interest rates from December 31, 2020 to December 31, 2021 are driven by the redeployment of funds from cash due from banks into the investment portfolio, extending the portfolio duration and reducing asset sensitivity.

Many assumptions are used to calculate the impact of interest rate fluctuations. Actual results may be significantly different than our projections due to several factors, including the timing and frequency of rate changes, market conditions and the shape of the yield curve. The computations of interest rate risk shown above do not include the full suite of actions that our management may undertake to manage the risks in response to anticipated changes in interest rates, and actual results may also differ materially.

Foreign Exchange Risk

The Group holds various non-USD denominated assets and liabilities and maintains investments in subsidiaries whose domestic currency is either not USD or whose domestic currency is not pegged to USD. Assets and liabilities denominated in currencies other than USD are translated to USD at the rates of exchange prevailing at the balance sheet date. The resulting gains or losses are included in foreign exchange revenue in the consolidated statements of operations. Assets and liabilities of subsidiaries outside of Bermuda are translated at the rate of exchange prevailing on the balance sheet date while associated revenues and expenses are translated to USD at the average rate of exchange prevailing through the accounting period. Unrealized translation gains or losses on investments in foreign currency based subsidiaries are recorded as a separate component of shareholders' equity within accumulated other comprehensive loss. Such gains or losses are recorded in the consolidated statements of operations only when realized. Our foreign currency subsidiaries may give rise to significant foreign currency translation movements against the USD. We also provide foreign exchange services to our clients, principally in connection with our banking and wealth management businesses, and effect other transactions in non-USD currencies. Foreign currency volatility and fluctuations in exchange rates may impact the value of non-USD denominated assets and liabilities and raise the potential for losses resulting from foreign currency trading positions where aggregate obligations to purchase and sell a currency other than USD do not offset one another, or offset each other in different time periods. If the policies and procedures we have in place to assess and mitigate potential impacts of foreign exchange volatility are not followed, or are not effective to mitigate such risks, our results and earnings may be negatively affected. The Group maintains a clearly articulated foreign exchange risk exposure tolerance framework which limits exposures to select major currencies.

Liquidity Risk

The objectives of liquidity risk management are to ensure that the Group can meet its cash flow requirements and capitalize on business opportunities on a timely and cost-effective basis. Liquidity is defined as the ability to hold and/or generate cash adequate to meet our needs for day-to-day operations and material long and short-term commitments. Liquidity risk is the risk of potential loss if the Group were unable to meet its funding requirements at a reasonable cost.

We monitor and manage our liquidity by banking location and on a Group-wide basis. The treasury functions in the Group's banking operations, located in Bermuda, the Cayman Islands, Guernsey, and Jersey, manage day-to-day liquidity. The Group market risk function has the responsibility for measuring and reporting to senior management on liquidity risk positions. We manage our liquidity based on demand, commitments, specific events and uncertainties to meet current and future financial obligations of a short-term nature. Our objective in managing liquidity is to respond to the needs of depositors and borrowers as well as to earnings enhancement opportunities in a changing marketplace. Management is responsible for establishing and monitoring liquidity targets as well as strategies to meet these targets. The Group adopts a cautious liquidity risk appetite with internal quantitative liquidity risk tolerances more stringent than regulatory requirements. Specifically, the Group manages liquidity against internal limits established by the market risk management policy and its related liquidity risk standard and quarterly stress testing methodology.

We maintained a balance sheet with loans representing 34.2% of total assets as at December 31, 2021. Further, at that date there were significant sources of liquidity within our balance sheet in the form of cash and cash equivalents, short-term investments, securities purchased under agreement to resell and investments amounting to \$9.7 billion, or 63.3%, of total assets.

An important element of our liquidity management is our liquidity contingency plan which can be employed in the event of a liquidity crisis. The objective of the liquidity contingency plan is to ensure that we maintain our liquidity during periods of stress. This plan takes into consideration a variety of scenarios that could challenge our liquidity. These scenarios include specific and systemic events that can impact our on- and off-balance sheet sources and uses of liquidity. This plan is reviewed and updated at least annually.

Credit Risk

Credit risk is defined as the risk that unexpected losses arise as a result of the Group's borrowers or market counterparties failing to meet their obligations to repay. Credit risk is managed through the jurisdictional CRM departments. CRM provides a system of checks and balances for our diverse credit-related activities by establishing and monitoring all credit-related policies and practices throughout the Group and assuring their uniform application. These activities are designed to diversify credit exposure on an industry and client basis, thus lessening overall credit risk. These credit management activities also apply to our use of derivative financial instruments, including foreign exchange contracts and interest rate risk management instruments, which are used primarily to facilitate client transactions.

Individual credit authority for commercial and other loans is limited to specified amounts and maturities. Credit decisions involving commitment exposure in excess of the specified individual limits are submitted to CRM and then to the GCC, which provides a forum for ongoing executive review of loan activity, establishing our credit guidelines and policies and approving selected credit transactions in accordance with our business objectives. The committee reviews large credit exposures, establishes and reviews credit strategy and policy and approves selected credit transactions. The FIC manages counterparty risk in respect of (third party) bank counterparties which do not have commercial credit relationships within the Group and also approves country exposure limits.

As part of our ongoing credit granting process, internal ratings are assigned to commercial clients before credit is extended, based on an assessment of creditworthiness. At least annually, a review of all significant credit exposures is undertaken to identify, at an early stage, clients who might be facing financial difficulties. Internal borrower risk ratings are also reviewed during this process, allowing identification of adverse individual borrower and sector trends, and accurate application of internal borrower risk ratings which incorporates but is not limited to an assessment of climate risk impacting borrower risk ratings.

An integral part of the CRM function is to formally review past due and potential problem loans to determine which credits, if any, need to be placed on non-accrual status or charged off. The allowance for loan losses is reviewed quarterly to determine the amount necessary to maintain an adequate provision for current expected credit losses.

Another way credit risk is managed is by requiring collateral. Management's assessment of the borrower's creditworthiness determines whether collateral is obtained. The amount and type of collateral held varies but may include deposits held in financial institutions, mutual funds, US Treasury securities, other marketable securities, income-producing commercial properties, accounts receivable, residential real estate, property, plant and equipment, and inventory. Values of variable collateral are monitored on a regular basis to ensure that they are maintained at an appropriate level, which includes an assessment of the climate risk impact on the value of the collateral.

Credit Risk — Retail and Private Banking

Retail and private lending activity is split between residential mortgages, personal loans, credit cards and authorized overdrafts. Retail credit risks are managed in accordance with limits and processes set out in the credit risk policies and guidelines approved by GCC and GRC (and approved by the Board). The policies set out where specialist underwriting may be needed.

For residential mortgages, a combination of lending policy criteria, lending guidelines and underwriting are used to make a decision on applications for credit. The primary factors considered are affordability, residential status, residential history, credit history, employment history, nature of income and LTV of the residential property. In addition, confirmation of a borrower's identity is obtained and an assessment of the value of the collateral is carried out prior to granting a credit facility. When considering applications, the primary focus is placed on the willingness and ability to repay.

LTV ratios are derived based on third-party valuations as part of the original underwriting or when increased borrowing has been requested. Updated valuations are not otherwise obtained unless the loan reaches non-accrual status. Non-accrual loans which are collateral-dependent on real estate must be supported by a third-party valuation no older than 12 months. Costs of sale for commercial properties are calculated based on individual circumstances, whereas the haircuts for residential real estate are prescribed in lending guidelines by geographic location and are never less than 15% of the valuation amount.

As valuations are conducted throughout the year, the rolling average age of the valuations are closer to 6 months than 12 months. To further ensure that valuations within the 12-month revaluation period remain appropriate measures for input into the CECL model, we: (1) compare renewal valuations to the prior valuation to track market movement; (2) back-test all sales to compare net carrying value versus any additional gain/loss at the time of sale; (3) segregate the tests described in (1) and (2) by geographic area and, where required, amend provision factors accordingly; and (4) perform a review of new valuations to ascertain such valuations' reasonableness and determine if any change in value may impact similar properties or locations where valuations are more stale-dated and require an adjustment to the CECL model.

The Bank performs an annual assessment of group residential LTV ranges as part of its stress-testing exercise for regulatory and capital-adequacy purposes. Real estate indices are not available in the Bank's primary markets and LTV values are based on standard reductions in value over time, based on observed market activity.

Generally, maximum LTV for new residential and commercial loans is as follows:

	Bermuda	Cayman Islands	UK—London	Channel Islands
Residential:				
Owner-occupied freehold	70 %	85 %	65 %	80 %
Owner-occupied leasehold condominium	70 %	85 %	65 %	80 %
Investment (not owner-occupied)	65 %	75 %	65 %	80 %
Raw land	50 %	80 %	N/A	N/A
Commercial Real Estate	65 %	65 %	N/A	65 %

For other retail lending products, similar lending policy criteria are used, and each of these products has its own policy and underwriting guidelines to enable decisions on applications for credit and to manage accounts. The factors used are attuned to the lending product in question, although affordability and credit history are considered in all cases. Ongoing monitoring of all retail and private banking credit is undertaken by the business unit concerned as well as by CRM. In addition, the GCC reviews reports on a weekly basis. In the event that particular exposures show adverse features such as arrears, the Bank's specialist recovery teams generally work with borrowers to resolve the situation.

Unlike the United States where the FCRA is designed to help ensure that credit bureaus furnish correct and complete information when evaluating loan applications, the markets in which we operate do not have systemic credit bureau reports. Therefore, we manually review each loan and we use a formally governed tiered credit approval process that is administered through and governed by our Risk Management framework.

Credit Risk — Commercial Banking

Commercial credit risks are managed in accordance with limits and asset quality measures set out in the credit risk policies and guidelines approved by GCC (and ratified by the Board).

In respect of Commercial Banking, there is a level of delegated sanctioning authority to underwrite certain credit risks based upon an evaluation of the borrower's experience, track record, financial strength, ability to repay, transaction structure and security characteristics. Lending decisions for large or high risk exposures are based upon a thorough credit risk analysis and the assignment of an internal borrower risk rating, and are subject to further approval by the assigned officers in CRM or the GCC.

Consideration is also given to risk mitigation measures which will provide the Group with protection, such as third-party guarantees, supporting collateral and security, legal documentation and financial covenants. Commercial portfolio asset quality monitoring is based upon a number of measures, including the monitoring of financial covenants, cash flows, pricing movements and variable collateral. In the event that particular exposures begin to show adverse features such as payment arrears, covenant breaches or business trading losses, a full risk reassessment is undertaken. Where appropriate, a specialist recovery team will work with the borrower to resolve the situation. If this proves unsuccessful, the case will be subject to intensive monitoring and management procedures designed to maximize debt recovery.

Credit Risk — Treasury

Treasury credit risks are managed in accordance with limits, asset quality measures and criteria set out within the policy approved by the GCC and ratified by the Board. The policy also sets out powers which require higher levels of authorization according to the size of the transaction or the nature of the associated risk. The FIC identifies, assesses, prioritizes and manages our risks associated with counterparty exposure to other financial institutions, as well as country-specific exposures.

Exposures to financial institutions arise within the Group's investment portfolio and treasury operations. The Group has treasury operations in all of its banking locations. Treasury exposures primarily take the form of deposits with banks and foreign exchange positions. Exposures to financial institutions in the investment portfolio can take the form of bonds, floating rate notes and/or certificates of deposit.

Diversification and avoidance of concentration is emphasized. The Group establishes limits for countries and each financial institution where there is an expected exposure. Ongoing asset quality monitoring is undertaken by Treasury and CRM and reports are sent to the FIC, GCC and the GRC on a monthly basis. Exception reporting takes place against a range of asset quality triggers. Treasury uses a number of risk mitigation techniques including netting and collateralization agreements. Other methods (such as margining and derivatives) are used periodically to mitigate the risk associated with particular transactions or groups of transactions.

For its exposure to Treasury credit risk, the Group uses S&P, Fitch and Moody's as external credit assessment institutions as permitted under Basel III for sovereign, financial institutions, asset-backed securities, covered bonds and corporate risks. With regard to financial institutions and corporates, the Group's preference for a long-term rating is the senior unsecured rating. However, counterparty ratings and/or short-term deposit or commercial paper ratings are used if this is unavailable. For asset-backed securities, the issue or tranche rating is used.

Exposures

The following tables analyze the Group's regulatory credit risk exposures as at December 31, 2021 and December 31, 2020. Exposures are allocated to specific standardized exposure portfolios determined by the BMA's Revised Framework for Regulatory Capital Assessment and it is these portfolios that determine the risk weights used. These exposures include both on- and off-balance sheet exposures, with the latter shown separately after credit conversion factors have been applied.

Analysis of exposures class (in millions of \$)	Average Exposure 2021	Position as at December 31, 2021	Average Exposure 2020	Position as at December 31, 2020
Cash	70.2	66.5	71.5	83.4
Claims on Sovereigns	2,539.2	3,091.5	1,697.9	2,230.7
Claims on Public Sector Entities	88.2	68.2	106.2	102.2
Claims on Corporates	666.0	559.0	819.0	741.3
Claims on Banks and Securities Firms	1,804.6	1,527.6	1,858.7	1,998.7
Securitized	5,194.9	5,134.3	4,562.3	4,844.6
Retail Loans	226.6	222.3	242.7	236.4
Residential Mortgages	3,444.3	3,582.8	3,200.0	3,348.4
Commercial Mortgages	703.5	675.7	682.1	705.3
Past Due Loans	72.4	63.3	68.3	75.4
Other Balance Sheet Exposures	268.5	246.6	278.9	277.1
Non-Market Related Off-Balance Sheet Credit Exposures	628.7	608.7	557.2	637.0
Market Related Off-Balance Sheet Credit Exposures	58.0	54.8	68.4	54.5
Total	15,765.2	15,901.3	14,213.2	15,335.0

Geographic segment distribution of exposures class
as at December 31, 2021
(in millions of \$)

	Bermuda	Cayman Islands	Channel Islands & UK	Other	Total
Cash	42.0	24.5	—	—	66.5
Claims on Sovereigns	939.1	825.6	1,326.8	—	3,091.5
Claims on Public Sector Entities	68.2	—	—	—	68.2
Claims on Corporates	384.0	57.0	118.0	—	559.0
Claims on Banks and Securities Firms	497.9	535.5	483.3	10.9	1,527.6
Securitized	1,966.4	2,396.3	771.6	—	5,134.3
Retail Loans	82.4	101.1	38.8	—	222.3
Residential Mortgages	1,029.3	752.8	1,800.7	—	3,582.8
Commercial Mortgages	470.8	76.7	128.2	—	675.7
Past Due Loans	50.5	0.3	12.5	—	63.3
Other Balance Sheet Exposures	126.6	7.9	61.8	50.3	246.6
Non-Market Related Off-Balance Sheet Credit exposures	191.2	279.6	137.9	—	608.7
Market Related Off-Balance Sheet Credit Exposures	32.6	6.8	15.4	—	54.8
Total	5,881.0	5,064.1	4,895.0	61.2	15,901.3

Residual maturity breakdown of exposures class
as at December 31, 2021
(in millions of \$)

	Up to 12 months	1 - 5 years	More than 5 years	No specific maturity	Total
Cash	66.5	—	—	—	66.5
Claims on Sovereigns	1,809.1	954.7	327.7	—	3,091.5
Claims on Public Sector Entities	0.3	61.8	6.1	—	68.2
Claims on Corporates	256.0	153.5	149.5	—	559.0
Claims on Banks and Securities Firms	1,527.6	—	—	—	1,527.6
Securitized	0.3	19.8	5,114.2	—	5,134.3
Retail Loans	145.5	54.7	22.1	—	222.3
Residential Mortgages	609.9	1,227.9	1,745.0	—	3,582.8
Commercial Mortgages	110.4	51.2	514.1	—	675.7
Past Due Loans	29.7	5.8	27.8	—	63.3
Other Balance Sheet Exposures	—	—	—	246.6	246.6
Non-Market Related Off-Balance Sheet Credit exposures	608.7	—	—	—	608.7
Market Related Off-Balance Sheet Credit Exposures	54.8	—	—	—	54.8
	5,218.8	2,529.4	7,906.5	246.6	15,901.3

The table below details the mappings between the main Fitch, Moody's and S&P external credit assessment institutions used by the Group and the credit quality steps used to determine the risk weightings applied to rated counterparties. Where no external rating is used in the risk weighted assets calculation, the unrated credit quality step applies.

Credit quality step	Fitch's assessment	Moody's assessment	S&P's assessment
Step 1	AAA to AA-	Aaa to Aa3	AAA to AA-
Step 2	A+ to A-	A1 to A3	A+ to A-
Step 3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-
Step 4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-
Step 5	B+ to B-	B1 to B3	B+ to B-
Step 6	CCC+ and below	Caa1 and below	CCC+ and below

Impairment Provisions

Credit Risk Concentrations

Concentration risk is defined as: any single exposure or group of exposures with the potential to produce losses large enough (relative to the Group's capital, total assets or overall risk level) to threaten the Group's health or ability to maintain core operations. The management of concentration risk is addressed in the first instance by the Group's large exposure policy and related credit guidelines, which require that credit facilities to entities that are affiliated through common ownership or management are aggregated for adjudication and reporting purposes. The policy also defines what constitutes a large exposure and the related reporting requirements. The CRM function also undertakes monitoring and assessment of our exposure to concentration risk, reporting the results of these analyses to the GCC, the GRCC and RPCC.

The factors taken into consideration when assessing concentration risk are as follows:

- single or linked counterparty;
- industry or economic sector (e.g., hospitality, property development, commercial office building investment);
- geographic region;
- product type;
- collateral type; and
- maturity date (whether of the facility or of interest rate fixes).

Counterparty Concentrations

Counterparty concentrations is the risk associated with assuming a high level of exposure to a single counterparty, the failure of which could have an adverse impact on the Group.

Large exposures are reviewed quarterly by the GRCC and RPCC for the loan portfolio and the treasury/investment portfolios. Group Market Risk and Treasury work closely together on daily treasury positions and exceptions.

All large exposures and concentrations in the portfolio are reviewed and agreed by the FIC on a quarterly basis and are reported to the Board as a part of this process. The review of large exposures considers:

- facility total;
- any link with other facilities;
- total linked facility being within guidelines;
- borrower risk rating;
- security value on the facility; and
- loan-to-value percentage against minimum security covenants.

Industry Concentration

Industry concentration encompasses the scenario that a risk factor inherent within an industry is tied to an entire portfolio of accounts or investments; e.g., a portfolio made up of a large number of small individual loans where all the counterparties are hotel operators. We believe that due to the nature of the Group's client base our exposure to the property, insurance and fund sectors could be classified as industry concentration, although geographic and product concentration are the more appropriate risks to measure.

Geographic Concentration

Geographic concentration of the book is monitored as follows. Reports are generated which provide details of all the property loan exposure of the Group. Through this, loans are subdivided into regional exposure. From this, the percentage breakdown per region of the Group's property exposure is analyzed and reported to the GRCC and RPCC. Assessment of the exposure allows the committees to decide whether the Group should decline further lending in any area in which it is becoming over-weighted.

Product Concentration

Product concentration is defined in the context of credit risk, as an over-weighting in the portfolio to a given product type, making the Group vulnerable to the impact of a variety of external factors that could either reduce demand for the product itself or lead to an increase in the level of default rates experienced. We operate as a full service bank in Bermuda and the Cayman Islands and aim to satisfy the requirements of our customers in these communities through the range of products and services we offer. Accordingly, there is no dependence or concentration on a single product in these markets outside of the residential mortgage portfolios, which comprised 68.8% of the Group's loan book as at December 31, 2021 (compared to 65.5% as at December 31, 2020); in Bermuda, residential mortgage lending made up 53.1% of the Bermuda loan book as at December 31, 2021 (compared to 52.1% as at December 31, 2020), and loans for many purposes (education, business support, family requirements) were made in the form of residential mortgages. Product category analysis confirms that the total lending portfolio is concentrated in the property market; this has been addressed by performing stress testing.

Collateral Concentration

Collateral concentration considers whether the Group's loan book is secured by a limited number of collateral types. An example of this would be when a large value of loans to a diversified group of borrowers is all secured by shares in the same company or by the shares of various companies within the same industry sector. Any decline in the value of these shares or in the performance of the sector as a whole could have an adverse impact on the Group's security position across all affected borrowers. The most relevant example of collateral concentration is the Group's exposure to real estate property values. Ignoring cash-backed facilities, the largest collateral concentrations within the portfolio are to residential and commercial property. The greatest risk with collateral concentration is that the value of the security could be severely reduced. To simulate this, the Group's stress testing process incorporates a scenario in which all real estate collateral is devalued by factors as high as 30%.

Credit Risk Mitigation

The Group uses a wide range of techniques to reduce the credit risk of its lending. The most basic of these is performing an assessment of the ability of a borrower to service the proposed level of borrowing without distress. However, the risk can be further mitigated by obtaining security for the funds advanced.

Residential Mortgages

Residential property is the Group's main source of collateral and means of mitigating credit risk inherent in the residential mortgage portfolio. All mortgage lending activities are supported by underlying assumptions and estimated values received by independent third parties. All residential property must be insured to cover property risks through a third party.

Commercial

Commercial property is one of the Group's primary sources of collateral and means of mitigating credit risk inherent in its commercial portfolios. Collateral for the majority of commercial loans comprises first legal charges over freehold or long leasehold property but the following may also be taken as security: life insurance policies; credit balances assignments; share guarantees; equitable charges; debentures; chattel mortgages and charges over residential property.

For property-based lending, supporting information such as professional valuations are an important tool to help determine the suitability of the property offered as security and, in the case of investment lending, generating the cash to cover interest and principal payments. All standard documentation is subject to in-house legal review and sign-off in order to ensure that the Group's legal documentation is robust and enforceable. Documentation for large advances may be specifically prepared by independent solicitors. Insurance requirements are always fully considered as part of the application process and the Group ensures that appropriate insurance is taken out to protect the property against an insurable event.

Treasury

Collateral held as security for treasury assets, including investments, is determined by the nature of the instrument. Loans, debt securities, treasury and other eligible bills are generally unsecured with the exception of asset-backed securities and similar instruments, which are secured by pools of financial assets. The ISDA Master Agreement is the Group's preferred method of documenting derivative activity. It is common in such cases for a Credit Support Annex to be executed in conjunction with the ISDA Master Agreement in order to mitigate credit risk on the derivatives portfolio. Valuations are performed, agreed with the relevant counterparties, and collateral is exchanged to bring the credit exposure within agreed tolerances. The EAD value to the counterparty is measured under the standardised approach for measuring counterparty credit risk exposures method and is derived by adding the gross positive fair value of the contract (replacement cost) to the contract's potential future credit exposure, which is derived by applying a multiple base on the contracts residual maturity to the notional value of the contract, and applying an alpha of 1.4 to the sum of these components.

The following table shows the exposures to counterparty credit risk for derivative contracts as at December 31, 2021 and December 31, 2020:

(in millions of \$)	Gross Positive Fair Value of Contracts as at December 31, 2021	Potential Future Credit Exposure as at December 31, 2021	Alpha as at December 31, 2021	EAD Value as at December 31, 2021	Gross Positive Fair Value of Contracts as at December 31, 2020	Potential Future Credit Exposure as at December 31, 2020	Alpha as at December 31, 2020	EAD Value as at December 31, 2020
Spot and forward foreign exchange and currency swap contracts	18.0	21.2	1.4	54.9	13.8	25.1	1.4	54.5

Securitizations

The Bank has not, to date, securitized assets that it has originated. The Bank's total exposure to purchased securitization positions as at December 31, 2021 was \$5.1 billion by market value (compared to \$4.8 billion as at December 31, 2020), with US government and federal agencies accounting for the majority of this exposure.

The following table provides an analysis of the Bank's investments in securitization positions by exposure type as at December 31, 2021 and December 31, 2020:

Underlying asset type (in millions of \$)	Exposure Value as at December 31, 2021	Exposure Value as at December 31, 2020
US government and federal agencies	5,083.2	4,771.8
Mortgage backed securities — Retail	27.3	59.9
Asset-backed securities — Student loans	13.2	12.9
Total	5,123.7	4,844.6

Operational Risk

In providing our services, we are exposed to operational risk. This is the risk of loss from inadequate or failed internal processes and systems, actions or inactions of people, or from external events. Operational risk is inherent in our activities and can manifest itself in various ways including fraudulent acts, business interruptions, inappropriate behavior of employees, unintentional failure to comply with applicable laws and regulations, cyber-security incidents and privacy breaches or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to us. Our risk management goal is to keep operational risk at appropriate levels consistent with our risk appetite, financial strength, the characteristics of our businesses, the markets in which we operate and the competitive and regulatory environment to which we are subject.

As we continue to expand our use of technology, we are exposed to various forms of cyber-attacks. We devote significant resources to maintain and regularly upgrade our systems and networks and review the ever changing threat landscape in order to mitigate our exposure to cyber risks. In addition to the policy reviews, we continue to look to implement technology solutions that enhance preventive and detection capabilities and our ability to recover quickly should a successful cyber-attack occur. We assess our third-party vendor controls and have a developed business continuity plan that addresses potential cyber risks. We also maintain insurance coverage that may, subject to policy terms and conditions, cover certain aspects of cyber risks. However, such insurance may be insufficient to cover all losses.

Operational risk is mitigated through internal controls embedded in our business activities and our risk management practices, which are designed to continuously reassess the effectiveness of these controls in order to keep the risk we assume at levels appropriate to our risk appetite as approved by the Board. Data on operational losses and any significant control failures incurred are captured through an incident reporting process. These events are reported to both the GRCC and RPCC, which assess the sufficiency of the corrective actions taken by management to prevent recurrence. Both committees also receive regular reporting on actual performance against established risk tolerance metrics.

Interest Rate Benchmark Reform

On March 5, 2021, the FCA and ICE Benchmark Administration, the authorized and regulated administrator of LIBOR, announced that all the GBP, CHF, JPY and EUR LIBOR settings and the one-week and two-month USD LIBOR settings will cease after December 31, 2021, and the remaining USD LIBOR settings will cease after June 30, 2023.

These reforms have the potential to impact various risk areas for the Bank, including but not limited to: operational risk (potential adverse impacts to the business, customers and technology); market risk (potential adverse impacts to the business and customers if markets are disrupted); and accounting risk (potential adverse impacts to the statement of operations if issues with hedge accounting/effectiveness arise). The Bank, however, does not expect any material change to its risk management frameworks and controls as a result of the reforms.

The Bank has established a LIBOR transition working group, consisting of senior members of management, with significant representation from the Legal and Risk departments. The working group reports directly to the GRCC which feeds into the RPCC of the Board. The working group has set up a detailed project plan which includes: transition planning; financial exposure measurement and risk assessment; operational preparedness and controls; legal contract preparedness/modification; communication; and training and oversight.

As at December 31, 2021, the Bank had 121 loans totaling \$563.5 million linked to USD LIBOR. The Bank is engaging with impacted customers to ensure adequate fallback provisions are included in contracts, where not already provided for.

There were no derivative positions maturing after the relevant transition dates.

Capital Adequacy Management

Effective January 1, 2015, the BMA adopted capital and liquidity requirements consistent with Basel III. These requirements are contained within the BMA's "Basel III for Bermuda Banks November 2017 Rule Update" and can be found on its website.

The Group manages its capital both on a total Group basis and, where appropriate, on a legal entity basis. The finance department has the responsibility for measuring, monitoring and reporting capital levels within guidelines and limits established by the RPCC. The management of capital will also involve regional management to ensure compliance with local regulation. In establishing the guidelines and limits for capital, a variety of factors are taken into consideration, including the overall risk of the business in stressed scenarios, regulatory requirements, capital levels relative to our peers, and the impact on our credit ratings.

Capital Assessment and Risk Profiling

Under the requirements of the Basel II Accord as implemented by the BMA, the Group undertakes a CARP process, which is an internal assessment of all material risks to determine our capital needs. This internal assessment takes account of the minimum capital requirement and other risks not covered by the minimum capital requirement (Pillar II). Where capital is deemed as not being able to mitigate a particular risk, alternative management actions are identified and described within the CARP. The CARP is presented to the RPCC before being presented to the Board for challenge and approval and then submission to the BMA. The CARP process is performed annually or more frequently should the need arise.

A SREP is then undertaken biannually by the BMA, which is designed to assess the Group's risk profile as documented in the CARP. This assessment is used to determine and set the Individual Capital Guidance which is the minimum level of capital the Group will be required to hold until the next SREP review is conducted.

B. Liquidity and Capital Resources

Liquidity

We define liquidity as our ability to maintain cash flow that is adequate to fund operations and meet present and future financial obligations through either the sale or maturity of existing assets or by obtaining additional funding through liability management.

Sources and Uses of Cash

Our primary sources of cash are (i) cash obtained from deposits, (ii) long-term debt, and (iii) cash from operations. Our primary uses are (i) the payment of our operating expenses, (ii) payment of dividends on our common shares, (iii) repayment of certain maturing liabilities, (iv) repurchase of our common shares, and (v) extraordinary requirements for cash, such as acquisitions. We had \$2.2 billion of cash and cash equivalents as at December 31, 2021 and \$3.3 billion as at December 31, 2020, as well as \$7.5 billion and \$5.9 billion, respectively, of liquid securities, the balance of which could be sold to meet liquidity requirements. In our opinion, the Bank's working capital is sufficient for the Bank's present requirements.

Liquidity Risk

Our liquidity risk is managed through a comprehensive framework of policies and limits overseen by our Group Asset and Liability Committee. We consider the effective and prudent management of liquidity to be fundamental to our health and strength. Our objective is to manage our cash flow and liquidity reserves so that they are adequate to fund our obligations and other commitments on a timely basis and at a reasonable cost.

We continuously monitor and make adjustments to our liquidity position by adjusting the balance between sources and uses of funds as we deem appropriate. Our primary measures of liquidity include monthly cash flow analysis under ordinary business activities and conditions and under situations simulating a severe run on the Bank. The Bank strives to use a balanced liquidity risk appetite with internal quantitative liquidity risk tolerances more stringent than regulatory requirements. Specifically the Bank manages liquidity against internal limits established by the market risk management policy and its related liquidity risk standard and quarterly stress testing methodology. The results of these measures and analysis are incorporated into our liquidity contingency plan, which provides the basis for the identification of our liquidity needs. For more information, see Item 11 "Operating Results - Liquidity Risk".

Capital Resources

We have financed our operations, growth and cash needs primarily through income from operations and issuances of debt and equity securities. We believe that our cash on hand and cash flows from operations will be sufficient to repay our outstanding debt as it matures. In the future, we may need to incur additional debt or issue additional equity securities, which we may be unable to do or which may be on less favorable terms.

We manage our capital both on a consolidated basis and, where appropriate, on a legal entity basis. The group finance team has the responsibility for measuring, monitoring and reporting capital levels within guidelines and limits established by the Risk Policy & Compliance Committee of the Board. The management of capital will also involve jurisdictional management to ensure compliance with local regulation. In establishing the guidelines and limits for capital, a variety of factors are taken into consideration, including the overall risk of the business in stressed scenarios, regulatory requirements, capital levels relative to our peers, and the impact on our credit ratings.

Effective January 1, 2015, the BMA implemented the capital reforms proposed by the BCBS and referred to as the Basel III regulatory framework. Basel III aims to raise the quality, consistency and transparency of the capital base, limit the build-up of excess leverage and increase capital requirements for the banking sector. Basel III adopts CET1 capital as the predominant form of regulatory capital with the CET1 ratio as a new metric. Basel III also adopts the new Leverage Ratio, Liquidity Coverage Ratio ("LCR") and Net Stable Funding Ratio ("NSFR") regimes. We are now subject to the following requirements:

- CET1 ratio of at least 7.0% of RWA, inclusive of a minimum CET1 ratio of 4.5% and the new capital conservation buffer of 2.5%, but excluding the Domestic Systematically Important Bank ("D-SIB") surcharge described below;
- Tier 1 capital of at least 8.5% of RWA, inclusive of a minimum Tier 1 ratio of 6% and the new capital conservation buffer of 2.5%, but excluding the D-SIB surcharge described below;
- Total capital of at least 10.5% of RWA, inclusive of a minimum total capital ratio of 8% and the new capital conservation buffer of 2.5%, but excluding the D-SIB surcharge described below;
- We are considered to be a D-SIB and are subject to a 3% surcharge composed of CET1-eligible capital implemented by the BMA effective September 30, 2015. This is based upon our assessment of the extent to which we (individually and collectively with the other Bermuda banks) pose a degree of material systemic risk to the economy of Bermuda due to our role in deposit taking, corporate lending, payment systems and other core economic functions;
- Counter-cyclical buffer of up to 2.5% composed of CET1-eligible capital may be implemented by the BMA when macroeconomic indicators provide an assessment of excessive credit or other pressures building in the banking sector, potentially increasing the CET1, Tier 1 and total capital ratios by up to 2.5%. No counter-cyclical buffer has been implemented to date;
- Leverage ratio must be at 5.0% or higher;
- LCR with a minimum requirement of 100%; and
- NSFR with a minimum requirement of 100%.

The minimum capital ratio requirements set forth above do not reflect additional Pillar II add-on requirements that the BMA may impose upon us as a prudential measure from time to time. Our capital requirements remain under continuous review by the BMA pursuant to its prudential supervision and we cannot guarantee that the BMA will not seek higher total capital ratio requirements at any time.

In December 2017, the BCBS published standards that it described as the finalization of the Basel III post-crisis regulatory reforms (the standards are commonly referred to as "Basel IV"). Among other things, these standards revise the BCBS's standardized approach for credit risk (including by recalibrating risk weights and introducing new segmentations for exposures) and provides a new standardized approach for operational risk capital. Under the BCBS framework, these standards will generally be effective on January 1, 2022, with an aggregate output floor phasing in through January 1, 2027. The impact of these standards on us will depend on the manner in which they are implemented by the BMA.

The following table sets forth our capital adequacy as at December 31, 2021 and 2020 in accordance with the Basel III framework:

(in millions of \$)	As at December 31	
	2021	2020
Capital		
Common Equity Tier 1	896.3	816.0
Tier 1 capital	896.3	816.0
Tier 2 capital	184.0	187.1
Total capital	1,080.3	1,003.1
Risk Weighted Assets		
Cash due from banks and investments	1,141.4	1,085.7
Loans	2,606.0	2,635.1
Other assets	255.3	288.3
Off-balance sheet items	230.9	217.4
Operational risk charge	867.9	842.1
Total risk-weighted assets	5,101.5	5,068.6
Capital Ratios (%)		
Common Equity Tier 1	17.6 %	16.1 %
Tier 1 total	17.6 %	16.1 %
Total capital	21.2 %	19.8 %
Leverage ratio	5.6 %	5.3 %

Overall, capital ratios have increased, driven primarily by earnings accretion and partially offset by dividends and share buy-backs. The increase in RWA is driven by increased depositor funding. As at December 31, 2021, we were in compliance with the minimum LCR of 100% as well as the minimum NSFR of 100%.

Share Buy-Back Program

The Bank repurchases its common shares through share buy-back programs from time to time as a means to improve shareholder liquidity and facilitate growth in share value. In accordance with applicable laws, regulations and listing standards, each program was approved by the Board and repurchases of shares pursuant to each program are subject to the approval of the BMA. In addition, the BSX is advised monthly of shares purchased pursuant to each program.

On December 6, 2018, following the completion of the initial 2018 share buy-back program, the Board approved the 2019 share buy-back program, authorizing the purchase of up to 2.5 million common shares through February 29, 2020.

On December 2, 2019, the Board approved, with effect from the completion of the previous program on December 20, 2019 through February 28, 2021, a common share buy-back program, authorizing the purchase of up to 3.5 million common shares or \$125 million.

On February 10, 2021, the Board approved a new common share-buy back program, authorizing the purchase of up to 2.0 million common shares through February 2022.

On February 14, 2022, the Board approved, with effect from the completion of the previous program, a new common share-buy back program, authorizing the purchase of up to 2.0 million common shares through February 28, 2023. The timing and amount of repurchase transactions under the new program will be based on market conditions, share price, legal requirements and other factors. No assurances can be given as to the amount of common shares that may actually be repurchased.

Total common share buy-backs for the years ending December 31, 2021, 2020 and 2019 are as follows:

	For the year ending December 31		
	2021	2020	2019
Acquired number of shares (to the nearest share)	534,828	3,452,000	2,293,788
Average cost per common share (in \$)	36.93	25.10	35.55
Total cost (in \$)	19,753,336	86,639,889	81,534,076

From time to time, our 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.

Dividends

During the year ended December 31, 2021, we paid cash dividends totaling \$87.3 million or \$1.76 (2020: \$88.9 million or \$1.76; 2019: \$93.6 million or \$1.76) for each common share on record as of the related record dates. The Board declared these dividends as a quarterly dividend of \$0.44 per common share for each quarter of 2021, 2020 and 2019.

For more information, see Item 3.D. "Risk Factors – Risks Relating to the Common Shares".

Cash Flows

2021 vs. 2020

Cash due from banks was \$2.2 billion as at December 31, 2021, compared to \$3.3 billion as at December 31, 2020. The decrease is described below by category of operating, investing and financing activities.

For the year ended December 31, 2021, net cash provided by operating activities totaled \$251.3 million (2020: \$188.2 million). Cash flows from operating activities are generally the cash effects of transactions and other events that enter into the determination of net income. Cash provided by operating activities increased by \$63.2 million from 2020 to 2021, due primarily to an increase in net income as well as movements in other liabilities.

Net cash used in investing activities for the year ended December 31, 2021 totaled \$1,905.7 million, compared to cash used in investing activities of \$41.7 million in 2020. The \$1,864.0 million increase in cash used in investing activities in 2021 was mainly attributable to the purchases of investments in securities which was driven by both increased depositor funding as well as the redeployment of funds from cash and cash equivalents.

Net cash provided by financing activities totaled \$535.8 million in 2021, compared to net cash provided by financing activities of \$546.4 million in 2020. The \$10.7 million decrease is mainly due to a decrease in common share repurchases during the year and partially offset by a reduced increase in deposit liabilities and the issuance of subordinated debt in 2020.

2020 vs. 2019

Cash due from banks was \$3.3 billion as at December 31, 2020, compared to \$2.6 billion as at December 31, 2019. The increase is described below by category of operating, investing and financing activities.

For the year ended December 31, 2020, net cash provided by operating activities totaled \$188.2 million (2019: \$248.7 million). Cash flows from operating activities are generally the cash effects of transactions and other events that enter into the determination of net income. Cash provided by operating activities decreased by \$60.6 million from 2019 to 2020, due primarily to a decrease in net income as well as movements in other liabilities.

Net cash used in investing activities for the year ended December 31, 2020 totaled \$41.7 million, compared to cash provided by investing activities of \$1,093.4 million in 2019. The \$1,135.1 million decrease in cash provided by investing activities in 2020 was mainly attributable to the acquisition of ABN AMRO (Channel Islands) in 2019 which had significant deposit funding which was deployed into short term investments.

Net cash provided by financing activities totaled \$546.4 million in 2020, compared to net cash used in financing activities of \$919.4 million in 2019. The \$1,465.9 million increase is mainly due to an increase in the balance of deposits liabilities.

Contractual Obligations

Credit-Related Arrangements

See "Note 12: Credit related arrangements, repurchase agreements and commitments" to our audited consolidated financial statements as at December 31, 2021 for additional information.

Contractual Obligations

The following table presents our outstanding contractual obligations as at December 31, 2021:

(in millions of \$)	Total	Less than 1 year	1 to 3 years	3 to 5 years	After 5 years
Long term debt ⁽¹⁾	175.0	—	—	175.0	—
Sourcing arrangements ⁽²⁾	53.3	13.5	21.7	18.1	—
Term deposits	2,944.9	2,846.8	98.1	—	—
Other obligations	38.8	19.0	17.7	2.1	—
Total outstanding contractual obligations	3,212.1	2,879.3	137.6	195.2	—

(1) Long-term debt excludes interest and unamortized debt issuance costs.

(2) We have an outstanding contractual obligation relating to a five-year agreement entered into in November 2016 with DXC (previously HP) to supply technology infrastructure and application development management, information security and technical support for our locations in Bermuda and the Cayman Islands. Under our agreement with DXC, server management and maintenance, technology field support, application support and development and help desk functions are managed by DXC.

See "Note 12: Credit related arrangements, repurchase agreements and commitments" to our audited consolidated financial statements as at December 31, 2021 for additional information.

Interest expense on our contractual obligations relates primarily to deposit liabilities and our long-term debt. Interest expense on customer deposits was \$15.5 million for the year-ended December 31, 2021, compared to \$25.1 million and \$51.5 million for the years ended December 31, 2020 and 2019, respectively. Movements in interest expense on deposit liabilities are due primarily to market interest rate movements, with yearly average deposits liabilities of \$13.7 billion, \$12.1 billion and \$11.0 billion for 2021, 2020 and 2019, respectively. The decrease in the expense is related primarily to a 10 basis point decrease in average deposit interest rates during 2021 driven by reduced market interest rates.

Capital Commitments

In 2021, the Bank embarked on a significant information technology project intended to modernize and upgrade its technology applications and infrastructure. It is a three-year programme that will improve the efficiency and stability of the Bank's technology estate and enhance the Bank's ability to provide broader and better digital solutions to its clients. The project is anticipated to be completed towards the end of 2023.

The Bank is expected to spend between \$30 million to \$40 million over the three year project horizon, which will be funded by existing cash resources.

The Bank has established a project management steering committee and program office. The steering committee consists of senior and executive members of management and reports directly to the Board.

For more information, see Item 3.D. "Risk Factors - Risks Relating to Risk Oversight and Internal Controls - Our operations are reliant on effective implementation and use of technology and require us to adapt to new technologies, and a breach, interruption or failure of our technology services or the inability to effectively integrate new technologies could have an adverse effect on our business, financial condition or results of operations."

See also "Note 12: Credit related arrangements, repurchase agreements and commitments" to our audited consolidated financial statements as at December 31, 2021 for additional information.

C. Research and Development, Patents and Licenses, etc.

Not applicable.

D. Trend Information

See discussion in Item 5.A. "Operating Results" for a description of the trend information relevant to us.

E. Critical Accounting Estimates

The Bank's significant accounting policies conform to GAAP and are described in Note 2 of our audited consolidated financial statements. Various elements of our accounting policies, by their nature, are inherently subject to estimation techniques, valuation assumptions and other subjective assessments. Given the sensitivity of our consolidated financial statements to these critical accounting policies, the use of other judgments, estimates and assumptions could result in material differences in our results of operations or financial condition. Details of certain critical policies and estimates that affect our business results are summarized below:

Allowance for Credit Losses

Accounting for Financial Instruments - Credit losses

On January 1, 2020, the Bank adopted Accounting Standards Update ("ASU") 2016-13 Financial Instruments – Credit Losses (Topic 326). Accordingly, from the date of adoption, the Bank uses a current expected credit loss model ("CECL") which is based on expected losses. The model used by the Bank up to December 31, 2019 to estimate credit losses was based on incurred losses. The CECL model is applied by the Bank to the measurement of credit losses on financial instruments at amortized cost, including

loan receivables and held-to-maturity ("HTM") debt securities. The Bank also applies the CECL model to certain off-balance sheet credit exposures such as undrawn loan commitments, standby letters of credit, financial guarantees, and other similar instruments. In line with Topic 326, the Bank will present credit losses on available-for-sale ("AFS") securities as a valuation allowance rather than as a direct write-down. Changes in expected credit losses are recorded through the respective credit loss allowances on the consolidated balance sheets as well as in the provision for credit losses (recoveries) in the consolidated statements of operations.

The Bank's purchased credit-impaired ("PCI") loans outstanding as at January 1, 2020 are now classified as purchased credit deteriorated ("PCD") loans and both the amortized cost and an allowance for expected credit losses are disclosed and included with other non-PCD loans figures. The Bank will continue to recognize the amortization of the noncredit discount, if any, as interest income based on the yield of such assets.

The Bank has not restated comparative information previously accounted for under the incurred loss and the PCI models. The total adjustment resulting from the adoption of this methodology on the opening balance of the Bank's accumulated deficit as at January 1, 2020 was a negative adjustment of \$7.8 million relating to the Bank's loan portfolio.

Under the CECL model, the Bank collects and maintains attributes as they relate to its financial instruments that are within the scope of CECL including fair value of collateral, expected performance over the lifetime of the instruments and reasonable and supportable assumptions about future economic conditions. The Bank's measurement of expected losses takes into account historical loss information and is primarily based on the product of the respective instrument's probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD"). For AFS securities, any allowance for credit losses is based on an impairment assessment.

The Bank made the accounting policy election to write off accrued interest receivable on loans that are placed on non-accrual status by reversing the then accrued interest balance against interest income revenue.

The Bank maintains an allowance for credit losses, which in management's opinion is adequate to absorb all estimated credit-related losses that are incurred in its lending and off-balance sheet credit-related arrangements at the balance sheet date.

Management measures expected credit losses on held-to-maturity and available-for-sale debt securities on a collective basis by major security type when similar risk characteristics exist, or failing that, on an individual basis.

For available-for-sale debt securities in an unrealized loss position, the Bank first assesses whether it intends to sell, or it is more likely than not that it will be required to sell the security before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the security's amortized cost basis is written down to fair value through income. For debt securities available-for-sale that do not meet the aforementioned criteria, the Bank evaluates whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, management considers the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded for the credit loss, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that has not been recorded through an allowance for credit losses is recognized in other comprehensive income.

Losses are charged against the allowance when management believes the uncollectibility of an available-for-sale security is confirmed or when either of the criteria regarding intent or requirement to sell is met.

The allowance for credit losses on loans is a valuation account that is deducted from the loans' amortized cost basis to present the net amount expected to be collected on the loans. Loans are charged off against the allowance when management believes the uncollectibility of a loan balance is confirmed. Expected recoveries typically do not exceed the aggregate of amounts previously charged-off and expected to be charged-off.

Management estimates the allowance balance using relevant available information, from internal and external sources, relating to past events, current conditions, and reasonable and supportable forecasts as well as the Bank's internal risk rating framework. Historical credit loss experience provides the basis for the estimation of expected credit losses. Adjustments to historical loss information are made for differences in the current-loan specific risk characteristics such as differences in underwriting practices, vintage, portfolio mix, delinquency level and term as well as changes in environmental conditions, such as changes in macroeconomic factors and collateral values.

The allowance for credit losses is measured on a collective pool basis when similar risk characteristics exist. In each of its jurisdictions, the Bank has identified the following portfolio segments: residential mortgages, consumer loans (including overdrafts), commercial loans, commercial overdrafts, commercial real estate loans and credit cards. For loans and overdrafts, Management uses a probability of default and loss-given-default model to estimate the allowance for credit losses. Loans that do not share risk characteristics are evaluated on an individual basis. Loans evaluated individually are not included in the collective evaluation. For credit cards, Management uses a loss rate to estimate expected credit losses.

Expected credit losses are estimated over the contractual term of the loans. The contractual term excludes potential extensions, renewals and modifications unless management has a reasonable expectation at the reporting date that the extension or renewal options included in the original contract will occur or that a troubled debt restructuring will be executed. Credit card receivables do not have stated maturities, therefore establishing a contractual term is performed by using an analytical approximation of behavior.

Fair Value

We define fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. We determine the fair values of assets and liabilities based on the fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The relevant accounting standard describes three levels of inputs that may be used to measure fair value. Investments classified as trading and AFS, and derivative assets and liabilities are recognized in the consolidated balance sheet at fair value.

Fair value inputs are considered Level 1 when based on unadjusted quoted prices in active markets for identical assets.

We determine fair value based on quoted market prices, where available. If quoted prices are not available, fair value is estimated based upon other observable inputs, and may include valuation techniques such as present value cash flow models or other conventional valuation methods. In addition, when estimating the fair value of assets, we may use the quoted price of similar assets, if available.

We use unobservable inputs when observable inputs are not available. These inputs are based upon our judgments and assumptions, which represent our assessment of the assumptions market participants would use in pricing the asset or liability, which may include assumptions about risk, counterparty credit quality and liquidity and are

developed based on the best information available. The use of different assumptions could produce significantly different results, which could have material positive or negative effects on the Bank's results of operations.

Significant assets measured at fair value on a recurring basis include our US government and federal agencies investments, corporate debt securities, and commercial mortgage-backed securities. The fair values of these instruments are generally sourced from an external pricing service and are classified as Level 2 within the fair value hierarchy. The service's pricing models use predominantly observable valuation inputs to measure the fair value of these securities under both the market and income approaches.

Fair value is also used on a nonrecurring basis to evaluate certain assets for impairment or for disclosure purposes. Examples of nonrecurring uses of fair value include OREO, loan impairments for certain loans and goodwill.

We review and update the fair value hierarchy classifications on a quarterly basis. We also verify the accuracy of the pricing provided by our primary external pricing service on a quarterly basis.

There were no transfers between Level 1 and Level 2 during the years ended December 31, 2021 and 2020.

Refer to "Note 17: Fair value measurements" of the audited consolidated financial statements for further detail on the judgments made in classifying instruments in the fair value hierarchy.

Goodwill

We account for acquisitions using the acquisition method of accounting, under which the acquired company's net assets are recorded at fair value at the date of the acquisition and the difference between the fair value of consideration and fair value of the net assets acquired is recorded as goodwill, if positive, and as bargain purchase gain, if negative.

Goodwill is tested annually in the third quarter for impairment at the reporting unit level, or more frequently if events or circumstances indicate there may be impairment. The goodwill impairment analysis is a two-step test. The first step, used to identify potential impairment, involves comparing each reporting unit's fair value to its carrying value including goodwill. If the fair value of a reporting unit exceeds its carrying value, applicable goodwill is deemed to be not impaired. If the carrying value exceeds fair value, there is an indication of impairment and the second step is performed to measure the amount of impairment.

The second step involves calculating an implied fair value of goodwill for each reporting unit for which the first step indicated impairment. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit, as determined in the first step, over the aggregate fair values of the individual assets, liabilities and identifiable intangible assets as if the reporting unit were being acquired in a business combination. If the implied fair value of goodwill exceeds the carrying value of goodwill assigned to the reporting unit, there is no impairment. If the carrying value of goodwill assigned to a reporting unit exceeds the implied fair value of the goodwill, an impairment charge is recorded for the excess. An impairment loss recognized cannot exceed the amount of goodwill assigned to a reporting unit, and the loss establishes a new basis in the goodwill. Subsequent reversal of goodwill impairment losses is not permitted.

We rely on several assumptions when estimating the fair value of our reporting units using the discounted cash flow method. These assumptions include the estimated future cash flows from operations, required discount rate, as well as projected loan losses, an estimate of terminal value and other inputs. Our estimated future cash flows are largely based on our historical actual cash flows and industry and economic trends, among other considerations. Although management has used the estimates and assumptions it believes to be most appropriate in the circumstances, it should be noted that even relatively minor changes in certain valuation assumptions used in management's calculation would result in significant differences in the results of the impairment test.

The valuation of goodwill is dependent on forward-looking expectations related to nationwide and local economic conditions and our associated financial performance. In the future, if our acquisitions do not yield expected returns or there are changes in discount rates, we may be required to take additional charges to our earnings based on the impairment assessment process, which could harm our business, financial condition, results of operations and prospects. We had \$25.4 million of goodwill as of December 31, 2021 and \$25.6 million as of December 31, 2020, and the results of the impairment analysis for both annual periods resulted in no impairment being required.

Employee Benefit Plans

We maintain trustee pension plans for substantially all employees as either non-contributory defined benefit plans or defined contribution plans. Benefits under the defined benefit plans are primarily based on the employee's years of credited service and average annual salary during the final years of employment as defined in the plans. We also provide post-retirement medical benefits for certain qualifying active and retired Bermuda-based employees.

The calculations of the amounts recorded require the use of various actuarial assumptions, such as discount rates, assumed rates of return on plan assets, compensation increases, and turnover rates. We review our actuarial assumptions on an annual basis and make modifications to the assumptions based on current rates and trends when appropriate. We believe that the assumptions used in recording our defined benefit plan obligations are reasonable based on our experience and advice from our actuaries.

The post-retirement medical benefits obligation is determined using our assumptions regarding health care cost trend rates. The health care trend rates are developed based on historical cost data, the near-term outlook on health care trends and the likely long-term trends.

In accordance with GAAP, actual results that differ from the assumptions are accumulated and amortized over future periods and, therefore, generally affect recognized expense and the recorded obligation of future periods. While management believes that the assumptions used are appropriate, differences in actual experience or changes in assumptions may affect the defined benefit obligations and future expense.

See "Note 11: Employee benefit plans" to our audited consolidated financial statements as at December 31, 2021 for more information on our pension plans and post-retirement medical benefit plan, along with the key actuarial assumptions.

Share-based Compensation

We engage in equity settled share-based payment transactions in respect of services received from eligible employees. The fair value of the services received is measured by reference to the fair value of the shares or share options granted on the date of the grant. The cost of the employee services received in respect of the shares or share options granted is recognized in the consolidated statements of operations over the shorter of the vesting or service period.

The fair value of the options granted is determined using option pricing models, which take into account the exercise price of the option, the current share price, the risk-free interest rate, expected dividend rate, the expected volatility of the share price over the life of the option and other relevant factors. The fair value of unvested share awards is deemed to be the closing price of the publicly traded Bank shares on the grant date. The fair value of time vesting conditions are taken into account by adjusting the number of shares or share options included in the measurement of the cost of employee services so that ultimately, the amount recognized in the consolidated statements of operations reflects the number of vested shares or share options. The Bank recognizes compensation cost for awards with performance conditions if and when the Bank concludes that it is probable that the performance condition will be achieved, net of an estimate of pre-vesting forfeitures (e.g., due to termination of employment prior to vesting).

See "Note 21: Share-based payments" to our audited consolidated financial statements as at December 31, 2021 for more information on share-based compensation.

Business Combinations

All business combinations are accounted for using the acquisition method. Identifiable intangible assets (mostly customer relationships) are recognized separately from goodwill and are initially valued at fair value using discounted cash flow calculations and other recognized valuation techniques. Goodwill represents the excess of the fair value of the consideration paid for the acquisition of a business over the fair value of the net assets acquired. Contingent purchase consideration is measured at its fair value and recorded on the purchase date. Any subsequent changes in the fair value of a contingent consideration liability will be recorded through the consolidated statements of operations.

See "Note 26: Business combinations" to our audited consolidated financial statements as at December 31, 2021 for more information on business combinations.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

Board

Our Board oversees the affairs of the Bank. The current Board is composed of ten members, consisting of our Chairman and Chief Executive Officer, Group Chief Financial Officer and eight non-executive independent directors. The Bank's bye-laws provide that the Board shall consist of not less than six and not more than twelve directors. The Board holds regular meetings five times per year and ad hoc meetings as necessary.

Persons may be proposed for election or appointed as directors at a general meeting either by the Board or by one or more shareholders holding shares which in the aggregate carry not less than 5% of the voting rights in respect of the election of directors. There is only a single class of director and each director holds office until the next annual general meeting.

As a foreign private issuer we are allowed to follow our "home country" corporate governance practices in lieu of the NYSE governance requirements for NYSE-listed US companies. Notwithstanding this, our Board has determined that, under current NYSE listing standards regarding independence (to which we are not currently subject), and taking into account any applicable committee standards, a majority of our Board, including Alastair Barbour, Sonia Baxendale, James Burr, Michael Covell, Mark Lynch, Jana Schreuder, Pamela Thomas-Graham and John Wright, are independent directors.

As the regulatory environment in which we operate becomes more complex, our governance practices and the structures and methodology we use to operate the Bank continue to be of key strategic significance. With the exception of the Chairman and Chief Executive Officer and Group Chief Financial Officer, our Board is comprised entirely of Directors who are not employees of the Bank. Our Board reviews and oversees the Bank's implementation of corporate governance policies and practices in accordance with prevailing standards. The following table lists the names, positions and ages of the Directors of the Bank:

Name	Age	Position
Michael Collins	58	Chairman and Chief Executive Officer
Alastair Barbour	69	Lead Independent Director
Sonia Baxendale	59	Non-Executive Director
James Burr	56	Non-Executive Director
Michael Covell	67	Non-Executive Director
Mark Lynch	60	Non-Executive Director
Jana Schreuder	63	Non-Executive Director
Michael Schrum	53	Director and Group Chief Financial Officer
Pamela Thomas-Graham	58	Non-Executive Director
John Wright	80	Non-Executive Director

Each of our directors may be reached at our registered office at: 65 Front Street, Hamilton, HM 12, Bermuda, or by postal mail at P.O. Box HM 195, Hamilton HM AX, Bermuda.

Michael Collins joined the Board in September of 2015 when he was named Chief Executive Officer of the Bank. He was named Chairman in July of 2017. Prior to this appointment, Mr. Collins was Senior Executive Vice President with responsibility for all of the Bank's client businesses in Bermuda, including Corporate, Private and Retail Banking, as well as the Operations, Custody and Marketing functions in Bermuda and the Cayman Islands. Mr. Collins has more than 35 years of experience in financial services, having held progressively senior positions at Morgan Guaranty Trust Company in New York and later at Bank of Bermuda and HSBC in Bermuda. Before joining the Bank in 2009, Mr. Collins was Chief Operating Officer at HSBC Bank Bermuda. Mr. Collins holds a BA in Economics from Brown University.

Alastair Barbour joined the Board in 2012 and was appointed Lead Independent Director in October 2021. He is a Chartered Accountant with more than 25 years of experience providing auditing and advisory services to publicly traded companies, primarily in the financial services industry. Mr. Barbour was employed with KPMG from 1978 until his retirement in 2011. During his time there, he held various positions both locally and overseas. In 1985, he was named a Partner at KPMG (Bermuda). Mr. Barbour's most recent position was head of KPMG's Financial Services Group in Scotland. Currently, Mr. Barbour serves as Chairman of Liontrust Asset Management plc and as a Director and Chairman of the Audit Committee of Phoenix Group Holdings plc. Mr. Barbour trained with Peat, Marwick, Mitchell & Co. in London and holds a Bachelor of Science from the University of Edinburgh. He is a Fellow of the Institute of Chartered Accountants in England & Wales.

Sonia Baxendale joined the Board in November 2020. She is currently the President and CEO of the Global Risk Institute, a government, industry and academic partnership. From 1992 to 2011, Ms. Baxendale held senior leadership roles within Canadian Imperial Bank of Commerce ("CIBC"), including six years as Senior Executive Vice President and President of Retail Banking and Wealth Management. Prior to joining CIBC, Ms. Baxendale held progressively senior positions with Saatchi & Saatchi and American Express Canada. Ms. Baxendale serves on the Boards of several public and private companies, including Foresters Financial and Laurentian Bank of Canada. Ms. Baxendale also serves as Chair of the Board of Directors of the Hospital for SickKids Foundation and on the Board of Trustees for Toronto's Hospital for Sick Children. She holds a Bachelor of Arts in Political Science and Economics from Victoria College, University of Toronto.

James Burr joined the Board in 2016 and served as Lead Independent Director from October 2018 until October 2021. Mr. Burr is a Managing Director in the Global Financial Services Group of The Carlyle Group, where he focuses on investing in management buyouts, growth capital opportunities and strategic minority investments in financial services. Prior to joining Carlyle, Mr. Burr served as Corporate Treasurer of Wachovia Bank, where he was responsible for activities relating to funding, investing, risk transference, balance sheet management, liquidity and capital usage. He served in various other roles at Wachovia Bank, including as Assistant Treasurer, Controller of the Corporate and Investment Bank and Management Analyst. Mr. Burr began his career at Ernst & Young, where he was a certified public accountant focused on banking and computer audit issues. Mr. Burr formerly served on the Board of Directors of Central Pacific Financial Corp. and currently serves as a Director of several private companies, including The Hilb Group, Benefit Mall and Jen Cap Insurance Solutions.

Michael Covell joined the Board in 2018. Mr. Covell currently serves as non-executive Chairman of several private companies, including Acolin, Ascot Lloyd, Sackville Capital and C Le Masurier. Previously, Mr. Covell was Chairman of the Tilney Group and Hawksford International. He was also a Director of the International Property Securities Exchange and Leeds Castle Foundation. Mr. Covell retired from Goldman Sachs in 2008, where he was a Managing Director of their European Private Wealth Management Division. Prior to Goldman Sachs, he was a senior partner at Rawlinson & Hunter, an international accountancy firm. Mr. Covell is a Fellow of the Institute of Chartered Accountants in England and Wales, and Member of the Society of Trust & Estate Practitioners.

Mark Lynch joined the Board in October 2019. Until June 30, 2019, he was a partner of Boston-based Wellington Management Co., where he served as the firm's senior financial services analyst since 1994 and a partner since 1996. He was also a portfolio manager of mutual funds, hedge funds, and institutional portfolios over that period. Prior to joining Wellington, Mr. Lynch was a US regional bank analyst with Lehman Brothers and Bear Stearns. He holds a degree in European History from Harvard College.

Jana Schreuder joined the Board in August 2020. She is an experienced executive who most recently served as Executive Vice President and Chief Operating Officer of Northern Trust Corporation, a role from which she retired in 2018. Ms. Schreuder joined Northern Trust in 1980 and during her tenure held multiple roles as a member of the executive management team, including: President of Wealth Management from 2011 through 2014; President of Operations & Technology from 2007 through 2010; and Chief Risk Officer from 2005 through 2006. Ms. Schreuder currently serves as a Director and Chair of the Compensation Committees of Kyndryl Holdings Inc. and Blucora, Inc. Since 2008, Ms. Schreuder has served as a Director and is currently Chair of the Compensation Committee for Entrust Corporation. From 2016 to 2018, Ms. Schreuder was a member of the Board of Directors of LifePoint Health. Ms. Schreuder received her Bachelor of Business Administration degree from Southern Methodist University and a Master's degree in finance and marketing management from Northwestern University's Kellogg Graduate School of Management. Ms. Schreuder is a member of the Governance and Membership Committee and the New York Chapter of Women Corporate Directors and the National Association of Corporate Directors, from which she has received the NACD Directorship Certification.

Michael Schrum joined the Board in April 2020. Mr. Schrum has served as the Bank's Group Chief Financial Officer since September 2015. He was previously Chief Financial Officer at HSBC Bank Bermuda. Mr. Schrum has more than 25 years of financial services experience in London, New York and Bermuda, mainly in banking, insurance and tax. He joined HSBC in Bermuda in 2001 and held progressively more senior positions within the bank's Commercial Banking, Strategy, and Finance divisions. He is a Chartered Financial Analyst and a Fellow of the Institute of Chartered Accountants in England and Wales. Mr. Schrum holds Master's (University of London) and Bachelor's (Southern Denmark Business School) degrees in Economics. Mr. Schrum is a Director of the Bermuda Institute of Ocean Sciences and the Royal Danish Consul in Bermuda.

Pamela Thomas-Graham joined the Board in 2017. She is the Founder and Chief Executive Officer of Dandelion Chandelier LLC, a private digital media enterprise focused on the intersection of luxury, marketing and technology. Prior to establishing Dandelion Chandelier, Ms. Thomas-Graham spent six years with Credit Suisse where she served as Chief Talent, Branding and Communications Officer, and Chief Marketing and Talent Officer & Head of Private Banking and Wealth Management New Markets. From 2008 to 2010, she was Managing Director of private equity firm, Angelo, Gordon & Company, leading the firm's investments in the consumer and retail sectors. Before assuming leadership roles in financial services, Ms. Thomas-Graham was Senior Vice President, Global Brand Development and Group President, Apparel Brands at Liz Claiborne (now Kate Spade & Company) where she was responsible for the P&L of 18 global brands. Prior to joining Liz Claiborne, she spent six years at NBC Universal, where she served as President and Chief Executive Officer of CNBC.com, and later President and Chief Operating Officer, and Chairman, President and Chief Executive Officer of CNBC. Ms. Thomas-Graham began her career at global consulting firm McKinsey & Company in 1989, and became the firm's first African-American female partner in 1995. She serves as a Director for several listed companies, including Rivian Automotive, Inc., Compass, Inc., Peloton Interactive, Inc. and Bumble Inc. Ms. Thomas-Graham holds Bachelor of Arts in Economics, Masters of Business Administration, and Doctor of Law degrees from Harvard University.

John Wright joined the Board in 2002. Mr. Wright served as a non-executive director of Butterfield UK from 2001 through 2014. Mr. Wright retired as chief executive of Clydesdale & Yorkshire Banks in 2001. Mr. Wright's career in commercial banking spans over 43 years and includes assignments in the UK, India, Sri Lanka, West Africa, Canada, Hong Kong and the United States. He is a visiting Professor at Heriot-Watt University Business School and he serves on the Board of Directors of several public and private U.K. and overseas companies, including Dhofar Insurance Company, LLC, where he serves on the Audit Committee, XM International Associates Limited, where he serves as Chairman of the Advisory Board, and Rasmala UK Limited. He is also a past President of the Irish Institute of Bankers and a past Vice President of the Chartered Institute of Bankers in Scotland. Mr. Wright was educated at Daniel Stewart's College Edinburgh.

Executive Management Team

The Group's current executive management team is as follows:

Name	Age	Position
Michael Collins	58	Chairman and Chief Executive Officer
Andrew Burns	43	Group Head of Human Resources
Kevin Dallas	43	Group Head of Marketing and Communications
Bri Hidalgo	42	Group Head of Compliance and Operational Risk
Michael McWatt	56	Managing Director, Cayman
Shaun Morris	61	General Counsel, Group Chief Legal Officer
Michael Neff	58	Managing Director, Bermuda and International Wealth
Jane Pearce	52	Group Head of Trust
Richard Saunders	52	Managing Director, Channel Islands and the UK
Michael Schrum	53	Group Chief Financial Officer
Sabeth Siddique	59	Group Chief Risk Officer

Each member of our executive management team may be reached at our registered office at 65 Front Street, Hamilton, HM 12, Bermuda, or by postal mail at P.O. Box HM 195, Hamilton HM AX, Bermuda.

Andrew Burns was named Group Head of Human Resources in September 2020. He was previously Group Head of Internal Audit from 2016, and became a member of the Executive Committee in October 2017. Mr. Burns has more than 20 years of progressive leadership experience in the financial services sector, having begun his career with PricewaterhouseCoopers' financial services group in Australia. He first joined the Butterfield Group of companies in the Fund Services subsidiary in Bermuda before transferring to the Internal Audit team in 2007, where he held progressively senior management roles. Mr. Burns is a Chartered Accountant and a Certified Internal Auditor. He holds a Bachelor of Commerce degree from the University of Melbourne, Australia.

Kevin Dallas joined Butterfield as Group Head of Marketing and Communications in October 2020. Mr. Dallas was previously Chief Executive Officer at the Bermuda Tourism Authority from 2017 to 2020, overseeing the strategy, operations, and financial management of Bermuda's independent public authority, which focuses on delivering economic growth through tourism. He was previously Chief Product and Marketing Officer at Worldpay Group plc (2013 to 2016), and spent 13 years at Monitor Group LLP and Bain & Company Inc., as a Partner, in London and Johannesburg. Mr. Dallas holds a Bachelor of Arts degree in Economics from Brown University.

Bri Hidalgo joined Butterfield as Group Head of Compliance and Operational Risk in September 2020. Before joining Butterfield, Ms. Hidalgo spent 14 years with Wells Fargo Bank in compliance and risk management roles, with her most recent role having been Chief Risk Officer, Wealth & Investment Management. Prior to joining Wells Fargo, she worked in senior risk management and compliance roles at Wachovia Securities and First State Investments in the US and the UK. Ms. Hidalgo holds a Bachelor of Science degree from San Francisco State University.

Michael McWatt currently serves as Managing Director for Butterfield Bank (Cayman) Limited, with responsibility for the overall operations of the bank in the Cayman Islands. Mr. McWatt joined the Group in 1999 and was appointed Managing Director in 2016. He has held progressively senior leadership positions with the Group, including Deputy Managing Director, EVP Group Head of Community Banking and SVP Group Chief Credit Officer. Mr. McWatt is a career banker with more than 30 years of experience in Canada, Bermuda and the Cayman Islands. Prior to joining Butterfield he held progressively senior positions in Corporate Banking and Risk Management in Canada. Mr. McWatt holds a BA in Economics from McMaster University, an Honors Commerce Degree from University of Windsor and is a graduate of the Ivey Executive Program at Western University. He is a Director and past president of the Cayman Islands Bankers' Association and is a Director of Cayman Finance.

Shaun Morris currently serves as General Counsel and Group Chief Legal Officer. Mr. Morris joined the Group as General Counsel and Group Chief Legal Officer in 2012. From 2005 to 2012, Mr. Morris was the Managing Partner of Appleby's Bermuda Office. Appleby is the largest offshore law and fiduciary group operating in Bermuda. Prior to joining Butterfield, Mr. Morris spent his entire professional career at Appleby and was a Partner in the Banking and Asset Finance team in Bermuda. In that role, he practiced corporate and commercial law, specializing in shipping, capital markets, mergers & acquisitions and project finance. Mr. Morris holds an MA (Economics) from Dalhousie University in Canada and a Bachelor of Laws from the London School of Economics & Political Science. He is currently a member of the Bermuda Bar Association.

Michael Neff currently serves as Managing Director, Bermuda and International Wealth. He previously served as the Bank's Group Head of Wealth Management. Mr. Neff has over 30 years' experience in financial services, having held senior roles in wealth management, commercial banking, client services, and business development functions. He began his career at Chemical Bank's Private Banking Group where he ultimately served on the Executive Committee and led relationship management across the group. Mr. Neff then led the implementation of the global wealth management client relationship model at Citibank's Private Bank before leaving to establish AnswerSpace Inc., a financial planning technology consultancy in 1998. He went on to found Monetaire Inc., a leading provider of financial and investment planning software that was acquired by the RiskMetrics Group. At RiskMetrics, he initially served as Global Head of Wealth Management, rising to become Co-Head of the firm's Global Financial Risk Management business in 2009. Mr. Neff holds a Bachelor of Arts from Middlebury College and a Master of Business Administration from Columbia Business School.

Jane Pearce joined Butterfield as Group Head of Trust in 2020. Prior to joining Butterfield, she was Regional Managing Director of Vistra's UK, Ireland and Channel Islands businesses. She has previously worked in senior positions at several Jersey-based firms, including Ernst & Young, Deutsche Bank, Kleinwort Benson, and Ogier. Ms. Pearce has been named to the Citywealth Leaders List and the IFC Powerwomen Top 200. She is a Fellow of the Association of Chartered Certified Accountants, and holds degrees from Teesside University and the Scottish School of Physical Education.

Richard Saunders currently serves as Managing Director, Channel Islands, with responsibility for Butterfield Bank (Guernsey) Limited, Butterfield Bank (Jersey) Limited and Butterfield Mortgages Limited in London. Mr. Saunders joined the Group in 2001 and was appointed Managing Director in 2015. He has held progressively senior leadership positions with the Group, including Head of European Asset Management. Mr Saunders joined the Executive Committee in July 2018. He has more than 25 years of

progressive management experience, having begun his career at Royal Bank of Canada in Guernsey. Mr. Saunders is a Chartered Member of the London-based Chartered Institute for Securities & Investment ("CISI") and holds a Bachelor's degree in Mathematics and Sports Science from Loughborough University, England.

Sabath Siddique joined Butterfield as Group Chief Risk Officer in September 2020. Mr. Siddique has over 30 years experience in risk management and banking. He was formerly Assistant Director in Banking Supervision and Regulation with the Federal Reserve Board in Washington DC and has also held senior level positions with money center and regional banks in the US and Asia as well as management consulting experience with a leading global consulting firm. Mr. Siddique holds a Master of Business Administration degree from Carnegie Mellon University and a Bachelor of Science degree in Chemical Engineering from Rutgers University.

B. Compensation

Senior Management and Director Compensation

In 2021, senior management included the following executives: Michael Collins, Andrew Burns, Kevin Dallas, Bri Hidalgo, Michael McWatt, Shaun Morris, Michael Neff, Jane Pearce, Richard Saunders, Michael Schrum and Sabath Siddique. Our compensation program is designed to reward and retain senior management and includes base salary, annual short-term cash and equity incentive compensation, long-term equity incentive compensation and miscellaneous employee benefits and fringe benefits (including, among others, executive medical benefits). In 2021, our compensation program for directors was comprised of an annual cash retainer and an equity grant. None of our directors have entered into service contracts with the Group that provide for benefits upon the termination of their service as a director.

The CEO is required to own a minimum aggregate value of our common shares equal to five times base salary. Eligible stock includes vested shares, unvested restricted stock and restricted stock units, and other stock held by the CEO. The intrinsic value of vested or unvested stock options is not considered eligible stock. The CEO complies with this requirement. If the market value of the CEO's common stock falls below the requirements, the CEO must retain 50% of the shares he receives as compensation until he achieves the specified ownership level.

Effective April 2020, senior management are required to own a minimum aggregate value of our common shares equal to two times base salary by December 31, 2022, or within five years following first appointment. Eligible stock includes vested shares, unvested restricted shares, and other stock held by senior management. The intrinsic value of vested or unvested stock options is not considered eligible stock. If the market value of senior management's common stock falls below the required threshold, senior management must retain 50% of the shares they receive as compensation until they achieve the specified ownership level. All members of senior management currently or intend to comply with this requirement.

The aggregate amount of compensation, including the value of in-kind benefits, paid to our directors and senior management during fiscal year 2021 was \$16.3 million. During 2021, the Group did not sponsor any deferred compensation plans (other than the equity compensation programs described below) and no amounts were set aside or accrued to provide pension, retirement or similar benefits to directors or senior management, other than employer matching contributions to retirement accounts on terms applicable to employees generally.

Short-Term Incentive Compensation

Senior management participates in our annual discretionary bonus program. Our compensation committee establishes an annual bonus pool based on overall company-wide performance during the applicable fiscal year. Once the compensation committee has approved the pool, the pool is allocated to eligible employees, including senior management, based on the employee's achievement of pre-established performance goals during the applicable fiscal year. Annual bonuses for executives are paid 50% in cash and 50% in the form of restricted stock unit awards that vest in three equal installments on the first three anniversaries of the date of grant.

Equity Compensation

The Group sponsors two equity incentive plans in which our senior management and directors have been or are eligible to participate: the 2010 Omnibus Share Incentive Plan (the "2010 Plan") and the 2020 Omnibus Share Incentive Plan (the "2020 Plan") which was approved and adopted by the Board on April 30, 2020. The Group no longer grants equity awards under the 1997 Stock Option Plan for Employees (the "1997 Plan") and all remaining unvested stock options under the 1997 Plan expired in 2019. The Group previously granted equity awards under the 2010 Plan, which was replaced with the adoption of the 2020 Plan. Awards granted pursuant to the 2010 Plan prior to the adoption of the 2020 Plan that remain outstanding will continue to be governed by the 2010 Plan, but no new awards are issued thereunder. The Group currently grants restricted stock unit and performance-vesting restricted stock unit awards under the 2020 Plan. As at December 31, 2021, in the aggregate, our members of senior management held 671,565 restricted stock units (assuming that performance with respect to performance-vesting restricted stock unit awards is satisfied at target levels) and no options.

Senior management participates in our long-term equity incentive compensation program. During 2021, our compensation committee granted annual restricted stock unit and performance-vesting restricted stock unit awards under our 2010 and 2020 Plan. Restricted stock unit awards granted in 2019, 2020 and 2021 were granted (i) under our long-term equity incentive compensation program in the form of performance shares, generally vesting upon the achievement of certain performance targets in the three-year period from the effective grant date, and (ii) under the omnibus programs in the form of time-based restricted stock units, generally vesting in three equal installments on the first three anniversaries of the date of grant. Certain members of senior management also participate in our 2010 and 2020 Executive Stock Purchase Plan, which allows participants to borrow against their common shares held in a restricted account to purchase common shares.

During calendar year 2021, in the aggregate, our compensation committee granted senior management 265,796 restricted stock units (which includes restricted stock unit awards granted under both the annual bonus program and long-term equity incentive compensation, and assumes that performance with respect to performance-vesting restricted stock unit awards is satisfied at target levels).

C. Board Practices

The Bank's bye-laws authorize the Board to delegate certain of its duties to committees of directors. The principal board committees are the: (1) Audit Committee, (2) Risk Policy & Compliance Committee, (3) Corporate Governance Committee, and (4) Compensation & Human Resources Committee. Members of committees are appointed by, from and among the non-executive members of the Board. The responsibilities and compositions of these committees are described below.

Audit Committee

Our Audit Committee, on behalf of the Board, monitors: (1) the integrity of the financial reports and other financial information provided by the Group to any governmental body or the public; (2) the independent auditor's qualifications and independence; (3) the performance of the Group's internal audit function and the independent auditors; (4) compliance with legal and regulatory requirements; (5) the Group's system of internal controls regarding finance, accounting, legal and ethics as established by management and the Board; and (6) the Group's auditing, accounting and financial reporting processes generally. Subject to shareholder approval, the Audit Committee has responsibility for the appointment or replacement of the independent auditor and for the compensation and oversight of the work of the independent auditor. In addition, the Audit Committee is responsible for approving all audit services, internal control-related services and permitted non-audit services. With respect to internal controls, the Audit

Committee reviews and evaluates any major issues as to the adequacy of the Bank's internal controls, and any major control deficiencies or changes in internal controls over financial reporting are discussed with the Bank's management and the independent auditor. With respect to financial reporting, the Audit Committee consults with management, the independent auditor and the internal auditors about the integrity of the financial reporting process, reviews significant financial reporting risk exposure and management's responses, reviews significant auditor findings and establishes and reviews procedures for the receipt, retention and treatment of complaints about accounting and auditing matters, and reviews and recommends for the Board's approval the Group's financial reports.

Our Audit Committee consists of five directors that are independent under the NYSE requirements. Each member of the Audit Committee also meets the additional criteria for independence of Audit Committee members set forth in Rule 10A-3(b)(1) under the Exchange Act.

The members of the Audit Committee are appointed by the Board upon the recommendation of the Corporate Governance Committee. The Audit Committee's membership is as follows:

Name	Position
Alastair Barbour	Chairperson
Sonia Baxendale	Member
Mark Lynch	Member
Pamela Thomas-Graham	Member
John Wright	Member

Mr. Barbour qualifies as the Audit Committee financial expert.

Risk Policy & Compliance Committee

The Risk Policy & Compliance Committee, on behalf of the Board, acts as the oversight function in respect of those activities throughout the Group that give rise to credit, market, liquidity, interest rate, operational, cyber security and reputational risks and reviews compliance with laws and regulations. Specifically, the Risk Policy & Compliance Committee assists the Board in fulfilling its responsibilities by overseeing the Group's risk profile and its performance against approved risk appetites and tolerance thresholds. It approves and ensures compliance with the capital allocation model and approves overall insurance coverage for the Group. The Risk Policy & Compliance Committee also reviews the credit risk of the Group with respect to country and financial institution risk, large exposures, reserves and provisioning, off-balance sheet risk and related capital needs, as well as market, interest rate and liquidity risks. The Risk Policy & Compliance Committee monitors operational risks, including cybersecurity risks, material breaches of agreed risk limits, appropriate product risk profiles and senior management policies for identification and management of risk. In doing so, the Risk Policy & Compliance Committee seeks to ensure compliance with all applicable policies and establishes the Group's risk appetite and tolerance.

The Risk Policy & Compliance Committee's membership is as follows:

Name	Position
Mark Lynch	Chairperson
James Burr	Member
Jana Schreuder	Member

Corporate Governance Committee

The Corporate Governance Committee, on behalf of the Board, reviews the effectiveness and performance of the Board as a whole, each Board committee and the boards and board committees of the Bank's subsidiaries in accordance with the corporate governance guidelines and policies of the Group. This committee acts as the nomination committee for the Board. The principal duties of the Corporate Governance Committee include reviewing and recommending to the Board membership criteria and director nominees, membership of the Board's committees and matters relating to the performance, diversity and independence of directors. The Corporate Governance Committee oversees questions of director independence and conflicts of interest, induction and ongoing training for directors and the Board's corporate governance policies and procedures. The Corporate Governance Committee also recommends director compensation and reviews and approves related-party transactions.

The Corporate Governance Committee's membership is as follows:

Name	Position
Pamela Thomas-Graham	Chairperson
Sonia Baxendale	Member
Michael Covell	Member

Compensation & Human Resources Committee

The Compensation & Human Resources Committee, on behalf of the Board, reviews and approves executive compensation, employee salary ranges, levels and degrees of participation in incentive compensation programs (including bonuses and equity-based incentive plans) and oversees employee development, relations and succession. Specifically, the Compensation & Human Resources Committee evaluates the fairness and effectiveness of the compensation practices implemented by the Group, approves overall compensation packages for executives, provides regular updates on executive compensation to the Board, approves changes in employee salary ranges for employees, approves the criteria and design of the Group's incentive bonus plans and approves changes to the other employee benefit plans. The Compensation & Human Resources Committee also recommends to the Board changes in the Group's equity-based incentive plans and the granting of awards under such plans, reviews and approves changes to our pension plans, reviews periodic management reports on our compensation and benefits, as well as other matters bearing on the relationship between management and employees, while making recommendations to the Board concerning our senior level organization structure and staffing, training and employee development programs.

The Compensation & Human Resources Committee's membership is as follows:

Name	Position
James Burr	Chairperson
Alastair Barbour	Member
Michael Covell	Member
Jana Schreuder	Member
John Wright	Member

Governance of Geographical Segments

Our banking business operates in three geographical segments — Bermuda, the Cayman Islands, and the Channel Islands and the UK— and each geographical segment utilizes operating subsidiary companies of the Bank within these jurisdictions. See Item 4.B. "Business Overview - Our International Network and Group Structure", which presents the corporate structure chart of our principal subsidiaries as at December 31, 2021. Our principal operating subsidiaries are each regulated by their respective geographical regulator and are fully capitalized as stand-alone operating companies, each with its own board of directors consisting of both executive and non-executive independent directors. Guidance on general corporate governance, board sub-committee structuring, and the various governance policies and procedures of the operating subsidiaries is determined at the Group level.

Board Leadership Structure and Qualifications

The Bank must comply with the BMA Corporate Governance Policy, which requires the Bank to appoint board members who have appropriate experience, competencies and personal qualities, including professionalism and personal integrity.

It is the Bank's policy to ensure that all companies within the Group have board members who are fit and proper persons to direct the Bank's business with prudence, integrity and professional skills. The Boards of the Bank and the Bank's subsidiaries are composed of individuals who possess diverse skills, experience and knowledge that are key to understanding the Bank's business and the execution of the Bank's strategies.

The Bank has established guidelines that address the size and composition of its own Board and those of its subsidiaries, and for identifying and selecting suitable candidates for appointment to these boards. The Corporate Governance Committee makes appointment recommendations to the Board and the appointment procedure is formal, rigorous and transparent. Each of the Bank and the Bank's subsidiary Boards are reviewed as appropriate in order to assess whether the Board composition is commensurate with the Bank's strategic objective and diversity principles.

In assessing continuity of service on the Board there is a general presumption that individuals should serve for a maximum of 15 years in order that the Board tenure be refreshed. Non-executive directors who have served for a period of more than 15 years are subject to an independent assessment in accordance with applicable legal requirements and regulatory and listing standards.

Board Oversight of Risk Management

The Board believes that effective risk management and control processes are critical to our safety and soundness, our ability to predict and manage the challenges that we face and, ultimately, our long-term corporate success. The Board, both directly and through its committees, is responsible for overseeing our risk management processes, with each of the committees of the Board assuming a different and important role in overseeing the management of the risks we face.

The Risk Policy & Compliance Committee oversees our enterprise-wide risk management framework, which establishes our overall risk appetite and risk management strategy and enables our management to understand, manage and report on the risks we face. The Risk Policy & Compliance Committee also reviews and oversees policies and practices established by management to identify, assess, measure and manage key risks we face, including the risk appetite metrics developed by management and approved by the Board. The Audit Committee of the Board is responsible for overseeing risks associated with financial, accounting and legal matters (particularly financial reporting, accounting practices and policies, disclosure controls and procedures and internal control over financial reporting), reviewing and discussing generally the identification, assessment, management and control of our risk exposures on an enterprise-wide basis and engaging as appropriate with the Risk Policy & Compliance Committee to assess our enterprise-wide risk framework. The Compensation & Human Resources Committee of the Board has primary responsibility for risks and exposures associated with our compensation policies, plans and practices, regarding both executive compensation and the compensation structure generally. In particular, our Compensation & Human Resources Committee, in conjunction with our Chairman and Chief Executive Officer, Group Head of Human Resources and Group Chief Risk Officer and other members of our management as appropriate, reviews our incentive compensation arrangements to ensure these programs are consistent with applicable laws and regulations, including safety and soundness requirements, and do not encourage imprudent or excessive risk-taking by our employees. The Corporate Governance Committee of the Board oversees risks associated with the independence of the Board and potential conflicts of interest.

Our senior management is responsible for implementing and reporting to the Board regarding our risk management processes, including by assessing and managing the risks we face, including strategic, operational, cybersecurity, regulatory, investment and execution risks, on a day-to-day basis. Our senior management is also responsible for creating and recommending to the Board for approval appropriate risk appetite metrics reflecting the aggregate levels and types of risk we are willing to accept in connection with the operation of our business and pursuit of our business objectives.

The role of the Board in our risk oversight is consistent with our leadership structure, with our Chairman and Chief Executive Officer and the other members of senior management having responsibility for assessing and managing our risk exposure, and the Board and its committees providing oversight in connection with those efforts. We believe this division of risk management responsibilities presents a consistent, systemic and effective approach for identifying, managing and mitigating risks throughout our operations.

D. Employees

As at December 31, 2021, 2020 and 2019, we had the following employees:

	As at December 31		
	2021	2020	2019
Per segment:			
Bermuda	413	449	520
Cayman Islands	241	236	296
Channel Islands and the UK	369	363	425
Other Segment	254	266	271
Total per full-time equivalency basis	1,277	1,314	1,512
Of which:			
Full-time and part-time employees	1,217	1,258	1,389
Temporary employees	60	56	123
Total per full-time equivalency basis	1,277	1,314	1,512

Staffing levels overall remained fairly constant from 2020 to 2021 although there was some relocation of non-client facing roles across jurisdictions. The decrease from 2019 to 2020 was as a result of the COVID-19 related cost restructuring program, which included voluntary separation, early retirement and redundancies across all operating segments.

We have not experienced any material employment-related issues or interruptions of services due to labor disagreements and are not a party to any collective bargaining agreements.

E. Share Ownership

See Item 7.A. "Major Shareholders".

ITEM 7. MAJOR SHAREHOLDERS AND RELATED-PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth information with respect to the beneficial ownership of our common shares as at February 15, 2022, unless noted otherwise, in each case by: each person or entity known by us to beneficially own 5% or more of our issued and outstanding common shares; each of our directors and executive officers individually; and all of our directors and executive officers as a group. As at February 15, 2022, we had approximately 50 million common shares issued and outstanding.

Under the rules of the Securities and Exchange Commission, a person is deemed to be a "beneficial owner" of a security if that person has or shares "voting power," which includes the power to vote or to direct the voting of such security, or "investment power," which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days. Under these rules, more than one person may be deemed to be a beneficial owner of such securities as to which such person has voting or investment power. Except as described in the footnotes below, to our knowledge, each of the persons named in the table below has sole voting and investment power with respect to the common shares beneficially owned, subject to community property laws where applicable.

Unless otherwise noted, the address for each shareholder listed on the table below is: c/o The Bank of N.T. Butterfield & Son Limited, 65 Front Street, Hamilton, HM 12, Bermuda.

Name of beneficial owner	Number of common shares beneficially owned	Beneficial ownership percentage
Major Shareholders:		
Davis Selected Advisers, L.P. ⁽¹⁾	3,883,140	7.8 %
Blackrock, Inc. ⁽²⁾	2,560,605	5.1 %
Directors and Executive Officers:		
Alastair Barbour	16,241	*
Sonia Baxendale	6,645	*
Andrew Burns ⁽³⁾	11,320	*
James F. Burr ⁽⁴⁾	6,796	*
Michael Collins ⁽⁵⁾	125,136	*
Michael Covell	5,982	*
Kevin Dallas ⁽⁶⁾	12,162	*
Bri Hidalgo ⁽⁷⁾	4,787	*
Mark Lynch ⁽⁸⁾	178,908	*
Michael McWatt ⁽⁹⁾	21,184	*
Shaun Morris ⁽¹⁰⁾	37,582	*
Michael Neff ⁽¹¹⁾	25,109	*
Jane Pearce ⁽¹²⁾	2,939	*
Richard Saunders ⁽¹³⁾	14,926	*
Jana Schreuder	4,549	*
Michael Schrum ⁽¹⁴⁾	107,254	*
Sabeth Siddique ⁽¹⁵⁾	539	*
Pamela Thomas-Graham	6,283	*
John R. Wright ⁽¹⁶⁾	10,298	*
All directors and executive officers as a group (19 persons)	598,640	*

* Indicates less than 1%

- (1) Based on the Schedule 13G/A filed on February 11, 2022 by Davis Selected Advisers, L.P., which reported that as at December 31, 2021, Davis Selected Advisers, L.P. beneficially owned 3,883,140 common shares, with sole voting power over 3,883,025 shares, no voting power over 115 shares and sole dispositive power over 3,883,140 shares. The business address of Davis Selected Advisers, L.P. is 2949 East Elvira Road, Suite 101, Tucson, Arizona 85756.
- (2) Based on the Schedule 13G filed on February 3, 2022 by Blackrock, Inc., which reported that as at December 31, 2021, Blackrock, Inc. beneficially owned 2,560,605 common shares, with sole voting over 2,496,470 of such shares and sole dispositive power over 2,560,605 of such shares. The business address of Blackrock, Inc. is 55 East 52nd Street, New York, NY 10055.
- (3) Consists of 11,320 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (4) Consists of (i) 5,892 ordinary shares held by Mr. Burr directly and (ii) 904 ordinary shares held by Wells Fargo over which Mr. Burr exercises voting and dispositive control.
- (5) Consists of 125,136 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (6) Consists of (i) 6,049 ordinary shares and (ii) 6,113 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (7) Consists of (i) 2,140 ordinary shares and (ii) 2,647 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (8) Consists of (i) 178,108 ordinary shares held by Mr. Lynch directly and (ii) 800 ordinary shares held by a family member over which Mr. Lynch exercises voting and dispositive control.
- (9) Consists of (i) 2,176 ordinary shares and (ii) 19,008 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (10) Consists of (i) 12,753 ordinary shares and (ii) 24,829 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (11) Consists of (i) 5,938 ordinary shares and (ii) 19,171 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (12) Consists of (i) 2,075 ordinary shares and (ii) 864 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (13) Consists of 14,926 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (14) Consists of (i) 42,792 ordinary shares held jointly with his spouse and (ii) 64,462 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (15) Consists of 539 ordinary shares underlying restricted stock units that will vest within 60 days of February 15, 2022.
- (16) Consists of 10,298 ordinary shares held jointly with his spouse.

The shareholders listed above do not have voting rights that are different from those held by any other holder of common shares of the Bank. As at January 31, 2022, approximately 83% of our common shares were held by holders and/or Custodians of record located in the United States, and there were approximately 217 holders of record of our common shares located in the United States. As at January 31, 2022, approximately 16% of our common shares were held by holders of record located in Bermuda, and there were approximately 3,768 holders of record of our common shares located in Bermuda.

B. Related Party Transactions

See "Note 27: Related party transactions" to our audited consolidated financial statements as at December 31, 2021 for information on transactions with related parties and with directors and executive officers.

Employment Agreements

The Group has entered into employment agreements with senior management. The compensation paid in 2021 to senior management under the employment agreements is described above under Item 6.B. "Compensation". The senior management employment agreements generally provide for terms and conditions of employment, including the payment of a base salary, participation in the Group's short and long-term incentive compensation programs, notice provisions, severance benefits, change in control, double-trigger equity award vesting and participation in the Group's health, welfare and retirement programs available to all senior executives. For certain members of senior management, the employment agreements also provide for executive life insurance and participation in the Group's share purchase programs.

Related-Party Transaction Policy

The Board has adopted a written policy governing the review, approval or ratification of transactions between the Bank or any of its subsidiaries and any "related party," which is a person or entity: (1) that controls, is controlled by, or is under common control with the Bank; (2) that is an associate of the Bank; (3) that is a shareholder of the Bank that has significant influence by virtue of its ownership of the Bank; (4) that is a director, executive officer or other key management person at the Bank; or (5) in which a substantial interest in its voting power is held by the persons described in (3) or (4) above. The policy calls for the related-person transactions to be reviewed and, if deemed appropriate, approved or ratified by our Corporate Governance Committee. In determining whether or not to approve or ratify a related-person transaction, our Corporate Governance Committee takes into account, among other factors it deems important, whether the related-person transaction is in our best interests and whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances. In the event that a member of our Corporate Governance Committee is not disinterested with respect to the related-person transaction under review, that member may not participate in the review, approval or ratification of that related-person transaction. Approval of the disclosure of any related party transaction included in our financial statements or any other SEC filing is the responsibility of the Audit Committee.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

Refer to Part III, Item 17 for the Consolidated Financial Statements and Notes to the Consolidated Financial Statements

A. Consolidated Statements and Other Financial Information

Refer to Part III, Item 17 for the Consolidated Financial Statements and Notes to the Consolidated Financial Statements.

Legal Proceedings

From time to time we are a party to various litigation matters incidental to the conduct and in the ordinary course of our business.

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 in connection with a US cross border tax investigation. On August 3, 2021, the Bank announced it had reached a resolution with the United States Department of Justice concerning this inquiry. The resolution is in the form of a non-prosecution agreement with a three-year term. The Bank paid \$5.6 million in respect of Forfeiture and Tax Restitution Amounts which is consistent with that previously provisioned for.

Dividend Policy

It is our intention to pay a quarterly dividend subject to the requisite approvals. There can be no assurance, however, that we will pay any dividend for any given period, and the declaration of dividends remains subject to the approval of our Board and receipt of a letter of no objection from the BMA.

Although we currently expect to pay dividends according to our dividend policy, we may elect not to pay dividends. Any declarations of dividends will be at the discretion of the Board and will be subject to the receipt of a letter of no objection from the BMA. Such dividends may be declared and paid by the Board only as permitted under applicable law. In determining the amount of any future dividends, the Board may take into account: (1) our financial results; (2) our available cash, as well as anticipated cash requirements (including debt servicing); (3) our capital requirements, including the capital requirements of our subsidiaries; (4) contractual, legal, tax and regulatory restrictions on, and implications of, the payment of dividends by us to our shareholders; (5) general economic and business conditions; (6) restrictions applicable to us and our subsidiaries under Bermuda and other applicable laws, regulations and policies, including the requirement to obtain a letter of no objection from the BMA for the payment of dividends on our common shares; and (7) any other factors that the Board may deem relevant. Therefore, there can be no assurance that we will declare or pay any dividends to holders of the common shares, or as to the amount of any such dividends. See Item 3.D "Risk Factors - Risks Relating to the Common Shares".

Our Historical Dividends

Since 2013 we have declared and paid dividends on a quarterly basis. For the year ended December 31, 2021, we declared four quarterly dividends of \$0.44 per quarter totaling \$1.76 for each common share held on record as of the applicable record dates.

The following table sets forth dividends paid per common share during the periods indicated.

	Year ended December 31		
	2021	2020	2019
(in \$, unless otherwise indicated)			
Period			
First Quarter	0.44	0.44	0.44
Second Quarter	0.44	0.44	0.44
Third Quarter	0.44	0.44	0.44
Fourth Quarter	0.44	0.44	0.44
Total dividends per common share	1.76	1.76	1.76
Total dividends per common share as a percentage of earnings per share (in %)	53.7 %	60.5 %	52.9 %

On February 14, 2022, the Board of Directors declared an interim dividend of \$0.44 per common share to be paid on March 14, 2022 to shareholders of record on February 28, 2022.

B. Significant Changes

Except as otherwise disclosed in this annual report, no significant change has occurred since December 31, 2021.

ITEM 9. THE OFFER AND LISTING

A. Offering and Listing Details

The Bank's common shares trade on the New York Stock Exchange under the symbol "NTB" and on the Bermuda Stock Exchange under the symbol "NTB.BH".

B. Plan of Distribution

Not applicable.

C. Markets

The Bank's common shares began trading on the New York Stock Exchange under the symbol "NTB" on September 21, 2016 and on the Bermuda Stock Exchange under the symbol "NTB.BH" on February 2, 1971.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Incorporation

Information can be found in the following Exhibits:

- 1.1 Amended and Restated Bye-laws of The Bank of N.T. Butterfield & Son Limited (incorporated by reference to Exhibit 1.1 to the registrants Annual Report on Form 20-F for the year ended December 31, 2018)
- 1.2 The N.T. Butterfield & Son Bank Act, 1904 (incorporated by reference to Exhibit 3.2 to the registrant's registration statement on Form F-1, filed on August 4, 2016)
- 2.2 Description of Securities

C. Material Contracts

We have not entered into any material contracts outside the ordinary course of business within the last two years.

D. Exchange Controls

Refer to Item 4.B. "Business Overview - Supervision and Regulation".

E. Taxation

Bermuda Tax Considerations

Under Bermuda law, there are currently no stamp or documentary taxes, duties or similar taxes in connection with a conveyance or transfer on sale, or a conveyance or transfer to effect or having the effect of a voluntary disposition inter vivos or any agreement for the lending and borrowing of the Bank's shares which are listed on the BSX or NYSE.

We are not required by any Bermuda law or regulation to make any deductions or withholdings in Bermuda from any payment we may make in respect of the Bank's shares. However, during 2018 the Bermuda Tax Reform Commission proposed the introduction of a withholding tax on interest and dividend income, amongst other reforms. The Bermuda government has not introduced this tax as yet. In January 2021, the Bermuda Government passed the Tax Reform Commission Amendment Act 2021, which allows the Minister of Finance to appoint a further Tax Reform Commission. The Bermuda Government has announced that it expects to form a new Tax Reform Commission in 2021, with such commission to report on tax reform within six months of creation. This new Tax Reform Commission may reiterate the 2018 commission's recommendation for a withholding tax on interest and dividend income, but it is unclear what changes will be proposed to Bermuda's system of taxation, as well as whether or not such changes will be implemented and on what terms. If additional taxes are introduced, whether in the form of withholding or otherwise, there may be an impact on holders of the Bank's shares, along with an increase in our compliance obligations.

Furthermore, Bermuda currently has no corporate or capital gains taxes.

Material US Federal Income Tax Consequences

This section describes the material US federal income tax consequences of owning and disposing of common shares of the Bank. It applies solely to US shareholders (as defined below) that hold shares as capital assets for US federal income tax purposes. This section does not describe the tax consequences arising under the Medicare contribution tax on net investment income or the alternative minimum tax or all the tax consequences that may apply to members of a special class of holders subject to special rules, including:

- a dealer in securities or foreign currencies;
- a regulated investment company;
- a trader in securities that elects to use a mark-to-market method of accounting for securities holdings;
- a tax-exempt organization;
- a bank, an insurance company, or any other financial institution;
- a person that actually or constructively owns 10% or more, by vote or value, of the Bank;
- a person that holds the Bank's common shares as part of a straddle or a hedging, conversion, or other risk reduction transaction for US federal income tax purposes;
- a person that purchases or sells common shares as part of a wash sale for tax purposes;
- an entity classified as a partnership for US federal income tax purposes; or
- a person whose functional currency is not the US Dollar.

This section is based on the Internal Revenue Code of 1986, as amended (the "IRC"), its legislative history, existing and proposed Treasury regulations, published rulings and court decisions, all as of the date hereof. These laws are subject to change, possibly on a retroactive basis.

If an entity treated as a partnership for US federal income tax purposes holds common shares, the US federal income tax treatment of a partner will generally depend on the status of the partner and the tax treatment of the partnership. A partner in an entity treated as a partnership for US federal income tax purposes holding common shares should consult its tax advisers with regard to the US federal income tax treatment of the ownership and disposition of the Bank's common shares.

Shareholders should consult their own tax advisers regarding the US federal, state and local and foreign and other tax consequences of owning and disposing of the Bank's common shares in their particular circumstances.

Special adverse US federal income tax rules apply if a US shareholder owns shares of a company that is or was treated as a PFIC for US federal income tax purposes for any taxable year during which the US shareholder held such shares. US shareholders should consult their own tax advisers as to the potential application of the PFIC rules to their ownership and disposition of the Bank's common shares.

US Shareholders

For the purposes of this discussion, a "US shareholder" is a beneficial owner of common shares that is:

- an individual that is a citizen or resident of the United States,
- a corporation, or other entity taxable as a corporation, created or organized under the laws of the United States, any state therein or the District of Columbia,
- an estate whose income is subject to US federal income tax regardless of its source, or
- a trust if a US court can exercise primary supervision over the trust's administration and one or more US persons are authorized to control all substantial decisions of the trust.

Passive Foreign Investment Company Considerations

Special adverse US federal income tax rules apply if a US shareholder holds shares of a company that is treated as a PFIC for any taxable year during which the US shareholder held such shares. This conclusion is a factual determination that is made annually and thus may be subject to change. A foreign corporation will be considered a PFIC with respect to a US Shareholder for any taxable year if (i) at least 75% of its gross income for the taxable year is passive income, or (ii) at least 50% of the value, determined on the basis of a quarterly average, of its assets is attributable to assets that produce or are held for the production of passive income (the "asset test"). Passive income for this purpose generally includes dividends, interest, royalties, rents (other than certain rents and royalties derived in the active conduct of a trade or business), annuities and gains from assets that produce passive income. If a foreign corporation owns at least 25% (by value) of the shares or stock of another corporation, the foreign corporation is treated, for purposes of the PFIC tests, as owning a proportionate share of the other corporation's assets and receiving its proportionate share of the other corporation's income.

Banks generally derive a substantial part of their income from assets that are interest bearing or that otherwise could be considered passive under the PFIC rules. The IRS has issued a notice, and has proposed regulations, that exclude from passive income any income derived in the active conduct of a banking business by a qualifying foreign bank.

Based upon the proportion of our income derived from activities that are "bona fide" banking activities for US federal income tax purposes, we believe that we were not a PFIC for the taxable year ending December 31, 2021 (the latest period for which the determination can be made) and, based further on our present regulatory status under local laws, the present nature of our activities, and the present composition of our assets and sources of income, we do not expect to be a PFIC for the current year or any future years. However, because PFIC status is a factual determination and because there are uncertainties in the application of the relevant rules, there can be no assurances that we will not be a PFIC for any particular year. In addition, our current position that we are not a PFIC is based in part upon the value of our goodwill which is based on the market value for our shares. Accordingly, we could become a PFIC in the future if there is a substantial decline in the value of our shares.

If the Bank were a PFIC in any taxable year during which a US shareholder owns the Bank's common shares and the US shareholder does not make a "mark-to-market" election, as discussed below, or a special "purging" election, the Bank generally would continue to be treated as a PFIC with respect to such US shareholder in all succeeding taxable years, regardless of whether the Bank continues to meet the income or asset test discussed above. US shareholders are urged to consult their own tax advisers with respect to the tax consequences to them if the Bank were to become a PFIC for any taxable year in which they own the common shares.

If the Bank is a PFIC for any taxable year during which a US shareholder holds the common shares and the US shareholder does not make a mark-to-market election, as described below, the US shareholder will be subject to special rules with respect to:

- any gain realized on the sale or other disposition of its common shares; and
- any "excess distribution" that the Bank makes to the US shareholder (generally, any distributions to the US shareholder during a single taxable year that are greater than 125% of the average annual distributions received by the US shareholder in respect of its common shares during the three preceding taxable years or, if shorter, the portion of the US shareholder's holding period for the common shares that preceded the current taxable year).

Under these rules:

- the gain or excess distribution will be allocated ratably over the US shareholder's holding period for the common shares;
- the amount allocated to the taxable year in which the US shareholder realized the gain or excess distribution and to years before the Bank became a PFIC will be taxed as ordinary income; and
- the amount allocated to each other taxable year, with certain exceptions, will be subject to additional tax calculated by multiplying the amount allocated to such other taxable year by the highest tax rate in effect for that taxable year for individuals or corporations, as appropriate, and the interest charge generally applicable to underpayments of tax will be imposed in respect of the tax attributable to each such year.

Alternatively, if a US shareholder owns shares in a PFIC that are treated as "marketable stock," the US shareholder may make a mark-to-market election. The common shares will be treated as marketable stock if they are regularly traded on a "qualified exchange." For these purposes, the common shares will be considered regularly traded during any calendar year during which it is traded, other than in negligible quantities, on a qualified exchange, which includes the NYSE, on at least 15 days during each calendar quarter. Any trades that have as their principal purpose meeting this requirement will be disregarded.

A US shareholder that makes a mark-to-market election will not be subject to the PFIC rules described above. Instead, the US shareholder will include as ordinary income each year that the Bank is a PFIC the excess, if any, of the fair market value of its common shares at the end of the taxable year over its adjusted basis in the common shares. These amounts of ordinary income will not be eligible for the favorable tax rates applicable to qualified dividend income or long-term capital gains discussed above. The US shareholder will also be allowed to take an ordinary loss in respect of the excess, if any, of the adjusted basis of its common shares over their fair market value at the end of the taxable year that the Bank is a PFIC (but only to the extent of the net amount of income previously included as a result of the mark-to-market election). The US shareholder's basis in its common shares will be adjusted to reflect any such income or loss amounts recognized. Any gain recognized on the sale or other disposition of the common shares in a taxable year when the Bank is a PFIC will be treated as ordinary income and any loss will be treated as an ordinary loss (but only to the extent of the net amount of income previously included as a result of the mark-to-market election). Distributions paid on the common shares will be treated as discussed below under "Taxation of Dividends".

A mark-to-market election will continue to be in effect for all taxable years in which the Bank is a PFIC and the common shares are treated as marketable stock, and may not be revoked without the consent of the IRS. If the US shareholder makes a mark-to-market election with respect to its common shares, it will be treated as having a new holding period in its common shares beginning on the first day of the first taxable year beginning after the last taxable year for which the mark-to-market election applies. The application of the mark-to-market rules to an investment in a PFIC with a subsidiary that is also a PFIC is not entirely clear; however, there is a significant risk that some or all of such an investment will be subject to the special rules described above that apply if a mark-to-market election is not made, even if a mark-to-market election is made with respect to the parent PFIC. In the event that the Bank is a PFIC, US shareholders are urged to consult their tax advisers regarding the availability of the mark-to-market election, and whether the election would be advisable in the holder's particular circumstances.

The PFIC rules outlined above would also not apply to a US shareholder if such holder were to elect to treat us as a qualified electing fund ("QEF"). An election to treat us as a QEF will not be available, however, if the Bank does not provide the information necessary to make such an election. The Bank will not provide US shareholders with the information necessary to make a QEF election, and thus, the QEF election will not be available with respect to the common shares.

Notwithstanding any election made with respect to the common shares, dividends received with respect to the common shares will not constitute "qualified dividend income" if we are a PFIC (or are treated as a PFIC with respect to the relevant US shareholder) in either the taxable year of the distribution or the preceding taxable year. Dividends that do not constitute qualified dividend income are not eligible for taxation at the reduced tax rate available to certain non-corporate holders described below in "Taxation of Dividends". Instead, such dividends would be subject to tax at ordinary income rates.

If a US shareholder owns common shares during any taxable year in which we are a PFIC, the US shareholder generally must file annual tax returns (including on Form 8621), for each taxable year that the US shareholder owns the common shares, unless its ownership satisfies a *de minimis* test.

Taxation of Dividends

Subject to the preceding discussion under the heading "— Passive Foreign Investment Company Considerations" above, a US shareholder must include in its gross income as dividends the gross amount of any distribution paid by the Bank to the extent that it is paid out of the Bank's current or accumulated earnings and profits as determined for US federal income tax purposes. Distributions in excess of current and accumulated earnings and profits, as determined for US federal income tax purposes, will be treated as a non-taxable return of capital to the extent of the US shareholder's basis in the common shares of the Bank, causing a reduction in the US shareholder's adjusted basis in such common shares, and thereafter as a capital gain. Because the Bank does not maintain calculations of its earnings and profits under US federal income tax principles, it is expected that distributions generally will be reported to US shareholders as dividends.

Dividends paid to certain non-corporate US shareholders by a "qualified foreign corporation" that constitute qualified dividend income are taxable to the shareholder at the preferential rates applicable to long-term capital gains provided that the shareholder holds the shares for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date and meets other holding period requirements. For this purpose, common shares of the Bank will be treated as stock of a "qualified foreign corporation" if the Bank was not a PFIC for the taxable year in which the dividend was paid, or the preceding taxable year and if such common shares are listed on an established securities market in the United States, such as the NYSE. The common shares of the Bank are listed on the NYSE. Accordingly, subject to the preceding discussion under the heading "— Passive Foreign Investment Company Considerations", dividends the Bank pays with respect to the common shares will constitute qualified dividend income, assuming the holding period requirements are met.

The dividend will not be eligible for the dividends-received deduction allowed to US corporations in respect of dividends received from other US corporations.

Dividends generally will be treated as foreign source income for US foreign tax credit purposes. Under Section 904(h) of the IRC, however, dividends paid by a foreign corporation that is treated as 50% or more owned, by vote or value, by US persons for US federal income tax purposes may be treated as US source income (rather than foreign source income) for foreign tax credit purposes, to the extent the foreign corporation earns US source income. In general, therefore, the application of Section 904(h) of the IRC may adversely affect a US shareholder's ability to use foreign tax credits. As a result of the listing of the common shares of the Bank on the NYSE, the Bank may be treated as 50% or more owned by US persons for purposes of Section 904(h) of the IRC. US shareholders are strongly urged to consult their own tax advisers regarding the possible impact if Section 904(h) of the IRC should apply.

Taxation of Capital Gains

Subject to the preceding discussion under the heading "— Passive Foreign Investment Company Considerations", a US shareholder that sells or otherwise disposes of common shares of the Bank will recognize a capital gain or loss for US federal income tax purposes equal to the difference between the amount that the US shareholder realizes and the US shareholder's tax basis in those common shares. Capital gain of a non-corporate US shareholder is generally taxed at preferential rates where the property is held for more than one year. The gain or loss will be US source income or loss for foreign tax credit limitation purposes. The deduction of capital losses is subject to limitations.

F. Dividends and Paying Agents

Not applicable.

G. Statements by Experts

Not applicable.

H. Documents on Display

As a foreign private issuer, we are also exempt from the requirements of Regulation FD (Fair Disclosure) which, generally, are meant to ensure that select groups of investors are not privy to specific information about an issuer before other investors. We are, however, still subject to the anti-fraud and anti-manipulation rules of the SEC, such as Rule 10b-5 under the Securities Act. Since many of the disclosure obligations required of us as a foreign private issuer are different than those required by other United States domestic reporting companies, the Bank's shareholders, potential shareholders and the investing public in general should not expect to receive information about us in the same amount, and at the same time, as information is received from, or provided by, other United States domestic reporting companies. We are liable for violations of the rules and regulations of the SEC which do apply to us as a foreign private issuer, see "Implications of Being a Foreign Private Issuer".

The SEC maintains an internet site at <https://www.sec.gov> that contains reports and other information regarding issuers that file electronically with the SEC. These SEC filings are also available to the public from commercial document retrieval services.

I. Subsidiary Information

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Refer to Risk Management discussion in Item 5.A. "Operating Results".

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not applicable.

PART II

ITEM 13. DEFAULTS, DIVIDENDS ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, Butterfield carried out an evaluation, under the supervision and with the participation of Butterfield's management, including our Chairman and Chief Executive Officer and Group Chief Financial Officer, of the effectiveness of the design and operation of Butterfield's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act), to ensure that information required to be disclosed by Butterfield in reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to Butterfield's management, including its Chairman and Chief Executive Officer and Group Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. Based upon that evaluation, Butterfield's Chairman and Chief Executive Officer and Group Chief Financial Officer concluded that the design and operation of these disclosure controls and procedures were effective, in all material respects, as of the end of the period covered by this report.

Reports Regarding Internal Controls

Management's Annual Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are included on pages F-2 and F-3, respectively.

ITEM 16. [RESERVED]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Refer to Item 6.A. "Directors and Senior Management".

ITEM 16B. CODE OF ETHICS

Code of Conduct and Ethics and Whistleblower Policy

The Board has adopted a Group Code of Conduct and Ethics (the "Code") based upon recommended principles of corporate governance. The Code sets out the guidelines and procedures for establishing a high standard of ethical conduct, accountability and transparency to which all of our employees are expected to comply and which are consistent with our high standards of ethics and core values. The Board, in conjunction with the Corporate Governance Committee, is responsible for administering the Code. The Code is available on our website at www.butterfieldgroup.com.

The Board has adopted a Whistleblower Policy which augments the Code. The policy is designed to serve as a tool to assist employees who believe they have or may have discovered illegal, unethical, or questionable practices to communicate their concerns confidentially and without fear of reprisals. It is also designed to protect the integrity of the Bank's financial reporting and its business dealings.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth for the fiscal years indicated the fees charged by our principal accountant and its associated entities for various services provided during those periods:

In millions of \$	Fiscal Year Ended		Description of Service
	December 31, 2021	December 31, 2020	
Audit services	5.3	6.3	(1)
Audit-related services	0.2	0.1	(1)
Other services	0.1	0.2	(2)
Total	5.6	6.6	

(1) Professional services rendered for the audit and review of the consolidated financial statements of The Bank of N.T. Butterfield & Son Limited and statutory audits of the financial statements of The Bank of N.T. Butterfield & Son Limited and its subsidiaries, compliance with local regulations, review of documents filed with the BMA and the SEC (including services provided by independent experts to the audit firms in connection with the audit).

(2) The non-audit services required during the years disclosed above were subject to the Audit Committee's pre-approval process pursuant to paragraph (c) (7)(i)(C) of Rule 2-01 of Regulation S-X.

Pre-approval Procedures

To ensure PwC's independence, all services provided by PwC have to be pre-approved by the Audit Committee. A pre-approval may be granted either for a specific mandate or in the form of a blanket pre-approval authorizing a limited and well-defined type and amount of services. The Audit Committee reviews and approves a list of blanket pre-approvals annually.

The Audit Committee has delegated pre-approval authority to its Chairman up to a maximum of \$500,000 for any engagement, and the Group Chief Financial Officer and Group Head of Finance submit all proposals for services by PwC to the Chairman of the Audit Committee, unless there is a blanket pre-approval in place. The Audit Committee is informed of the approvals granted by its Chairman on a quarterly basis.

ITEM 16D. EXEMPTION FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASES

The below details purchases made by or on behalf of the issuer or any "affiliated purchaser," as defined in §240.10b-18(a)(3), of shares or other units of any class of the issuer's equity securities that are registered by the issuer pursuant to section 12 of the Exchange Act (15 U.S.C. 78l) during the year ended December 31, 2021.

From time to time, the Bank, may seek to repurchase and retire equity securities of the Bank, through cash purchase, privately negotiated transactions, or otherwise. Such transactions, if any, depend on prevailing market conditions, our liquidity and capital requirements, contractual restrictions, and other factors. The amounts involved may be material.

On February 10, 2021, the Board approved a new common share repurchase program, authorizing the purchase of up to 2.0 million common shares through to February 2022.

On February 14, 2022, the Board approved a new common share repurchase program, authorizing the purchase of up to 2.0 million common shares through to February 28, 2023. In the year ended December 31, 2021, the Bank retired 534,828 shares which were previously held as treasury shares as a result of these buy-backs.

The following table summarizes our repurchases of our common shares during the year ended December 31, 2021.

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of a publicly announced program	Maximum number of shares that may yet be purchased under the program
February 10, 2021	—	—	—	2,000,000
February 16 to 28, 2021	36,000	34.50	36,000	1,964,000
March 1 to 31, 2021	54,828	38.41	90,828	1,909,172
April 1 to 30, 2021	40,000	38.14	130,828	1,869,172
May 1 to 31, 2021	40,000	38.74	170,828	1,829,172
June 1 to 30, 2021	38,000	36.92	208,828	1,791,172
July 1 to 31, 2021	42,000	34.54	250,828	1,749,172
August 1 to 31, 2021	44,000	33.60	294,828	1,705,172
September 1 to 30, 2021	36,000	32.63	330,828	1,669,172
October 1 to 31, 2021	42,000	37.78	372,828	1,627,172
November 1 to 30, 2021	124,000	38.76	496,828	1,503,172
December 1 to 31, 2021	38,000	37.22	534,828	1,465,172

ITEM 16F. CHANGES IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

The listing rules of the NYSE include certain accommodations with respect to corporate governance requirements that allow foreign private issuers, such as us, to follow "home country" corporate governance practices in lieu of otherwise applicable NYSE corporate governance standards for listed US companies. However, foreign private issuers are required to have an audit committee that satisfies certain of the NYSE standards, including the requirements of the SEC's Rule 10A-3. Our Audit Committee satisfies such requirements. The NYSE also requires a foreign private issuer to provide certain written affirmations and notices to the NYSE.

SEC rules require foreign private issuers to disclose the significant ways in which their corporate governance practices differ from NYSE listing standards. A description of how our corporate governance practices compare to NYSE listing standards is set forth below:

- *A Majority of Independent Directors.* The NYSE requires the majority of the board of directors of a listed US company to be independent directors pursuant to applicable NYSE standards. As required by our Corporate Governance Guidelines, a majority of our Board is independent according to the NYSE's standards.
- *A Nominating/Corporate Governance Committee.* The NYSE requires a listed US company to have a nominating/corporate governance committee consisting of independent directors as well as a written charter specifying the purpose and responsibilities of the committee. We currently have a Corporate Governance Committee, and the composition of this committee and its written charter are determined pursuant to the NYSE standards. A copy of the charter is available on our website at www.butterfieldgroup.com.

- *A Compensation Committee.* The NYSE requires a listed US company to have a compensation committee consisting of independent directors that also meet additional independence requirements as set forth in the NYSE rules as well as a committee charter specifying the purpose and responsibilities of the committee. We currently have a Compensation & Human Resources Committee, and the composition of this committee and its written charter are determined pursuant to the NYSE standards. A copy of the charter is available on our website at www.butterfieldgroup.com.
- *Executive Sessions.* The NYSE requires that non-management directors meet regularly in executive sessions without management. The NYSE also requires that all independent directors meet in an executive session at least once a year. Our non-management directors meet regularly in executive sessions without management present. In 2021, the Board held five executive sessions with only our independent directors present.
- *Company Policies.* The NYSE requires a listed US company to adopt and disclose a code of business conduct and corporate governance guidelines that address certain governance standards. As noted above, the Board has adopted the Code. In addition, the Board has adopted Corporate Governance Guidelines that address Board composition and qualifications, director responsibilities, director access to management, director orientation and continuing education, succession planning and management development and Board assessments. The Code and the Corporate Governance Guidelines are available on our website at www.butterfieldgroup.com.
- *Shareholder Approval of Equity Compensation Plans.* The NYSE requires a listed US company to receive shareholder approval of any equity compensation plans. The Bank does not submit its equity compensation plans to shareholders for approval.

We believe that our established corporate governance practice satisfies the NYSE listing standards applicable to foreign private issuers. If at any time we cease to be a "foreign private issuer" under the rules of the NYSE and no other exemptions apply, or if we otherwise so elect, the Board will take any additional actions necessary to comply with NYSE corporate governance rules applicable to listed US companies, subject to a permitted "phase-in" period.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

-

INDEX TO THE FINANCIAL STATEMENTS

	Page
Audited Consolidated Financial Statements	
Management's Annual Report on Internal Control over Financial Reporting	F-2
Report of Independent Registered Public Accounting Firm (PCAOB ID 1403)	F-3
Consolidated Balance Sheets as at December 31, 2021 and December 31, 2020	F-5
Consolidated Statements of Operations for the Years Ended December 31, 2021, 2020 and 2019	F-6
Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2021, 2020 and 2019	F-7
Consolidated Statements of Changes in Shareholders' Equity for the Years Ended December 31, 2021, 2020 and 2019	F-8
Consolidated Statements of Cash Flows for the Years Ended December 31, 2021, 2020 and 2019	F-9
Notes to the Consolidated Financial Statements for the years ended December 31, 2021, 2020 and 2019	F-11

Management's Annual Report on Internal Control over Financial Reporting

Management of The Bank of N.T. Butterfield & Son Limited ("Butterfield" or the "Bank") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Bank's principal executive and principal financial officers, or persons performing similar functions, and effected by Butterfield's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

Butterfield's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Bank's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Bank are being made only in accordance with authorizations of Butterfield's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of Butterfield's internal control over financial reporting as at December 31, 2021. In making the assessment, management used the "Internal Control - Integrated Framework (2013)" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission.

Based upon the assessment performed, management concluded that as at December 31, 2021, Butterfield's internal control over financial reporting was effective. There have been no changes in Butterfield's internal control over financial reporting that occurred during the period covered by this report which have materially affected or are reasonably likely to materially affect Butterfield's internal control over financial reporting.

The Bank's internal control over financial reporting as at December 31, 2021, has been audited by PricewaterhouseCoopers Ltd., an independent registered public accounting firm, as stated in their report on page F-3 of this annual report.

/s/ Michael Collins

Michael Collins

Chairman and Chief Executive Officer

/s/ Michael Schrum

Michael Schrum

Group Chief Financial Officer

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
The Bank of N.T. Butterfield & Son Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of The Bank of N.T. Butterfield & Son Limited and its subsidiaries (the “Company”) as of December 31, 2021 and 2020, and the related consolidated statements of operations, comprehensive income, changes in shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2021, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for credit losses on certain financial instruments in 2020.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance

with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

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

Allowance for Credit Losses

As described in Notes 2 and 6 to the consolidated financial statements, management assesses the adequacy of the allowance for credit losses based on evaluations of the loan portfolio utilizing quantitative and qualitative criteria. At December 31, 2021, the allowance for credit losses was \$28.1 million on total loans retained of \$5.3 billion. As described by management, the allowance is management's estimate of credit losses expected in its lending arrangements based upon a current expected credit loss ("CECL") model. The quantitative criteria used in the model primarily includes the Company's internal risk rating framework and historical credit loss experience, relevant available information relating to past events and current conditions, and specific allowances for impaired loans. Management subjectively assesses the adequacy of the total allowance for credit losses and the need for adjustments to the quantitative model estimate, with consideration given to qualitative assumptions such as changes in underwriting practices, vintage, portfolio mix, delinquency level and term as well as changes in environmental conditions such as changes in macroeconomic factors and collateral values not adequately included in the quantitative model estimate.

The principal considerations for our determination that performing procedures relating to the qualitative assessment of the allowance for credit losses is a critical audit matter are (i) the significant judgment by management in determining the assumptions used in the qualitative assessment, which in turn led to a high degree of auditor judgment in performing procedures relating to the significant assumptions used in management's qualitative assessment; and (ii) significant audit effort in evaluating audit evidence relating to management's assumptions used in the estimation process.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's estimation process for the allowance for credit losses, which included controls over the assumptions used within management's qualitative assessment. These procedures also included, among others, testing management's process for determining the allowance for credit losses by evaluating the appropriateness of the methodology and models, testing the data used in the estimate and evaluating the reasonableness of the significant assumptions used in management's qualitative assessment. Evaluating the assumptions used in the model involved evaluating (i) the reasonableness of the impact of external macroeconomic factors and events that have occurred but are not yet otherwise reflected in the quantitative model estimate for the allowance for credit losses; and (ii) the consistency with external market and industry data and consistency with evidence obtained in other areas of the audit.

/s/PricewaterhouseCoopers Ltd.
Hamilton, Bermuda
February 23, 2022

We have served as the Company's auditor since 1961.

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

	As at	
	December 31, 2021	December 31, 2020
Assets		
Cash and demand deposits with banks - Non-interest bearing	115,651	133,363
Demand deposits with banks - Interest bearing	437,644	433,511
Cash equivalents - Interest bearing	1,626,538	2,722,718
Cash due from banks	2,179,833	3,289,592
Securities purchased under agreements to resell	96,107	197,039
Short-term investments	1,198,918	823,039
Investment in securities		
Equity securities at fair value	222	7,317
Available-for-sale at fair value (amortized cost: \$3,495,564 (2020: \$2,588,335))	3,473,730	2,661,116
Held-to-maturity (fair value: \$2,786,112 (2020: \$2,304,756))	2,763,344	2,194,371
Total investment in securities	6,237,296	4,862,804
Loans		
Loans	5,268,743	5,194,908
Allowance for credit losses	(28,073)	(34,098)
Loans, net of allowance for credit losses	5,240,670	5,160,810
Premises, equipment and computer software, net of accumulated depreciation	138,686	150,752
Goodwill	25,356	25,627
Other intangible assets, net	60,750	67,192
Equity method investments	12,614	12,933
Other real estate owned, net	691	4,052
Accrued interest and other assets	144,279	144,794
Total assets	15,335,200	14,738,634
Liabilities		
Deposits		
Non-interest bearing	2,820,609	3,012,360
Interest bearing	11,049,614	10,237,724
Total deposits	13,870,223	13,250,084
Employee benefit plans	126,230	131,279
Accrued interest and other liabilities	189,378	203,861
Total other liabilities	315,608	335,140
Long-term debt	171,876	171,462
Total liabilities	14,357,707	13,756,686
Commitments, contingencies and guarantees (Note 12)		
Shareholders' equity		
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: 49,911,351 (2020: 50,010,948)	499	500
Additional paid-in capital	1,017,640	1,013,326
Retained earnings (Accumulated deficit)	104,329	33,918
Less: treasury common shares, at cost: 619,212 (2020: 619,212)	(20,058)	(16,116)
Accumulated other comprehensive income (loss)	(124,917)	(49,680)
Total shareholders' equity	977,493	981,948
Total liabilities and shareholders' equity	15,335,200	14,738,634

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

/s/ Michael Collins

Michael Collins

Chairman of the Board

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

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Non-interest income			
Asset management	29,853	29,225	28,721
Banking	51,920	47,346	49,347
Foreign exchange revenue	43,434	37,180	37,001
Trust	52,873	50,653	51,220
Custody and other administration services	15,232	13,845	12,868
Other non-interest income	4,795	5,610	4,818
Total non-interest income	198,107	183,859	183,975
Interest income			
Interest and fees on loans	221,544	230,656	234,032
<i>Investments (none of the investment securities are intrinsically tax-exempt)</i>			
Available-for-sale	48,422	50,621	60,686
Held-to-maturity	53,488	58,607	68,735
Deposits with banks and other	1,444	12,125	41,625
Total interest income	324,898	352,009	405,078
Interest expense			
Deposits	15,490	25,116	51,486
Long-term debt	9,601	9,294	7,876
Securities sold under agreement to repurchase	—	—	14
Total interest expense	25,091	34,410	59,376
Net interest income before provision for credit losses	299,807	317,599	345,702
Provision for credit recoveries (losses)	3,128	(8,491)	184
Net interest income after provision for credit losses	302,935	309,108	345,886
Net gains (losses) on equity securities	85	658	925
Net realized gains (losses) on available-for-sale investments	(239)	1,220	1,624
Net gains (losses) on other real estate owned	(53)	(104)	(5)
Net other gains (losses)	(1,154)	(552)	223
Total other gains (losses)	(1,361)	1,222	2,767
Total net revenue	499,681	494,189	532,628
Non-interest expense			
Salaries and other employee benefits	161,317	173,662	183,659
Technology and communications	63,843	65,156	62,633
Professional and outside services	21,400	21,263	27,952
Property	30,862	29,392	24,181
Indirect taxes	22,091	21,323	21,109
Non-service employee benefits expense	3,888	2,640	5,649
Marketing	4,561	4,443	8,050
Amortization of intangible assets	6,011	5,819	5,451
Other expenses	19,917	20,896	18,240
Total non-interest expense	333,890	344,594	356,924
Net income before income taxes	165,791	149,595	175,704
Income tax benefit (expense)	(3,123)	(2,378)	1,371
Net income	162,668	147,217	177,075
Earnings per common share			
Basic earnings per share	3.28	2.91	3.33
Diluted earnings per share	3.26	2.90	3.30

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
(In thousands of US dollars)

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Net income	162,668	147,217	177,075
Other comprehensive income (loss), net of taxes			
Unrealized net gains (losses) on translation of net investment in foreign operations	152	(247)	(952)
Unrealized net gains (losses) on held-to-maturity investments transferred from available-for-sale investments	151	665	71
Unrealized net gains (losses) on available-for-sale investments	(94,761)	60,971	55,438
Employee benefit plans adjustments	19,221	(23,972)	6,873
Other comprehensive income (loss), net of taxes	(75,237)	37,417	61,430
Total comprehensive income (loss)	87,431	184,634	238,505

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

	Year ended					
	December 31, 2021		December 31, 2020		December 31, 2019	
	Number of shares	In thousands of US dollars	Number of shares	In thousands of US dollars	Number of shares	In thousands of US dollars
Common share capital issued and outstanding						
Balance at beginning of year	50,010,948	500	53,005,177	530	55,359,218	554
Retirement of shares	(534,828)	(5)	(3,452,000)	(35)	(2,928,788)	(29)
Issuance of common shares	435,231	4	457,771	5	574,747	5
Balance at end of year	49,911,351	499	50,010,948	500	53,005,177	530
Additional paid-in capital						
Balance at beginning of year		1,013,326		1,081,569		1,171,435
Share-based compensation		14,539		14,608		17,459
Share-based settlements		612		637		257
Retirement of shares		(10,834)		(85,222)		(107,926)
Issuance of common shares, net of underwriting discounts and commissions		(3)		1,734		344
Balance at end of year		1,017,640		1,013,326		1,081,569
Retained earnings (Accumulated deficit)						
Balance at beginning of year		33,918		(9,237)		(92,676)
Cumulative effect from change in accounting policy (Note 2)		—		(7,841)		—
Net Income for the year		162,668		147,217		177,075
Common share cash dividends declared and paid, 1.76 per share (2020: \$1.76 per share)		(87,285)		(88,932)		(93,636)
Retirement of shares		(4,972)		(7,289)		—
Balance at end of year		104,329		33,918		(9,237)
Treasury common shares						
Balance at beginning of year	619,212	(16,116)	619,212	(22,022)	1,254,212	(48,443)
Purchase of treasury common shares	534,828	(19,754)	3,452,000	(86,640)	2,293,788	(81,534)
Retirement of shares	(534,828)	15,812	(3,452,000)	92,546	(2,928,788)	107,955
Balance at end of year	619,212	(20,058)	619,212	(16,116)	619,212	(22,022)
Accumulated other comprehensive income (loss)						
Balance at beginning of year		(49,680)		(87,097)		(148,527)
Other comprehensive income (loss), net of taxes		(75,237)		37,417		61,430
Balance at end of year		(124,917)		(49,680)		(87,097)
Total shareholders' equity		977,493		981,948		963,743

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
(In thousands of US dollars)

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Cash flows from operating activities			
Net income	162,668	147,217	177,075
Adjustments to reconcile net income to operating cash flows			
Depreciation and amortization	69,456	62,435	48,390
Provision for credit (recoveries) losses	(3,128)	8,491	(184)
Share-based payments and settlements	15,151	15,245	17,716
Net change in equity securities at fair value	7,096	102	(925)
Net realized (gains) losses on available-for-sale investments	239	(1,220)	(1,624)
Net (gains) losses on other real estate owned	53	104	5
(Increase) decrease in carrying value of equity method investments	(123)	(1,298)	(340)
Dividends received from equity method investments	442	2,845	520
Changes in operating assets and liabilities			
(Increase) decrease in accrued interest receivable and other assets	13,295	(8,143)	(18,583)
Increase (decrease) in employee benefit plans, accrued interest payable and other liabilities	(13,800)	(37,628)	26,672
Cash provided by (used in) operating activities	251,349	188,150	248,722
Cash flows from investing activities			
(Increase) decrease in securities purchased under agreements to resell	100,932	(54,756)	(114,942)
Short-term investments other than restricted cash: proceeds from maturities and sales	2,365,631	2,214,870	568,944
Short-term investments other than restricted cash: purchases	(2,748,942)	(1,815,887)	(1,657,456)
Available-for-sale investments: proceeds from sale	189,417	352,965	225,305
Available-for-sale investments: proceeds from maturities and pay downs	650,347	565,028	348,665
Available-for-sale investments: purchases	(1,771,776)	(1,313,884)	(563,007)
Held-to-maturity investments: proceeds from maturities and pay downs	652,359	538,345	274,490
Held-to-maturity investments: purchases	(1,233,329)	(533,379)	(420,018)
Net (increase) decrease in loans	(99,007)	25,555	(362,624)
Additions to premises, equipment and computer software	(15,724)	(20,566)	(22,777)
Proceeds from sale of other real estate owned	4,430	—	1,102
Gross cash received from (disbursed for) business acquisition	—	—	2,815,752
Cash provided by (used in) investing activities	(1,905,662)	(41,709)	1,093,434

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

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Cash flows from financing activities			
Net increase (decrease) in deposits	642,815	692,635	(744,610)
Issuance of subordinated capital, net of underwriting fees	—	97,647	—
Repayment of long-term debt	—	(70,000)	—
Common shares repurchased	(19,754)	(86,640)	(81,534)
Proceeds from stock option exercises	—	1,739	349
Cash dividends paid on common shares	(87,285)	(88,932)	(93,636)
Cash provided by (used in) financing activities	535,776	546,449	(919,431)
Net effect of exchange rates on cash, cash equivalents and restricted cash	7,536	42,707	86,056
Net increase (decrease) in cash, cash equivalents and restricted cash	(1,111,001)	735,597	508,781
Cash, cash equivalents and restricted cash: beginning of year	3,314,498	2,578,901	2,070,120
Cash, cash equivalents and restricted cash: end of year	2,203,497	3,314,498	2,578,901
Components of cash, cash equivalents and restricted cash at end of year			
Cash due from banks	2,179,833	3,289,592	2,550,070
Restricted cash included in short-term investments on the consolidated balance sheets	23,664	24,906	28,831
Total cash, cash equivalents and restricted cash at end of year	2,203,497	3,314,498	2,578,901
Supplemental disclosure of cash flow information			
Cash interest paid	24,464	39,125	56,265
Cash income taxes paid	463	5,052	2,628
Supplemental disclosure of non-cash items			
Transfer to (out of) other real estate owned	704	314	(397)
Initial recognition of right-of-use assets and operating lease liabilities	1,575	323	22,370
Reduction in net loans due to initial adoption of a current expected credit loss model	—	7,841	—
Extinguishment of loan in exchange for available-for-sale investments	—	—	3,347

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
(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. Butterfield also has operations in the jurisdictions of The Bahamas, Canada, Mauritius, Singapore and Switzerland, which are included in our Other segment.

The Bank's common shares trade on the New York Stock Exchange under the symbol "NTB" and on the Bermuda Stock Exchange ("BSX") under the symbol "NTB.BH".

Note 2: Significant accounting policies

The Bank's reporting currency is United States ("US") dollars. Assets, liabilities, revenues and expenses denominated in Bermuda dollars are translated to US dollars at par.

A. Basis of Presentation and Use of Estimates and Assumptions

The accounting and financial reporting policies of the Bank and its subsidiaries conform to generally accepted accounting principles in the United States of America ("GAAP"). The preparation of consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the year, and actual results could differ from those estimates.

Critical accounting estimates are those that require management to make subjective or complex judgments about the effect of matters that are inherently uncertain and may change in subsequent periods. Changes that may be required in the underlying assumptions or estimates in these areas could have a material impact on the future financial condition and results of operations. Management believes that the most critical accounting estimates upon which the financial condition depends, and which involve the most complex or subjective decisions or assessments, are as follows:

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

B. Basis of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries (collectively the "Bank"). Intercompany accounts and transactions have been eliminated.

The Bank consolidates entities where it holds, directly or indirectly, more than 50% of the voting rights or where it otherwise exercises control. Entities where the Bank holds 20% to 50% of the voting rights and/or has the ability to exercise significant influence are accounted for under the equity method, and the pro rata share of their income (loss) is included in other non-interest income.

C. Foreign Currency Translation

Assets, liabilities, revenues and expenses denominated in Bermuda dollars are translated to US dollars at par. Assets and liabilities of the parent company arising from other foreign currency transactions are translated into US dollars at the rates of exchange prevailing at the balance sheet date. The resulting gains or losses are included in foreign exchange revenue in the consolidated statements of operations.

The assets and liabilities of foreign currency-based subsidiaries are translated at the rate of exchange prevailing on the balance sheet date, while associated revenues and expenses are translated to US dollars at the average rates of exchange prevailing throughout the year. Unrealized translation gains or losses on investments in foreign currency-based subsidiaries are recorded as a separate component of Shareholders' equity within accumulated other comprehensive income ("AOCI"). Gains and losses on foreign currency-based subsidiaries are recorded in the consolidated statements of operations when the Bank ceases to have a controlling financial interest in a foreign currency-based subsidiary.

D. Assets Held in Trust or Custody

Securities and properties (other than cash and deposits held with the Bank and its subsidiaries) held in trust, custody, agency or fiduciary capacity for customers are not included in the consolidated balance sheets because the Bank is not the beneficiary of these assets.

E. Cash Due from Banks

Cash due from banks includes cash on hand, cash items in the process of collection, amounts due from correspondent banks and highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in fair value. Such investments are those with a maturity of three months or less from the date of acquisition and include unrestricted term deposits, certificates of deposit and treasury bills.

F. Securities Purchased Under Agreement to Resell

Securities purchased under agreement to resell are treated as collateralized lending transactions. The obligation to resell is recorded at the value of the cash paid on purchase adjusted for the amortization of the difference between the purchase price and the agreed resell price. The amortization of this amount is recorded as interest income.

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

G. Short-Term Investments

Short-term investments have maturities of one year or less from the date of acquisition, are only subject to an insignificant risk of change in fair value and comprise (1) restricted term and demand deposits, and (2) unrestricted term deposits, certificate of deposits and treasury bills with a maturity greater than three months from the date of acquisition.

H. Investments

Equity method investments which include investments whereby the Bank has the ability to influence, but not control, the financial or operating policies of such entities, are accounted for using the equity method of accounting.

Equity securities with readily determinable fair values are carried at fair value in the consolidated balance sheets, with unrealized gains and losses included in the consolidated statements of operations as net gains (losses) on equity securities.

Contained within other assets are investments in private equity for which the Bank does not have sufficient rights or ownership interests to follow the equity method of accounting. Unquoted equity investments which are held directly by the Bank and which do not have readily determinable fair values are recorded at cost, less impairment, plus or minus observable price changes from transactions of identical or similar securities.

Debt securities are classified as available-for-sale ("AFS") or held-to-maturity ("HTM").

Investments are classified primarily as AFS when used to manage the Bank's exposure to interest rate and liquidity movements, as well as to make strategic longer-term investments. AFS investments are carried at fair value in the consolidated balance sheets with unrealized gains and losses reported in AOCL, net of the allowance for credit losses. Investments that the Bank has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost in the consolidated balance sheets, net of the allowance for credit losses. Unrecognized gains and losses on HTM securities are disclosed in the notes to the consolidated financial statements.

The specific identification method is used to determine realized gains and losses on investments, which are included in net gains (losses) on equity securities and net realized gains (losses) on AFS investments respectively, in the consolidated statements of operations.

Dividend and interest income, including amortization of premiums and discounts, on securities for which cash flows are not considered uncertain are included in interest income in the consolidated statements of operations.

Impairment and credit losses (From January 1, 2020)

For debt securities, where management does not expect to recover the entire amortized cost basis of the security and intends to sell such securities or it is more likely than not that the Bank will be required to sell the securities before recovering the amortized cost, the Bank recognizes an impairment loss equal to the full difference between the amortized cost basis and the fair value of those securities through the statement of operations. Following the recognition of impairment, the security's new amortized cost basis is the previous basis less impairment.

When management does not intend to sell or it is more likely than not that the Bank will hold such securities until recovering the amortized cost, management determines whether any credit losses exist. See "Note 2.J: Allowance for Credit Losses".

Recognition of other-than-temporary impairments (Prior to January 1, 2020)

For debt securities, management considers a decline in fair value to be other-than-temporary when it does not expect to recover the entire amortized cost basis of the security. Investments in debt securities in unrealized loss positions are analyzed as part of management's ongoing assessment of other-than-temporary impairment ("OTTI"). When management intends to sell such securities or it is more likely than not that the Bank will be required to sell the securities before recovering the amortized cost, it recognizes an impairment loss equal to the full difference between the amortized cost basis and the fair value of those securities. When management does not intend to sell or it is more likely than not that the Bank will hold such securities until recovering the amortized cost, management determines whether any credit losses exist to identify any OTTI.

Under certain circumstances, management will perform a qualitative determination and consider a variety of factors, including the length of time and extent to which the fair value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and changes in fair value of the security after the balance sheet date. Alternatively, management estimates cash flows over the remaining lives of the underlying security to assess whether credit losses exist.

In situations where there is a credit loss, only the amount of impairment relating to credit losses on AFS and HTM investments is recognized in net income. For AFS investments, the decrease in fair value relating to factors other than credit losses is recognized in AOCL. Cash flow estimates take into account expectations of relevant market and economic data as of the end of the reporting period, including, for example, underlying loan-level data, and structural features of securitization, such as subordination, excess spread, over collateralization or other forms of credit enhancement. The degree of judgment involved in determining the recoverable value of an investment security is dependent upon the availability of observable market prices or observable market parameters. When observable market prices and parameters do not exist, judgment is necessary to estimate recoverable value which gives rise to added uncertainty in the assessment. The assessment takes into consideration factors such as interest rate changes, movements in credit spreads, default rate assumptions, prepayment assumptions, type and quality of collateral, and market sentiment.

Management's fair valuations may include inputs and assumptions that are less observable or require greater estimation, thereby resulting in values which may be greater or lower than the actual value at which the investments may be ultimately sold or the ultimate cash flows that may be recovered. If the assumptions on which management based its fair valuations change, the Bank may experience additional OTTI or realized losses or gains, and the period-to-period changes in value could vary significantly.

I. Loans

Loans are reported as the principal amount outstanding, net of allowance for credit losses, unearned income, fair value adjustments arising from hedge accounting and net deferred loan fees. Interest income is recognized over the term of the loan using the effective interest method, or on a basis approximating a level rate of return over the term of the loan, except for loans classified as non-accrual. Prepayments are treated as a reduction of principal outstanding which is recognized upon receipt of payment. Prepayment penalties, if applicable under the terms of the specific loan agreement, are recognized also upon receipt of payment.

Acquired loans

Acquired loans that, as of the date of acquisition, have experienced a more-than-insignificant deterioration in credit quality since origination, are accounted for as purchased credit-deteriorated ("PCD") loans. PCD loans are recorded at their purchase price with an adjustment to the amortized cost basis for the initial expected credit losses at the time of acquisition i.e. via a balance sheet gross-up. Changes in estimates of expected credit losses after acquisition are recognized as a movement in provision for credit recoveries (losses) in the statement of operations. Generally, acquired loans that meet the Bank's definition for non-accrual status are considered to be PCD loans.

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

The Bank's purchased credit-impaired ("PCI") loans outstanding as at January 1, 2020 are now classified as PCD loans and both the amortized cost and an allowance for expected credit losses are disclosed and included with other non-PCD loans' figures. The Bank will continue to recognize the amortization of the noncredit discount, if any, as interest income based on the yield of such assets as at the date of purchase.

Participated or Assigned Loans

The Bank may act as lead lender on large loans from time to time and may for strategic or commercial reasons, assign portions of such loans to other market participants. Such assignments are without full right of recourse to the Bank as the lead lender and participants/assignees accept all risks and obligations of the ultimate borrower associated with their proportional participation and assignment in such loans. The Bank records the unassigned portion of the principal outstanding in such loans on the consolidated balance sheets and records only its proportional share of interest income on the unassigned portion of the loan in the consolidated statement of operations.

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-accruing loans and all loans modified in a troubled debt restructuring ("TDR") even if full collectability is expected following the restructuring.

If the Bank determines that the expected realizable value of the impaired loan is less than the recorded investment in the loan (net of previous charge-offs, deferred loan fees or costs and unamortized premium or discount), impairment is recognized through an allowance estimate. If the Bank determines that part of the allowance is uncollectible, that amount is charged off.

Non-accrual

Commercial, commercial real estate and consumer loans (excluding credit card consumer loans) are placed on non-accrual status if:

- in the opinion of management, full payment of principal or interest is in doubt; or
- principal or interest is 90 days past due.

Residential mortgages are placed on non-accrual status immediately if:

- in the opinion of management, full payment of principal or interest is in doubt; or
- when principal or interest is 90 days past due, unless the loan is well secured and any ongoing collection efforts are reasonably expected to result in repayment of all amounts due under the contractual terms of the loan.

Interest income on non-accrual loans is recognized only to the extent it is received in cash. Cash received on non-accrual loans where there is no doubt regarding full repayment (no impairment recognized in the form of a specific allowance) is first applied as repayment of the past due principal amount of the loan and secondly to past due interest and fees.

Where there is doubt regarding the ultimate full repayment of the non-accrual loan (impairment recognized in the form of a specific allowance), all cash received is applied to reduce the principal amount of the loan. Interest income on these loans is recognized only after the entire balance receivable is recovered and interest is actually received.

Loans are returned to accrual status when:

- none of the principal or accrued interest is past due (with certain exceptions as noted below) and the Bank expects repayment of the remaining contractual obligation; or
- when the loan becomes well secured and in the process of collection.

Loans modified in a TDR

A modification of a loan constitutes a TDR when a borrower is experiencing financial difficulty and the modification constitutes a concession from originally agreed terms. If a restructuring is considered a TDR, the Bank is required to make certain disclosures to the notes of the consolidated financial statements and evaluate the restructured loan for impairment. The Bank employs various types of concessions when modifying a loan which may include extension of repayment periods, interest rate reductions, principal or interest forgiveness, forbearance, and other actions intended to minimize economic loss and to avoid foreclosure or repossession of collateral.

Commercial and industrial loans modified in a TDR may involve temporary interest-only payments, term extensions, and converting revolving credit lines to term loans. Additional collateral, a co-borrower, or a guarantor may be requested. Commercial mortgage and construction loans modified in a TDR may involve extending the maturity date at an interest rate lower than the current market rate for new debt with similar risk, or substituting or adding a new borrower or guarantor. Construction loans modified in a TDR may also involve extending the interest-only payment period.

Residential mortgage modifications generally involve a short-term forbearance period after which the missed payments are added to the end of the loan term, thereby extending the maturity date. Interest continues to accrue on the missed payments and as a result, the effective yield on the mortgage remains unchanged. As the forbearance period usually involves an insignificant payment delay they typically do not meet the reporting criteria for a TDR.

Automobile loans modified in a TDR are primarily composed of loans where the Bank has lowered monthly payments by extending the term.

When a loan undergoes a TDR, the determination of the loan's accrual versus non-accrual status following the modification depends on several factors. As with the risk rating process, the accrual status decision for such a loan is a separate and distinct process from the loan's TDR analysis and determination. Management considers the following in determining the accrual status of restructured loans:

- If the loan was appropriately on accrual status prior to the restructuring, the borrower has demonstrated performance under the previous terms, and the Bank's credit evaluation shows the borrower's capacity to continue to perform under the restructured terms (both principal and interest payments), it is likely that the appropriate conclusion is for the loan to remain on accrual at the time of the restructuring. This evaluation must include consideration of the borrower's sustained historical repayment performance for a reasonable period prior to the date on which the loan was restructured. A sustained period of repayment performance generally would be a minimum of six months and would involve payments of cash or cash equivalents; or
- If the loan was on non-accrual status before the restructuring, but the Bank's credit evaluation shows the borrower's capacity to meet the restructured terms, the loan would likely remain as non-accrual until the borrower has demonstrated a reasonable period of sustained repayment performance. As noted above, this period generally would be at least six months (thereby providing reasonable assurance as to the ultimate collection of principal and interest in full under the modified terms). Sustained performance before the restructuring may be taken into account.

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

Loans that have been modified in a TDR are restored to accrual status only when interest and principal payments are brought current for a continuous period of six months under the modified terms. However, performance prior to the modification, or significant events that coincide with the modification, are included in assessing whether the borrower can meet the new terms and may result in the loan being returned to accrual status at the time of loan modification or after a shorter performance period. If the borrower's ability to meet the revised payment schedule is uncertain, the loan remains on non-accrual status.

A loan that is modified in a TDR prior to becoming impaired will be left on accrual status if full collectability in accordance with the restructured terms is expected. The Bank may enter into a TDR for loans that are in default, or at risk of defaulting, even if the loan is not impaired.

A loan that had previously been modified in a TDR and is subsequently refinanced under current underwriting standards at a market rate with no concessionary terms is accounted for as a new loan and is no longer reported as a TDR.

Delinquencies

The entire balance of an account is contractually delinquent if the minimum payment of principal or interest is not received by the specified due date. Delinquency is reported on loans that are more than 30 days past due.

Charge-offs

The Bank recognizes charge-offs when it determines that loans are uncollectible, and this generally occurs when all commercially reasonable means of recovering the loan balance have been exhausted.

Commercial and consumer loans are either fully or partially charged-off down to the fair value of collateral securing the loans when:

- management judges the loan to be uncollectible;
- repayment is expected to be protracted beyond reasonable time frames;
- the asset has been classified as a loss by either the Bank's internal loan review process or third party appraisers; or
- the customer has filed bankruptcy and the loss becomes evident owing to a lack of assets or cash flow.

The outstanding balance of commercial and consumer real estate secured loans and residential mortgages that are in excess of the estimated property value, less costs to sell, is charged-off once there is reasonable assurance that such excess outstanding balance is not recoverable.

Credit card consumer loans that are contractually 180 days past due and other consumer loans with an outstanding balance under \$100,000 that are contractually 180 days past due are generally written off and reported as charge-offs.

J. Allowance for Credit Losses

Accounting for Financial Instruments - Credit losses

Starting on January 1, 2020 the Bank adopted Accounting Standards Update ("ASU") 2016-13 Financial Instruments – Credit Losses (Topic 326). Accordingly, from the date of adoption, the Bank uses a current expected credit loss model ("CECL") which is based on expected losses. The model used by the Bank up to December 31, 2019 to estimate credit losses was based on incurred losses. The CECL model is applied by the Bank to the measurement of credit losses on financial instruments at amortized cost, including loan receivables and held-to-maturity ("HTM") debt securities. The Bank also applies the CECL model to certain off-balance sheet credit exposures such as undrawn loan commitments, standby letters of credit, financial guarantees, and other similar instruments. In line with Topic 326, the Bank will present credit losses on available-for-sale ("AFS") securities as a valuation allowance rather than as a direct write-down. Changes in expected credit losses are recorded through the respective credit loss allowances on the consolidated balance sheets as well as in the provision for credit losses (recoveries) in the consolidated statements of operations.

The Bank's PCI loans outstanding as at January 1, 2020 were classified as PCD loans and both the amortized cost and an allowance for expected credit losses were disclosed and included with other non-PCD loans' figures. The Bank will continue to recognize the amortization of the noncredit discount, if any, as interest income based on the yield of such assets.

The Bank has not restated comparative information previously accounted for under the incurred loss and the PCI models. The total adjustment resulting from the adoption of this methodology on the opening balance of the Bank's accumulated deficit as at January 1, 2020 was a negative adjustment of \$7.8 million relating to the Bank's loan portfolio.

Under the CECL model, the Bank collects and maintains attributes as they relate to its financial instruments that are within scope of CECL including fair value of collateral, expected performance over the lifetime of the instruments and reasonable and supportable assumptions about future economic conditions. The Bank's measurement of expected losses takes into account historical loss information and is primarily based on the product of: the respective instrument's probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD"). For AFS securities, any allowance for credit losses is based on an impairment assessment.

The Bank made the accounting policy election to write off accrued interest receivable on loans that are placed on non-accrual status by reversing the then accrued interest balance against interest income revenue.

The Bank maintains an allowance for credit losses, which in management's opinion is adequate to absorb all estimated credit-related losses that are expected in its lending and off-balance sheet credit-related arrangements at the balance sheet date.

Management measures expected credit losses on held-to-maturity and available-for-sale debt securities on a collective basis by major security type when similar risk characteristics exist, or failing that, on an individual basis.

For available-for-sale debt securities in an unrealized loss position, the Bank first assesses whether it intends to sell, or it is more likely than not that it will be required to sell the security before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the security's amortized cost basis is written down to fair value through income. For debt securities available-for-sale that do not meet the aforementioned criteria, the Bank evaluates whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, management considers the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security is compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded for the credit loss, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that has not been recorded through an allowance for credit losses is recognized in other comprehensive income.

Losses are charged against the allowance when management believes the uncollectibility of an available-for-sale security is confirmed or when either of the criteria regarding

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

intent or requirement to sell is met.

The allowance for credit losses on loans is a valuation account that is deducted from the loans' amortized cost basis to present the net amount expected to be collected on the loans. Loans are charged off against the allowance when management believes the uncollectibility of a loan balance is confirmed. Expected recoveries typically do not exceed the aggregate of amounts previously charged-off and expected to be charged-off.

Management estimates the allowance balance using relevant available information, from internal and external sources, relating to past events, current conditions, and reasonable and supportable forecasts as well as the Bank's internal risk rating framework. Historical credit loss experience provides the basis for the estimation of expected credit losses. Adjustments to historical loss information are made for differences in the current-loan specific risk characteristics such as differences in underwriting practices, vintage, portfolio mix, delinquency level, term as well as changes in environmental conditions, such as changes in macroeconomic factors and collateral values.

The allowance for credit losses is measured on a collective pool basis when similar risk characteristics exist. In each of its jurisdictions, the Bank has identified the following portfolio segments: Residential mortgages, Consumer loans (including overdrafts), Commercial loans, Commercial overdrafts, Commercial real estate loans and Credit cards. For Loans and overdrafts, Management uses a probability of default and loss-given-default model to estimate the allowance for credit losses. Loans that do not share risk characteristics are evaluated on an individual basis. Loans evaluated individually are not included in the collective evaluation. For Credit cards, Management uses a loss rate to estimate expected credit losses.

Expected credit losses are estimated over the contractual term of the loans. The contractual term excludes potential extensions, renewals and modifications unless management has a reasonable expectation at the reporting date that the extension or renewal options included in the original contract will occur or that a troubled debt restructuring will be executed. Credit card receivables do not have stated maturities, therefore establishing a contractual term is performed by using an analytical approximation of behavior.

Prior to January 1, 2020, under the incurred loss model, the allowance for credit losses consisted of specific allowances and a general allowance as follows:

Specific allowances

Specific allowances are determined on an exposure-by-exposure basis identified through the Bank's internal risk rating framework and reflect the associated estimated credit loss. The specific allowance for an individual loan is computed as the difference between the recorded investment in the loan and the present value of expected future cash flows and is dependent upon the assumptions on the timing and amounts of the receipts or the fair value of collateral-dependent loans. The effective rate of return on the loan is used for discounting the cash flows. However, when foreclosure of a collateral-dependent loan is probable, the Bank measures impairment based on the fair value of the collateral. The Bank considers estimated costs to sell, on a discounted basis, in the measurement of impairment if those costs are expected to reduce the cash flows available to repay or otherwise satisfy the loan. If the measurement of an impaired loan is less than the recorded investment in the loan, then the Bank recognizes impairment by creating an allowance with a corresponding charge to provision for credit losses.

For all commercial and commercial real estate TDRs, the Bank conducts further analysis to determine the probable amount of loss and establishes a specific allowance for the loan, if appropriate. The Bank estimates the impairment amount by comparing the loan's carrying amount to the estimated present value of its future cash flows or the fair value of its underlying collateral. For collateral-dependent impaired commercial and commercial real estate loans, the excess of the Company's recorded investment in the loan over the fair value of the collateral, less cost to sell, is charged off to the specific allowance.

For consumer and residential mortgage TDRs that are not collateral-dependent, allowances are developed using the present value of expected future cash flows, compared to the recorded investment in the loans. Expected re-default factors are considered in this analysis. The fair value of collateral is periodically monitored subsequent to the modification.

General allowances

The allowance for credit losses attributed to the remaining portfolio of smaller balance homogeneous loans is established through various models that estimate the incurred loss at the balance sheet date inherent in the lending and off-balance sheet credit-related arrangements portfolios. These models may consider historical default and loss rates, geographic, industry, economic, and other environmental factors. Management may also consider overall portfolio indicators including trends in internally risk rated exposures, delinquent (defined as loans that are more than 30 days past due), non-performing, trends in volumes and terms of loans, cash-basis loans, historical and forecasted write-offs, and a review of industry, geographic and portfolio concentrations, including current developments within those segments. In addition, management may consider the current business strategy and credit process, including lending policies and procedures such as limit setting and compliance, credit approvals, loan underwriting criteria and loan workout procedures.

K. Business Combinations, Goodwill and Intangible Assets

All business combinations are accounted for using the acquisition method. Identifiable intangible assets (mostly customer relationships) are recognized separately from goodwill and are initially valued at fair value using discounted cash flow calculations and other recognized valuation techniques. Goodwill represents the excess of the fair value of the consideration paid for the acquisition of a business over the fair value of the net assets acquired. Contingent purchase consideration is measured at its fair value and recorded on the purchase date. Any subsequent changes in the fair value of a contingent consideration liability will be recorded through the consolidated statements of operations.

Goodwill is tested annually for impairment at the reporting unit level, or more frequently if events or circumstances indicate there may be impairment. If the carrying amount of a reporting unit, including the allocated goodwill, exceeds its fair value, goodwill impairment is measured as the excess of the carrying amount of the reporting unit's allocated goodwill over the implied fair value of the goodwill. Other acquired intangible assets with finite lives are amortized on a straight-line basis over their estimated useful lives, not exceeding 15 years. Intangible assets' estimated lives are re-evaluated annually and an impairment test is carried out if certain indicators of impairment exist.

L. Premises, Equipment and Computer Software

Land is carried at cost. Buildings, equipment and computer software, including leasehold improvements, are carried at cost less accumulated depreciation. The Bank generally computes depreciation using the straight-line method over the estimated useful life of an asset, which is 50 years for buildings, and 3 to 10 years for other equipment. For leasehold improvements the Bank uses the straight-line method over the lesser of the remaining term of the leased facility or the estimated economic life of the improvement. The Bank capitalizes certain costs, including interest cost incurred during the development phase, associated with the acquisition or development of internal use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life, which is between 5 and 10 years. The Bank capitalizes certain implementation costs for cloud computing arrangements, which includes infrastructure as a service, and these costs are then amortized on a straight-line basis over the term of the arrangement. Management reviews the recoverability of the carrying amount of premises, equipment and computer software when indicators of impairment exist and an impairment charge is recorded when the carrying amount of the reviewed asset is deemed not recoverable by future expected cash flows to be derived from the use and disposition of the asset. If there is a disposition of premises, equipment and computer software, a gain is recorded if the difference of the proceeds on disposition is in excess of the asset's carrying value. Otherwise, a loss is recorded. If there is an abandonment out of premises, equipment and computer software, the full carrying value of the asset is recognized as a loss.

M. Other Real Estate Owned

Other real estate owned ("OREO") comprises real estate property held for sale and commercial and residential real estate properties acquired in partial or total satisfaction of loans acquired through foreclosure proceedings, acceptance of a deed-in-lieu of foreclosure or by taking possession of assets that were used as loan collateral. These properties are initially recorded at fair value less estimated costs to sell the property. If the recorded investment in the loan exceeds the property's fair value at the time of acquisition, a charge-off is recorded against the specific allowance. If the carrying value of the real estate exceeds the property's fair value at the time of reclassification, an impairment charge is recorded in the consolidated statements of operations. Subsequent decreases in the property's fair value below the new cost basis are recorded through the use of a valuation allowance. Subsequent increases in the fair value of a property may be used to reduce the allowance but not below zero. Any operating expenses of the property are recognized through charges to non-interest expense.

N. Leases

In the normal course of operations, 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 Accounting Standards Update ("ASU") 2016-02 Leases (Topic 842)), the Bank recognized (prospectively, with no adjustments to prior periods) right-of-use assets and lease liabilities for operating 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: (1) the practical expedient not to separate lease components from non-lease components for all classes of underlying assets; and (2) 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").

O. Derivatives

All derivatives are recognized on the consolidated balance sheets at their fair value. On the date that the Bank enters into a derivative contract, it designates the derivative as either: a hedge of the fair value of a recognized asset or liability (a fair value hedge); a hedge of a forecasted transaction or the variability of cash flows that are to be received or paid in connection with a recognized asset or liability (a cash flow hedge); a hedge of an exposure to foreign currency risk of a net investment in a foreign operation (a net investment hedge); or, an instrument that is held for trading or non-hedging purposes (a trading or non-hedging derivative instrument).

All instruments utilized as a hedging instrument in a fair value hedge or cash flow hedge must have one or more underlying notional amounts, no or a minimal net initial investment and a provision for net settlement in the contract to meet the definition of a derivative instrument. Instruments utilized as a hedging instrument in a hedge of a net investment in foreign operations may be derivative instruments or non-derivatives.

The changes in the fair value of a derivative that is designated and qualifies as a fair value hedge, along with changes in the fair value of the hedged asset or liability that are attributable to the hedged risk, are recorded in the statement of operations.

The changes in the fair value of a derivative that is designated and qualifies as a cash flow hedge, to the extent that the hedge is effective, are recorded in other comprehensive income ("OCI") and the ineffective portion is recorded in statement of operations. That is, ineffectiveness from a derivative that overcompensates for changes in the hedged cash flows is recorded in statement of operations. However, the ineffectiveness from a derivative that under compensates is not recorded in the statement of operations.

The changes in the fair value of a derivative that is designated and qualifies as a foreign currency hedge is recorded in either current year earnings or OCI, depending on whether the hedging relationship satisfies the criteria for a fair value or cash flow hedge. If, however, a derivative is used as a hedge of a net investment in a foreign operation, the changes in the derivative's fair value, to the extent that the derivative is effective as a hedge, are recorded in the cumulative translation adjustment ("CTA") account within OCI.

Changes in the fair value of trading and non-hedging derivative instruments are reported in the statement of operations.

The Bank formally documents all relationships between hedging instruments and hedged items, as well as its risk management objectives and strategies for undertaking various hedge transactions. This process includes linking all derivatives that are designated as fair value, cash flow, or foreign currency hedges to specific assets and liabilities on the consolidated balance sheets or specific firm commitments or forecasted transactions.

The Bank also formally assesses whether the derivatives that are used in hedging transactions have been highly effective in offsetting changes in the fair value or cash flows of hedged items and whether those derivatives may be expected to remain highly effective in future periods.

For those hedge relationships that are terminated, hedge designations that are elected to be removed, forecasted transactions that are no longer expected to occur, or the hedge relationship ceases to be highly effective, the hedge accounting treatment described in the paragraphs above is no longer applied and the end-user derivative is terminated or transferred to the trading designation. For fair value hedges, any changes to the carrying value of the hedged item prior to the discontinuance remain as part of the basis of the asset or liability. When a cash flow hedge is discontinued, the net derivative gain (loss) remains in AOCI unless it is probable that the forecasted transaction will not occur in the originally specified time period.

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

P. Collateral

The Bank pledges assets as collateral as required for various transactions involving security repurchase agreements, deposit products and derivative financial instruments. Assets that have been pledged as collateral, including those that can be sold or repledged by the secured party, continue to be reported on the Bank's consolidated balance sheets under the same line items as non-pledged assets of the same type.

Q. Employee Benefit Plans

The Bank maintains trustee pension plans for substantially all employees as either non-contributory defined benefit plans or defined contribution plans. Benefits under the defined benefit plans are based primarily on the employee's years of credited service and average annual salary during the final years of employment as defined in the plans. The Bank also provides post-retirement medical benefits for certain qualifying active and retired Bermuda-based employees.

Expense for the defined benefit pension plans and the post-retirement medical benefits plan is composed of (a) the actuarially determined benefits for the current year's service, (b) imputed interest on the actuarially determined liability of the plan, (c) in the case of the defined benefit pension plans, the expected investment return on the fair value of plan assets and (d) amortization of certain items over the expected average remaining service life of employees in the case of the active defined benefit pension plans, estimated average remaining life expectancy of the inactive participants in the case of the inactive defined benefit pension plans and the expected average remaining service life to full eligibility age of employees covered by the plan in the case of the post-retirement medical benefits plan. The items amortized are amounts arising as a result of experience gains and losses, changes in assumptions, plan amendments and the change in the net pension asset or post-retirement medical benefits liability arising on adoption of revised accounting standards.

For each of the defined benefit pension plans and for the post-retirement medical benefits plan, the assets and liabilities recognized for accounting purposes are reported in other assets and employee benefit plans respectively. The actuarial gains and losses, transition obligation and prior service costs of the defined pension plans and post-retirement medical benefits plan are recognized in OCI net of tax and amortized to net income over the average service period for the active defined benefit pension plans and post-retirement medical benefits plan and average remaining life expectancy for the inactive defined benefit pension plans.

For the defined contribution pension plans, the Bank and participating employees provide an annual contribution based on each participating employee's pensionable earnings. Amounts accrued are expensed in the period.

R. Share-Based Compensation

The Bank engages in equity settled share-based payment transactions in respect of services received from eligible employees. The fair value of the services received is measured by reference to the fair value of the shares or share options granted on the date of the grant. The cost of the employee services received in respect of the shares or share options granted is recognized in the consolidated statements of operations over the shorter of the vesting or service period.

The fair value of the options granted is determined using option pricing models, which take into account the exercise price of the option, the current share price, the risk-free interest rate, expected dividend rate, the expected volatility of the share price over the life of the option and other relevant factors. The fair value of unvested share awards is deemed to be the closing price of the publicly traded Bank shares on grant date. The fair value of time vesting conditions is taken into account by adjusting the number of shares or share options included in the measurement of the cost of employee services so that ultimately, the amount recognized in the consolidated statements of operations reflects the number of vested shares or share options. The Bank recognizes compensation cost for awards with performance conditions if and when the Bank concludes that it is probable that the performance condition will be achieved, net of an estimate of pre-vesting forfeitures (e.g., due to termination of employment prior to vesting).

S. Revenue Recognition

Trust, custody and other administration services fees include fees for private and institutional trust, executorship, and custody services. Asset management fees include fees for investment management, investment advice and brokerage services. Fees are recognized as revenue over the period of the relationship or when the Bank has rendered all services to the client and is entitled to collect the fee from the client, as long as there are no contingencies associated with the fees.

Banking services fees primarily include fees for letters of credit and other financial guarantees, compensating balances, overdraft facilities and other financial services-related products as well as credit card fees. Letters of credit and other financial guarantees fees are recognized as revenue over the period in which the related guarantee is outstanding. Credit card fees are comprised of merchant discounts, late fees and membership fees, net of interchange and rewards costs. Credit card fees and other fees are recognized in the period in which the service is provided.

Foreign exchange revenue includes fees earned on currency exchange transactions which are recognized when such transactions occur, as well as gains and losses recognized when translating financial instruments held or due in currencies other than the local functional currency at the rates of exchange prevailing at the balance sheet date.

Loan interest income is accrued and recognized in revenues over time and also includes the amortization of deferred non-refundable loan origination and commitment fees. These fees are recognized as an adjustment of yield over the life of the related loan. Loan origination and commitment fees are offset by their related direct costs and only the net amounts are deferred and amortized into interest income.

Dividend and interest income, including amortization of premiums and discounts, on securities for which cash flows are not considered uncertain are included in interest income in the consolidated statements of operations. Loans placed on non-accrual status and investments with uncertain cash flows are accounted for under the cost recovery method, whereby all principal, dividends, interest and coupon payments received are applied as a reduction of the amortized cost and carrying amount.

T. Fair Values

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The Bank determines the fair values of assets and liabilities based on the fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The relevant accounting standard describes three levels of inputs that may be used to measure fair value. Equity securities and debt investments classified as AFS, and derivative assets and liabilities are recognized in the consolidated balance sheets at fair value.

Level 1, 2 and 3 valuation inputs

Management classifies items that are recognized at fair value on a recurring basis based on the level of inputs used in their respective fair value determination as described below.

Fair value inputs are considered Level 1 when based on unadjusted quoted prices in active markets for identical assets.

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

Fair value inputs are considered Level 2 when based on inputs other than quoted prices that are observable for the asset or liability either directly or indirectly, including inputs in markets that are not considered to be active.

Fair value inputs are considered Level 3 when based on internally developed models using significant unobservable assumptions involving management's estimations or non-binding bid quotes from brokers.

The following methods and assumptions were used in the determination of the fair value of financial instruments:

Cash due from banks

The carrying amount of cash and demand deposits with banks, being short-term in nature, is deemed to approximate fair value.

Cash equivalents include unrestricted term deposits, certificates of deposits and Treasury bills with a maturity of less than three months from the date of acquisition and the carrying value at cost is considered to approximate fair value because they are short term in nature, bear interest rates that approximate market rates, and generally have negligible credit risk.

Short-term investments

Short-term investments comprise restricted term and demand deposits and unrestricted term deposits, certificates of deposit and treasury bills with less than one year but greater than three months' maturity from the date of acquisition. The carrying value at cost is considered to approximate fair value because they are short term in nature, bear interest rates that approximate market rates, and generally have negligible credit risk.

Equity securities, defined benefit pension plan equity securities, and mutual funds

The fair value of listed equity securities is based upon quoted market values. Investments in actively traded mutual funds are based on their published net asset values.

AFS and HTM investments and defined benefit pension plan fixed income securities

The fair values for AFS investments are generally sourced from third parties. The fair value of fixed income securities is based upon quoted market values where available, "evaluated bid" prices provided by third party pricing services ("pricing services") where quoted market values are not available, or by reference to broker or underwriter bid indications where pricing services do not provide coverage for a particular security. To the extent the Bank believes current trading conditions represent distressed transactions, the Bank may elect to utilize internally generated models. The pricing services typically use market approaches for valuations using primarily Level 2 inputs (in the vast majority of valuations), or some form of discounted cash flow analysis.

Pricing services indicate that they will only produce an estimate of fair value if there is objectively verifiable information available to produce a valuation. Standard inputs to the valuations provided by the pricing services listed in approximate order of priority for use when available include: reported trades, benchmark yields, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data. The pricing services may prioritize inputs differently on any given day for any security, and not all inputs listed are available for use in the evaluation process on any given day for each security evaluation. However, the pricing services also monitor market indicators and industry and economic events. When these inputs are not available, pricing services identify "buckets" of similar securities (allocated by asset class types, sectors, sub-sectors, contractual cash flows/structure, and credit rating characteristics) and apply some form of matrix or other modeled pricing to determine an appropriate security value which represents their best estimate as to what a buyer in the marketplace would pay for a security in a current sale.

It is common industry practice to utilize pricing services as a source for determining the fair values of investments where the pricing services are able to obtain sufficient market corroborating information to allow them to produce a valuation at a reporting date. In addition, in the majority of cases, although a value may be obtained from a particular pricing service for a security or class of similar securities, these values are corroborated against values provided by other pricing services. While the Bank receives values for the majority of the investment securities it holds from pricing services, it is ultimately management's responsibility to determine whether the values received and recorded in the financial statements are representative of appropriate fair value measurements.

Broker/dealer quotations are used to value investments with fixed maturities where prices are unavailable from pricing services due to factors specific to the security such as limited liquidity, lack of current transactions, or trades only taking place in privately negotiated transactions. These are considered Level 3 valuations, as significant inputs utilized by brokers may be difficult to corroborate with observable market data, or sufficient information regarding the specific inputs utilized by the broker was not available to support a Level 2 classification.

For disclosure purposes, HTM investments are fair valued using the same methods described above.

Loans

The majority of loans are variable rate and re-price in response to changes in market rates and hence management estimates that the fair value of loans is not significantly different than their carrying amount. For significant fixed-rate loan exposures, fair value is estimated by discounting the future cash flows, using the current rates at which similar loans would be made to borrowers with similar credit ratings and for the same remaining maturities, of such loans. Management includes the effects of any credit losses recorded against individual loans, which factors in a loan's credit quality, as well as accrued interest in determining the fair value of loans.

Accrued interest

The carrying amounts of accrued interest receivable and payable are assumed to approximate their fair values given their short-term nature.

OREO

OREO assets are carried at the lower of cost or fair value less estimated costs to sell. The determination of fair value, which aims at estimating the realizable value of the properties, is based either on third-party appraisals, when available, or on internal valuation models. Appraisals of OREO properties are updated on an annual basis. Where the fair value of the related property is based on an unadjusted appraised value, the OREO is generally classified as Level 2. Where significant adjustments are made to the appraised value, or based on an internally generated valuation model, the OREO is generally classified as Level 3.

Deposits

The fair value of fixed-rate deposits has been estimated by discounting the contractual cash flows, using market interest rates offered at the balance sheet date for deposits of similar terms. The carrying amount of deposits with no stated maturity date is deemed to equate to the fair value.

Long-term debt

The fair value of the long-term debt has been estimated by discounting the contractual cash flows, using current market interest rates.

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

Derivatives

Derivative contracts can be exchange traded or over-the-counter ("OTC") derivative contracts and may include forward, swap and option contracts relating to interest rates or foreign currencies. Exchange-traded derivatives typically fall within Level 1 of the fair value hierarchy depending on whether they are deemed to be actively traded or not. OTC derivatives are valued using market transactions and other market evidence whenever possible, including market-based inputs to models, model calibration to market clearing transactions, broker or dealer quotations or alternative pricing sources where an understanding of the inputs utilized in arriving at the valuations is obtained.

Where models are used, the selection of a particular model to value an OTC derivative depends upon the contractual terms and specific risks inherent in the instrument as well as the availability of pricing information in the market. The Bank generally uses similar models to value similar instruments. Valuation models require a variety of inputs, including contractual terms, market prices, yield curves, credit curves, measures of volatility, prepayment rates and correlations of such inputs. For OTC derivatives that trade in liquid markets, such as generic forwards, interest rate swaps and options, model inputs can generally be verified and model selection does not involve significant management judgment.

Goodwill

The fair value of reporting units for which goodwill is recognized is determined when an impairment assessment is performed by discounting estimated future cash flows using discount rates reflecting valuation-date market conditions and risks specific to the reporting unit.

U. Impairment or Disposal of Long-Lived Assets

Impairment losses are recognized when the carrying amount of a long-lived asset exceeds the sum of the undiscounted cash flows expected from its use and disposal. The impairment recognized is measured as the amount by which the carrying amount of the asset exceeds its fair value. Long-lived assets that are to be disposed of other than by sale are classified and accounted for as held for use until the date of disposal or abandonment. Assets that meet certain criteria are classified as held for sale and are measured at the lower of their carrying amounts or fair value less estimated costs to sell.

V. Credit-Related Arrangements

In the normal course of business, the Bank enters into various commitments to meet the credit requirements of its customers. Such commitments, which are not included in the consolidated balance sheet, include:

- commitments to extend credit, which represent undertakings to make credit available in the form of loans or other financing for specific amounts and maturities, subject to certain conditions;
- standby letters of credit, which represent irrevocable obligations to make payments to third parties in the event that the customer is unable to meet its financial obligations; and,
- documentary and commercial letters of credit, related primarily to the import of goods by customers, which represent agreements to honor drafts presented by third parties upon completion of specific activities.

These credit arrangements are subject to the Bank's normal credit standards and collateral is obtained where appropriate. The contractual amounts for these commitments set out in the table in Note 12 represent the maximum payments the Bank would have to make should the contracts be fully drawn, the counterparty default, and any collateral held prove to be of no value. As many of these arrangements will expire or terminate without being drawn upon or are fully collateralized, the contractual amounts do not necessarily represent future cash requirements. The Bank does not carry any liability for these obligations.

W. Income Taxes

The Bank uses the asset and liability method of accounting for income taxes. Under this method, deferred income taxes reflect the net tax effect of temporary differences between the consolidated financial statements' carrying amounts of assets and liabilities and their respective tax bases. Accordingly, a deferred income tax asset or liability is determined for each temporary difference based on the enacted tax rates to be in effect on the expected reversal date of the temporary difference. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Bank records net deferred tax assets to the extent the Bank believes these assets will more likely than not be realized. Net deferred income tax assets or liabilities accumulated as a result of temporary differences are included in other assets or other liabilities, respectively. A valuation allowance is established to reduce deferred income tax assets to the amount more likely than not to be realized. In making such a determination, the Bank considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. In the event the Bank were to determine that it would be able to realize the deferred income tax assets in the future in excess of their net recorded amount, the Bank would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Bank records uncertain tax positions on the basis of a two-step process whereby (1) the Bank determines whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position and (2) where those tax positions that meet the more-likely-than-not recognition threshold, the Bank recognizes the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

Income taxes on the consolidated statements of operations include the current and deferred portions of the income taxes. The Bank recognizes accrued interest and penalties related to income taxes in operating expenses. Income taxes applicable to items charged or credited directly to shareholders' equity are included in such items.

X. Consolidated Statements of Cash Flows

For the purposes of the consolidated statements of cash flows, cash due from banks include cash on hand, cash items in the process of collection, amounts due from correspondent banks and highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in fair value, and restricted cash included in short-term investments on the consolidated balance sheets.

Y. Earnings Per Share

Earnings per share have been calculated using the weighted average number of common shares outstanding during the year (see also Note 20: Earnings per share). In periods when basic earnings per share is positive, the dilutive effect of share-based compensation plans is 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 common shares, using the quarterly average market price of the Bank's shares for the period.

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

Z. New Accounting Pronouncements

The following accounting developments were issued during the year ended December 31, 2021 or are accounting standards pending adoption:

In January 2021, the FASB published ASU 2021-01 Reference Rate Reform (Topic 848): Scope. The amendments to ASU 2021-01 clarify that certain optional expedients and exceptions in Topic 848 for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition, specifically derivative instruments that use an interest rate for margining, discounting, or contract price alignment that is modified as a result of reference rate reform. The Bank elected to early adopt ASU 2021-01 as of December 31, 2020. This ASU did not have a material impact on the Bank's consolidated financial statements.

In August 2021, the Financial Accounting Standards Board ("FASB") published ASU 2021-06 - Presentation of Financial Statements (Topic 205), Financial Services—Depository and Lending (Topic 942), and Financial Services—Investment Companies (Topic 946): Amendments to SEC Paragraphs Pursuant to SEC Final Rule Releases No. 33-10786, Amendments to Financial Disclosures about Acquired and Disposed Businesses, and No. 33-10835, Update of Statistical Disclosures for Bank and Savings and Loan Registrants (SEC Update). The amendments are effective for fiscal years ending on or after December 15, 2021. This ASU did not have a material impact on the Bank's consolidated financial statements.

In October 2021, the Financial Accounting Standards Board ("FASB") published ASU 2021-08 - Accounting Standards Update 2021-08—Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers. This Update was issued to improve the accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to the following: (1) Recognition of an acquired contract liability; (2) Payment terms and their effect on subsequent revenue recognized by the acquirer. The amendments are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The Bank does not anticipate this ASU to have a material impact on its consolidated financial statements.

Note 3: Cash due from banks

	December 31, 2021	December 31, 2020
Non-interest bearing		
Cash and demand deposits with banks	115,651	133,363
Interest bearing¹		
Demand deposits with banks	437,644	433,511
Cash equivalents	1,626,538	2,722,718
Sub-total - Interest bearing	2,064,182	3,156,229
Total cash due from banks	2,179,833	3,289,592

¹ Interest bearing cash due from banks includes certain demand deposits with banks as at December 31, 2021 in the amount of \$280.5 million (December 31, 2020: \$156.2 million) that are earning interest at a negligible rate.

Note 4: Short-term investments

	December 31, 2021	December 31, 2020
Unrestricted		
Maturing within three months	818,340	469,580
Maturing between three to six months	252,340	326,836
Maturing between six to twelve months	104,574	1,717
Total unrestricted short-term investments	1,175,254	798,133
Affected by drawing restrictions related to minimum reserve and derivative margin requirements		
Non-interest earning demand deposits	—	260
Interest earning demand and term deposits	23,664	24,646
Total restricted short-term investments	23,664	24,906
Total short-term investments	1,198,918	823,039

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

Note 5: Investment in securities

Amortized Cost, Carrying Amount and Fair Value

On the consolidated balance sheets, equity securities and AFS investments are carried at fair value and HTM investments are carried at amortized cost.

	December 31, 2021				December 31, 2020			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Equity securities								
Mutual funds	724	—	(502)	222	5,274	2,531	(488)	7,317
Total equity securities	724	—	(502)	222	5,274	2,531	(488)	7,317
Available-for-sale								
US government and federal agencies	3,163,964	30,945	(51,285)	3,143,624	2,493,659	72,713	(306)	2,566,066
Non-US governments debt securities	291,119	—	(1,526)	289,593	22,797	—	(389)	22,408
Asset-backed securities - Student loans	13,290	—	(116)	13,174	13,290	—	(345)	12,945
Residential mortgage-backed securities	27,191	218	(70)	27,339	58,589	1,108	—	59,697
Total available-for-sale	3,495,564	31,163	(52,997)	3,473,730	2,588,335	73,821	(1,040)	2,661,116
Held-to-maturity¹								
US government and federal agencies	2,763,344	57,497	(34,729)	2,786,112	2,194,371	110,526	(141)	2,304,756
Total held-to-maturity	2,763,344	57,497	(34,729)	2,786,112	2,194,371	110,526	(141)	2,304,756

¹ For the years ended December 31, 2021, 2020 and 2019, impairments recognized in other comprehensive income for HTM investments were nil.

Investments with Unrealized Loss Positions

The Bank does not believe that the AFS debt securities that were in an unrealized loss position as of December 31, 2021, comprising 67 securities representing 73.6% of the AFS portfolios' carrying value (December 31, 2020: 13 and 5.9%), represent credit losses. Total gross unrealized AFS losses were 2.1% of the fair value of the affected securities (December 31, 2020: 0.7%).

The Bank's HTM debt securities are comprised of US government and federal agencies securities and have a zero credit loss assumption under the CECL model. HTM debt securities that were in an unrealized loss position as of December 31, 2021, were comprised of 57 securities representing 59.1% of the HTM portfolios' carrying value (December 31, 2020: 3 and 1.7%). Total gross unrealized HTM losses were 2.2% of the fair value of affected securities (December 31, 2020: 0.4%).

Management does not intend to sell and it is likely that management will not be required to sell the securities prior to the anticipated recovery of the cost of these securities. Unrealized losses were attributable primarily to changes in market interest rates, relative to when the investment securities were purchased, and not due to a decrease in the credit quality of the investment securities. The issuers continue to make timely principal and interest payments on the 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.

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 **Residential mortgage-backed securities** relate to 4 securities (December 31, 2020: none) which are rated AAA 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 loan-to-value ratios range from 15% - 38% and 51% - 57% , respectively. Current credit support is significantly greater than any delinquencies experienced on the underlying mortgages.

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

In the following tables, debt securities with unrealized losses that are not deemed to be credit impaired and for which an allowance for credit losses has not been recorded 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.

December 31, 2021	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
Available-for-sale securities with unrealized losses						
US government and federal agencies	2,144,105	(47,214)	102,428	(4,071)	2,246,533	(51,285)
Non-US governments debt securities	267,201	(1,125)	22,392	(401)	289,593	(1,526)
Asset-backed securities - Student loans	—	—	13,174	(116)	13,174	(116)
Residential mortgage-backed securities	8,051	(70)	—	—	8,051	(70)
Total available-for-sale securities with unrealized losses	2,419,357	(48,409)	137,994	(4,588)	2,557,351	(52,997)

Held-to-maturity securities with unrealized losses						
US government and federal agencies	1,568,315	(33,554)	29,713	(1,175)	1,598,028	(34,729)

December 31, 2020	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
Available-for-sale securities with unrealized losses						
US government and federal agencies	120,599	(279)	236	(27)	120,835	(306)
Non-US governments debt securities	15	—	22,393	(389)	22,408	(389)
Asset-backed securities - Student loans	—	—	12,945	(345)	12,945	(345)
Total available-for-sale securities with unrealized losses	120,614	(279)	35,574	(761)	156,188	(1,040)

Held-to-maturity securities with unrealized losses						
US government and federal agencies	36,079	(141)	—	—	36,079	(141)

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.

December 31, 2021	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	Over 10 years		
Available-for-sale							
US government and federal agencies	—	—	640,654	183,155	—	2,319,815	3,143,624
Non-US governments debt securities	—	—	289,593	—	—	—	289,593
Asset-backed securities - Student loans	—	—	—	—	—	13,174	13,174
Residential mortgage-backed securities	—	—	—	—	—	27,339	27,339
Total available-for-sale	—	—	930,247	183,155	—	2,360,328	3,473,730
Held-to-maturity							
US government and federal agencies	—	—	—	—	—	2,763,344	2,763,344

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	December 31, 2021		December 31, 2020	
	Amortized cost	Fair value	Amortized cost	Fair value
Available-for-sale	807	842	1,387	1,456
Held-to-maturity	33,102	31,958	2,460	2,623

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

Sale Proceeds and Realized Gains and Losses of AFS Securities

	Year ended								
	December 31, 2021			December 31, 2020			December 31, 2019		
	Sale proceeds	Gross realized gains	Gross realized (losses)	Sale proceeds	Gross realized gains	Gross realized (losses)	Sale proceeds	Gross realized gains	Gross realized (losses)
US government and federal agencies	189,417	1,563	(1,802)	349,699	1,171	(55)	35,001	115	—
Non-US governments debt securities	—	—	—	3,266	104	—	—	—	—
Corporate debt securities	—	—	—	—	—	—	64,787	49	(141)
Commercial mortgage-backed securities	—	—	—	—	—	—	124,545	901	(272)
Pass-through note	—	—	—	—	—	—	972	972	—
Total	189,417	1,563	(1,802)	352,965	1,275	(55)	225,305	2,037	(413)

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.

Note 6: Loans

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 30 years and personal and business loans are generally repayable over terms not exceeding five years. Government loans are repayable over a variety of terms which are individually negotiated. 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 December 31, 2021 is 4.00% (December 31, 2020: 4.13%). The interest receivable on total loans as at December 31, 2021 is \$7.6 million (December 31, 2020: \$8.7 million). The interest receivable is included in Accrued interest and other assets on the consolidated balance sheets and is excluded from all loan amounts disclosed in this note.

Loans' Credit Quality

The four credit quality classifications set out in the following tables 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. Loans' internal credit ratings are assigned by the Bank's customer relationship managers as well as members of the Bank's jurisdictional and Group Credit Committees. The borrowers' financial condition is documented at loan origination and maintained periodically thereafter at a frequency which can be up to monthly for certain loans. The loans' performing status, as well as current economic trends, are continuously monitored. The Bank's jurisdictional and Group Credit Committees meet on a monthly basis. The Bank also has a group Provisions and Impairments Committee which is responsible for approving significant provisions and other impairment charges.

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. Loans in this category are reviewed by the Bank's management on at least an annual basis.

A **special mention** loan shall mean a loan under close monitoring by the Bank's management on at least a quarterly basis. Loans in this category are currently still performing, 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. Loans in this category are under close monitoring by the Bank's management on at least a quarterly basis.

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 unless it is a residential mortgage loan which is well secured and collection efforts are reasonably expected to result in amounts due. Loans in this category are under close monitoring by the Bank's management on at least a quarterly basis.

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

The amortized cost of loans by credit quality classifications and allowance for expected credit losses by class of loans is as follows:

December 31, 2021	Pass	Special mention	Substandard	Non-accrual	Total amortized cost	Allowance for expected credit losses	Total net loans
Commercial loans							
Government	259,572	—	—	—	259,572	(969)	258,603
Commercial and industrial	353,337	—	1,079	18,549	372,965	(10,115)	362,850
Commercial overdrafts	104,814	145	446	2	105,407	(42)	105,365
Total commercial loans	717,723	145	1,525	18,551	737,944	(11,126)	726,818
Commercial real estate loans							
Commercial mortgage	673,167	4,034	1,578	4,740	683,519	(1,168)	682,351
Construction	9,645	—	—	—	9,645	—	9,645
Total commercial real estate loans	682,812	4,034	1,578	4,740	693,164	(1,168)	691,996
Consumer loans							
Automobile financing	21,412	—	—	117	21,529	(88)	21,441
Credit card	72,569	—	284	—	72,853	(1,420)	71,433
Overdrafts	42,293	—	—	4	42,297	(236)	42,061
Other consumer ¹	76,963	—	72	1,038	78,073	(1,276)	76,797
Total consumer loans	213,237	—	356	1,159	214,752	(3,020)	211,732
Residential mortgage loans	3,464,857	14,070	107,361	36,595	3,622,883	(12,759)	3,610,124
Total	5,078,629	18,249	110,820	61,045	5,268,743	(28,073)	5,240,670

¹ Other consumer loans' amortized cost includes \$13 million of cash and portfolio secured lending and \$57 million of lending secured by buildings in construction or other collateral.

December 31, 2020	Pass	Special mention	Substandard	Non-accrual	Total amortized cost	Allowance for expected credit losses	Total net loans
Commercial loans							
Government	279,417	—	—	—	279,417	(1,453)	277,964
Commercial and industrial	422,616	5,841	1,082	18,226	447,765	(9,926)	437,839
Commercial overdrafts	70,324	1,686	451	1	72,462	(230)	72,232
Total commercial loans	772,357	7,527	1,533	18,227	799,644	(11,609)	788,035
Commercial real estate loans							
Commercial mortgage	627,512	79,168	2,362	6,300	715,342	(847)	714,495
Construction	4,950	39,870	—	—	44,820	(1,257)	43,563
Total commercial real estate loans	632,462	119,038	2,362	6,300	760,162	(2,104)	758,058
Consumer loans							
Automobile financing	22,491	52	—	127	22,670	(103)	22,567
Credit card	68,025	—	234	—	68,259	(2,795)	65,464
Overdrafts	23,934	1,127	—	2	25,063	(162)	24,901
Other consumer ¹	112,466	1,031	215	1,048	114,760	(1,416)	113,344
Total consumer loans	226,916	2,210	449	1,177	230,752	(4,476)	226,276
Residential mortgage loans	3,212,218	61,499	83,846	46,787	3,404,350	(15,909)	3,388,441
Total	4,843,953	190,274	88,190	72,491	5,194,908	(34,098)	5,160,810

¹ Other consumer loans' amortized cost includes \$54 million of cash and portfolio secured lending and \$45 million of lending secured by buildings in construction or other collateral.

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

Based on the most recent analysis performed, the amortized cost of loans by year of origination and credit quality indicator is as follows:

December 31, 2021	Pass	Special mention	Substandard	Non-accrual	Total amortized cost
Loans by origination year					
2021	911,403	—	232	13	911,648
2020	605,139	—	—	3	605,142
2019	917,700	—	290	181	918,171
2018	513,293	6,060	12,548	1,154	533,055
2017	493,091	—	3,400	12,215	508,706
Prior	1,393,929	11,131	93,620	47,474	1,546,154
Overdrafts and credit cards	244,074	1,058	730	5	245,867
Total amortized cost	5,078,629	18,249	110,820	61,045	5,268,743

December 31, 2020	Pass	Special mention	Substandard	Non-accrual	Total amortized cost
Loans by origination year					
2020	683,821	18,789	—	70	702,680
2019	1,026,634	27,575	181	4	1,054,394
2018	684,716	65,570	559	1,407	752,252
2017	624,332	2,381	3,245	11,910	641,868
2016	447,293	2,073	7,993	4,939	462,298
Prior	1,183,869	69,934	75,466	52,174	1,381,443
Overdrafts and credit cards	193,288	3,952	746	1,987	199,973
Total amortized cost	4,843,953	190,274	88,190	72,491	5,194,908

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

The following tables summarize the past due status of the loans. 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.

December 31, 2021	30 - 59 days	60 - 89 days	More than 90 days	Total past due loans	Total current	Total amortized cost
Commercial loans						
Government	—	—	—	—	259,572	259,572
Commercial and industrial	53	—	18,549	18,602	354,363	372,965
Commercial overdrafts	—	—	1	1	105,406	105,407
Total commercial loans	53	—	18,550	18,603	719,341	737,944
Commercial real estate loans						
Commercial mortgage	—	—	4,739	4,739	678,780	683,519
Construction	—	—	—	—	9,645	9,645
Total commercial real estate loans	—	—	4,739	4,739	688,425	693,164
Consumer loans						
Automobile financing	56	34	118	208	21,321	21,529
Credit card	471	681	285	1,437	71,416	72,853
Overdrafts	—	—	5	5	42,292	42,297
Other consumer	67	15	1,038	1,120	76,953	78,073
Total consumer loans	594	730	1,446	2,770	211,982	214,752
Residential mortgage loans	12,602	1,501	44,763	58,866	3,564,017	3,622,883
Total amortized cost	13,249	2,231	69,498	84,978	5,183,765	5,268,743

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

December 31, 2020	30 - 59 days	60 - 89 days	More than 90 days	Total past due loans	Total current	Total amortized cost
Commercial loans						
Government	—	—	—	—	279,417	279,417
Commercial and industrial	109	50	18,176	18,335	429,430	447,765
Commercial overdrafts	—	—	90	90	72,372	72,462
Total commercial loans	109	50	18,266	18,425	781,219	799,644
Commercial real estate loans						
Commercial mortgage	710	1,552	4,748	7,010	708,332	715,342
Construction	—	—	—	—	44,820	44,820
Total commercial real estate loans	710	1,552	4,748	7,010	753,152	760,162
Consumer loans						
Automobile financing	55	35	127	217	22,453	22,670
Credit card	480	224	234	938	67,321	68,259
Overdrafts	—	—	2	2	25,061	25,063
Other consumer	56	3	1,043	1,102	113,658	114,760
Total consumer loans	591	262	1,406	2,259	228,493	230,752
Residential mortgage loans	6,304	4,023	59,957	70,284	3,334,066	3,404,350
Total amortized cost	7,714	5,887	84,377	97,978	5,096,930	5,194,908

Changes in Allowances For Credit Losses

The decrease in the provision for credit losses during the year ended December 31, 2021 was primarily attributable to changes in macroeconomic factors, such as GDP forecasts, and the repayment of some commercial facilities. As per the Bank's accounting policy, as disclosed in Note 2, the Bank continuously collects and maintains attributes related to financial instruments within the scope of CECL, including current conditions, and reasonable and supportable assumptions about future economic conditions.

	Year end December 31, 2021				
	Commercial	Commercial real estate	Consumer	Residential mortgage	Total
Balance at the beginning of period	11,609	2,104	4,476	15,909	34,098
Provision increase (decrease)	(431)	(936)	(1,552)	(581)	(3,500)
Recoveries of previous charge-offs	65	—	1,344	262	1,671
Charge-offs	(112)	—	(1,248)	(2,806)	(4,166)
Other	(5)	—	—	(25)	(30)
Allowances for expected credit losses at end of year	11,126	1,168	3,020	12,759	28,073

	Year end December 31, 2020				
	Commercial	Commercial real estate	Consumer	Residential mortgage	Total
Balance at the beginning of period, before change in accounting policy (Note 2)	7,281	1,496	1,502	13,309	23,588
Cumulative effect from change in accounting policy (Note 2)	4,109	1,026	2,506	200	7,841
Provision increase (decrease)	3,832	(418)	1,095	3,803	8,312
Recoveries of previous charge-offs	12	—	1,247	379	1,638
Charge-offs	(3,635)	—	(1,876)	(2,043)	(7,554)
Other	10	—	2	261	273
Allowances for expected credit losses at end of year	11,609	2,104	4,476	15,909	34,098

Collateral-dependent loans

Management identified that the repayment of certain commercial and consumer mortgage loans is expected to be provided substantially through the operation or the sale of the collateral pledged to the Bank ("collateral-dependent loans"). The Bank believes that for the vast majority of loans identified as collateral-dependent, the sale of the collateral will be sufficient to fully reimburse the loan's carrying amount.

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

Loan Deferral Program

In response to the COVID-19 pandemic, effective April 1, 2020, the Bank implemented a residential mortgage and consumer loan deferral program for qualified borrowers in the Bermuda and Cayman segments under which principal and interest payments on performing loans were automatically deferred for three months from April 1, 2020 to June 30, 2020 and the loan term extended. Borrowers had the option to notify the Bank if they preferred to continue with regular, scheduled payments (i.e. to opt-out). Commercial customers had the option to pay interest only on their monthly loan payments with no penalties. The Bank subsequently extended the residential mortgage and personal loan deferral program for a further three months from July 1, 2020 to September 30, 2020, however, borrowers had to notify the Bank of their intention to defer principal and interest payments (i.e. to opt-in). Loans that meet the requirements for deferral under the above programs or as a result of COVID-19 specific factors are not considered troubled debt restructurings ("TDRs") or past due as the borrowers were current on their payments and were not experiencing financial difficulty at the time of modifications.

In addition, the Bank also introduced deferrals on credit card payments for April and May 2020 in the Bermuda segment and May and June 2020 in the Cayman segment.

There were no deferrals in effect for 2021.

Non-Performing Loans

During the year ended December 31, 2021, no interest was recognized on non-accrual loans. Non-performing loans at December 31, 2021 include PCD loans, which have all been on non-accrual status since their acquisition. No credit deteriorated loans were purchased during the period.

	December 31, 2021				December 31, 2020			
	Non-accrual loans with an allowance	Non-accrual loans without an allowance	Past due more than 90 days and accruing	Total non-performing loans	Non-accrual loans with an allowance	Non-accrual loans without an allowance	Past due more than 90 days and accruing	Total non-performing loans
Commercial loans								
Commercial and industrial	18,530	19	—	18,549	18,207	19	—	18,226
Commercial overdrafts	—	2	—	2	—	1	89	90
Total commercial loans	18,530	21	—	18,551	18,207	20	89	18,316
Commercial real estate loans								
Commercial mortgage	885	3,855	—	4,740	952	5,348	—	6,300
Total commercial real estate loans	885	3,855	—	4,740	952	5,348	—	6,300
Consumer loans								
Automobile financing	117	—	—	117	126	1	—	127
Credit card	—	—	284	284	—	—	234	234
Overdrafts	—	4	—	4	—	2	—	2
Other consumer	850	188	—	1,038	869	179	—	1,048
Total consumer loans	967	192	284	1,443	995	182	234	1,411
Residential mortgage loans	29,549	7,046	12,969	49,564	36,897	9,890	18,788	65,575
Total non-performing loans	49,931	11,114	13,253	74,298	57,051	15,440	19,111	91,602

Loans modified in a TDR

As at December 31, 2021, the Bank had nil loans that were modified in a TDR during the preceding 12 months that subsequently defaulted (December 31, 2020: nil; December 31, 2019: nil).

TDRs entered into during the period

	Year ended December 31, 2021			
	Number of contracts	Pre-modification recorded loans	Modification: interest capitalization	Post-modification recorded loans
Residential mortgage loans	1	284	2	286

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

Year ended December 31, 2020

	Number of contracts	Pre-modification recorded loans	Modification: interest capitalization	Post-modification recorded loans
Residential mortgage loans	9	5,590	98	5,688

TDRs Outstanding

	December 31, 2021		December 31, 2020	
	Accrual	Non-accrual	Accrual	Non-accrual
Commercial loans	847	—	901	—
Commercial real estate loans	1,578	2,445	2,362	1,811
Residential mortgage loans	60,453	12,653	61,937	17,129
Total TDRs outstanding	62,878	15,098	65,200	18,940

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 table summarizes the credit exposure of the Bank by geographic region. The exposure amounts disclosed below do not include accrued interest and are gross of allowances for credit losses and gross of collateral held.

Geographic region	December 31, 2021				December 31, 2020			
	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	—	—	—	—	220,871	—	—	220,871
Belgium	8,675	—	—	8,675	4,271	—	—	4,271
Bermuda	46,683	2,080,385	297,731	2,424,799	51,329	2,225,401	323,097	2,599,827
Canada	1,193,387	—	—	1,193,387	996,213	—	—	996,213
Cayman	39,018	1,060,328	379,518	1,478,864	29,480	948,290	396,654	1,374,424
Germany	85,886	—	—	85,886	107,412	—	—	107,412
Guernsey	1	735,786	169,904	905,691	1	779,915	213,461	993,377
Ireland	37,236	—	—	37,236	83,842	—	—	83,842
Japan	4,873	—	—	4,873	6,029	—	—	6,029
Jersey	—	78,048	34,298	112,346	—	26,773	35,224	61,997
New Zealand	—	—	—	—	23,463	—	—	23,463
Norway	57,132	—	—	57,132	57,900	—	—	57,900
Switzerland	2,441	—	—	2,441	4,510	—	—	4,510
The Bahamas	1,511	9,361	—	10,872	1,516	12,024	—	13,540
United Kingdom	990,624	1,304,835	117,200	2,412,659	1,291,655	1,202,505	140,663	2,634,823
United States	1,003,365	—	—	1,003,365	1,428,090	—	—	1,428,090
Other	4,026	—	—	4,026	3,088	—	—	3,088
Total gross exposure	3,474,858	5,268,743	998,651	9,742,252	4,309,670	5,194,908	1,109,099	10,613,677

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

Note 8: Premises, equipment and computer software

Category	December 31, 2021			December 31, 2020		
	Cost	Accumulated depreciation	Net carrying value	Cost	Accumulated depreciation	Net carrying value
Land	8,333	—	8,333	8,730	—	8,730
Buildings	169,806	(77,229)	92,577	164,171	(71,721)	92,450
Equipment	26,129	(17,509)	8,620	25,150	(15,930)	9,220
Computer hardware and software in use	197,941	(175,612)	22,329	197,165	(161,801)	35,364
Computer software in development	6,827	—	6,827	4,988	—	4,988
Total	409,036	(270,350)	138,686	400,204	(249,452)	150,752

Depreciation charged to operating expenses	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Buildings (included in Property expense)	6,005	5,511	4,492
Equipment (included in Property expense)	2,323	1,929	1,524
Computer hardware and software (included in Technology and communication expense)	18,902	21,773	20,620
Total depreciation charged to operating expenses	27,230	29,213	26,636

Note 9: Goodwill and other intangible assets

Goodwill

	Segment			Total
	Cayman	Channel Islands and the UK	Other	
Balance at December 31, 2018	551	21,427	2,013	23,991
Foreign exchange translation adjustment	—	818	29	847
Balance at December 31, 2019	551	22,245	2,042	24,838
Foreign exchange translation adjustment	—	719	70	789
Balance at December 31, 2020	551	22,964	2,112	25,627
Foreign exchange translation adjustment	—	(226)	(45)	(271)
Balance at December 31, 2021	551	22,738	2,067	25,356

Customer Relationship Intangible Assets

Segment	December 31, 2021			December 31, 2020		
	Cost	Accumulated amortization	Net carrying amount	Cost	Accumulated amortization	Net carrying amount
Bermuda	29,785	(16,438)	13,347	29,785	(15,009)	14,776
Cayman	16,517	(6,663)	9,854	17,728	(6,773)	10,955
Channel Islands and the UK	89,396	(56,030)	33,366	90,069	(53,279)	36,790
Other	5,563	(1,380)	4,183	5,563	(892)	4,671
Total	141,261	(80,511)	60,750	143,145	(75,953)	67,192

Customer relationships are initially valued based on the present value of net cash flows expected to be derived solely from the recurring customer base existing as at the date of acquisition. Customer relationship intangible assets may or may not arise from contracts.

During the years ended December 31, 2021 and 2020, no new customer intangible assets were acquired. During the year ended December 31, 2019, the Bank acquired \$24.4 million new customer intangible assets with an estimated useful life of 15 years (see "Note 26: Business combinations"). During the year ended December 31, 2021, \$1.2 million and \$0.7 million were written off in the Cayman and Channel Islands and the UK segments, respectively, as they were fully amortized (December 31, 2020: nil, December 31, 2019: nil). The amortization expense amounted to \$6.0 million (December 31, 2020: \$5.8 million, December 31, 2019: \$5.5 million) and the foreign exchange translation adjustment increased the net carrying amount by \$0.4 million (December 31, 2020: decreased by \$1.3 million, December 31, 2019: decreased by \$2.0 million). The estimated aggregate amortization expense for each of the succeeding five years is \$5.9 million.

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

Note 10: Deposits

By Maturity

December 31, 2021	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		
Demand or less than \$100k ¹	2,820,609	8,104,668	10,925,277	30,181	8,949	13,094	12,426	64,650	10,989,927
Term - \$100k or more	N/A	N/A	—	1,627,330	578,096	589,161	85,709	2,880,296	2,880,296
Total deposits	2,820,609	8,104,668	10,925,277	1,657,511	587,045	602,255	98,135	2,944,946	13,870,223

December 31, 2020	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		
Demand or less than \$100k ¹	3,012,360	7,577,642	10,590,002	30,551	8,402	13,138	14,875	66,966	10,656,968
Term - \$100k or more	N/A	N/A	—	1,553,178	625,533	330,773	83,632	2,593,116	2,593,116
Total deposits	3,012,360	7,577,642	10,590,002	1,583,729	633,935	343,911	98,507	2,660,082	13,250,084

¹ The weighted-average interest rate on interest-bearing demand deposits as at December 31, 2021 is -0.03% (December 31, 2020: -0.04%).

By Type and Segment

	December 31, 2021			December 31, 2020		
	Payable on demand	Payable on a fixed date	Total	Payable on demand	Payable on a fixed date	Total
Bermuda	3,820,647	690,102	4,510,749	4,107,156	705,490	4,812,646
Cayman	4,087,131	524,918	4,612,049	3,577,120	531,602	4,108,722
Channel Islands and the UK	3,017,499	1,729,926	4,747,425	2,905,726	1,422,990	4,328,716
Total deposits	10,925,277	2,944,946	13,870,223	10,590,002	2,660,082	13,250,084

Note 11: 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 UK jurisdictions, and the defined benefit post-retirement medical plan is in Bermuda. The Bank has a residual obligation on top of its defined contribution plan in Mauritius.

Bermuda Defined Benefit and Post-Retirement Medical Benefit Plan

The Bank amortizes prior service credit resulting from plan amendments that occurred when plan members were active employees, on a linear basis over the expected average remaining service period (to full eligibility) of active members expected to receive benefits under the plan. Such remaining service periods are as follows: 3.1 years for the 2010 plan amendments and 4.6 years for the 2011 plan amendments. Plan amendments occurring in 2014 and 2019 resulted in the recognition of new prior service costs on December 31, 2014 and December 31, 2019 on a plan for which substantially all members are now inactive. The Bank has elected to amortize these new prior service costs on a linear basis over 21 years and 16 years, respectively, which was the average remaining life expectancy of members eligible for benefits under the plan at the time of the amendments.

Guernsey Defined Benefit Pension Plan

Effective October 2014, all the participants of the Guernsey defined benefit pension plan became inactive and in accordance with GAAP, the net actuarial loss of the Guernsey defined benefit pension plan is amortized over the then estimated average remaining life expectancy of the inactive participants of 39 years. Prior to all of the Guernsey participants being inactive, the net actuarial loss of the Guernsey defined benefit pension plan was amortized to net income over the estimated average remaining service period for active members of 15 years.

UK Defined Benefit Pension Plan

The UK defined benefit pension plan closed to new members effective April 1, 2002 and subsequently closed to further accrual of new benefits effective October 1, 2012. During the years ended December 31, 2018 and 2017, the pension plan settled in cash the liability of several plan members and an insurance policy was purchased in the name of the trustees of the plan to match the liabilities of remaining members who were pensioners as at March 31, 2016.

Mauritius Portable Retirement Gratuity Fund

Under the Mauritius Workers' Right Act of 2019, the Portable Retirement Gratuity Fund was established for the purpose of providing for the payment of a gratuity on the death or retirement of an employee and came into effect on January 1, 2020. The Fund operates as a centralized defined contribution scheme with employers required to make upfront contributions at prescribed rates based on employees monthly remuneration. Any shortfall in this lump sum gratuity in the employees accumulated fund upon death or retirement, is to be funded by the Bank. Accordingly, the Bank recognizes the related service and net interest costs as well as the related net actuarial liability.

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

The following table presents the financial position of the Bank's defined benefit pension plans and the Bank's post-retirement medical benefit plan, which is unfunded. The Bank measures the benefit obligations and plan assets annually on each December 31 and therefore, the most recent measurement date is December 31, 2021.

The 2021 net actuarial gain recognized in the defined benefit plans is largely due to an increase in discount rates as well as an update to census data used to value the benefit obligation and actual returns on investments being higher than expected. This was partially offset by a change in the mortality tables applied in 2021.

	December 31, 2021		December 31, 2020		December 31, 2019	
	Pension plans	Post-retirement medical benefit plan	Pension plans	Post-retirement medical benefit plan	Pension plans	Post-retirement medical benefit plan
Accumulated benefit obligation at end of year	157,478	125,968	179,018	128,167	168,791	110,347
Change in projected benefit obligation						
Projected benefit obligation at beginning of year	179,018	128,167	168,791	110,347	148,966	117,203
Service cost	—	82	43	66	—	58
Interest cost	2,729	2,594	3,957	3,270	5,034	4,741
Benefits paid	(9,050)	(3,712)	(7,412)	(4,069)	(7,546)	(4,010)
Prior service cost	403	—	48	—	—	—
Plan amendment	—	—	—	—	—	2,369
Settlement and curtailment of liability	(5,906)	—	(7,505)	—	(2,549)	—
Actuarial (gain) loss	(9,093)	(1,163)	18,326	18,553	21,950	(10,014)
Foreign exchange translation adjustment	(623)	—	2,770	—	2,936	—
Projected benefit obligation at end of year	157,478	125,968	179,018	128,167	168,791	110,347
Change in plan assets						
Fair value of plan assets at beginning of year	182,516	—	175,400	—	154,151	—
Actual return on plan assets	10,265	—	14,945	—	25,225	—
Employer contribution	1,680	3,712	2,917	4,069	2,605	4,010
Plan settlement	(5,625)	—	(5,903)	—	(2,043)	—
Benefits paid	(9,050)	(3,712)	(7,412)	(4,069)	(7,546)	(4,010)
Foreign exchange translation adjustment	(761)	—	2,569	—	3,008	—
Fair value of plan assets at end of year	179,025	—	182,516	—	175,400	—
Amounts recognized in the consolidated balance sheets consist of:						
Prepaid benefit cost included in other assets	21,809	—	6,610	—	6,609	—
Accrued pension benefit cost included in employee benefit plans liability	(262)	(125,968)	(3,112)	(128,167)	—	(110,347)
Surplus (deficit) of plan assets over projected benefit obligation at measurement date	21,547	(125,968)	3,498	(128,167)	6,609	(110,347)

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

	Year ended					
	December 31, 2021		December 31, 2020		December 31, 2019	
	Pension plans	Post- retirement medical benefit plan	Pension plans	Post- retirement medical benefit plan	Pension plans	Post- retirement medical benefit plan
Amounts recognized in accumulated other comprehensive loss consist of:						
Net actuarial gain (loss), excluding deferred taxes	(55,809)	(18,371)	(73,506)	(21,213)	(67,118)	(2,660)
Net prior service credit (cost)	(591)	(7,342)	(226)	(7,866)	(190)	(8,390)
Deferred income taxes assets (liabilities)	—	—	1,477	—	996	—
Net amount recognized in accumulated other comprehensive loss	(56,400)	(25,713)	(72,255)	(29,079)	(66,312)	(11,050)

Annual Benefit Expense							
Expense component	Line item in the consolidated statements of operations						
Service cost	Salaries and other employee benefits	58	82	97	66	—	58
Interest cost	Non-service employee benefits expense	2,729	2,594	3,960	3,270	5,034	4,741
Expected return on plan assets	Non-service employee benefits expense	(6,437)	N/A	(7,547)	N/A	(7,563)	—
Amortization of net actuarial (gains) losses	Non-service employee benefits expense	2,766	1,679	2,412	—	2,197	272
Amortization of prior service (credit) loss	Non-service employee benefits expense	(25)	524	21	524	20	376
(Gain) loss on settlement	Net other gains (losses)/Non-service employee benefits expense	1,679	—	1,326	—	572	—
Defined benefit (income) expense		770	4,879	269	3,860	260	5,447
Defined contribution expense		8,259	—	8,933	—	8,340	—
Total benefit (income) expense		9,029	4,879	9,202	3,860	8,600	5,447

The components of 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 operations.

Other Changes Recognized in Other Comprehensive Income (Loss)						
Net gain (loss) arising during the year	14,772	1,163	(8,363)	(18,553)	(3,472)	10,014
Prior service credit (cost) arising during the year	(399)	—	(47)	—	—	(2,369)
Amortization of net actuarial (gains) losses	2,766	1,679	2,412	—	2,407	272
Amortization of prior service (credit) cost	(25)	524	20	524	19	376
Change in deferred taxes	(1,462)	—	456	—	149	—
Foreign exchange adjustment	203	—	(421)	—	(523)	—
Total changes recognized in other comprehensive income (loss)	15,855	3,366	(5,943)	(18,029)	(1,420)	8,293

To develop the expected long-term rate of return on the plan assets assumption for each plan, the Bank considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocations of the assets. The weighted average discount rate used to determine benefit obligations at the end of the year is derived from interest rates on high quality corporate bonds with maturities that match the expected benefit payments.

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

Actuarial Assumptions

	Year ended					
	December 31, 2021		December 31, 2020		December 31, 2019	
	Pension plans	Post-retirement medical benefit plan	Pension plans	Post-retirement medical benefit plan	Pension plans	Post-retirement medical benefit plan
Actuarial assumptions used to determine annual benefit expense						
Weighted average discount rate	1.90 %	2.53 %	2.65 %	3.38 %	3.65 %	4.40 %
Weighted average rate of compensation increases ¹	2.20 %	N/A	2.30 %	N/A	2.50 %	N/A
Weighted average expected long-term rate of return on plan assets	3.65 %	N/A	4.60 %	N/A	5.00 %	N/A
Weighted average annual medical cost increase rate	N/A	7.2% to 4.5% in 2040	N/A	7.3% to 4.5% in 2040	N/A	7.5% to 4.5% in 2035
Actuarial assumptions used to determine benefit obligations at end of year						
Weighted average discount rate	2.30 %	2.88 %	1.90 %	2.53 %	2.65 %	3.38 %
Weighted average rate of compensation increases ¹	3.00 %	N/A	2.20 %	N/A	2.30 %	N/A
Weighted average annual medical cost increase rate	N/A	7.0% to 4.5% in 2040	N/A	7.2% to 4.5% in 2040	N/A	7.3% to 4.5% in 2040

¹ Only the UK subsidiary plan is impacted by potential future compensation increases.

Investments Policies and Strategies

The pension plans' assets are managed according to each plan's investment policy statement, which outlines the purpose of the plan, statement of objectives and guidelines and investment policy. The asset allocation is diversified and any use of derivatives is limited to hedging purposes only.

	December 31, 2021		December 31, 2020	
	Actual allocation	Target allocation	Actual allocation	Target allocation
Weighted average actual and target asset allocations of the pension plans by asset category				
Debt securities (including debt mutual funds)	39 %	32 %	37 %	30 %
Equity securities (including equity mutual funds)	51 %	53 %	50 %	52 %
Other	10 %	15 %	13 %	18 %
Total	100 %	100 %	100 %	100 %

Fair Value Measurements of Pension Plans' Assets

The following table presents the fair value of the plans' assets by category and level of inputs used in their respective fair value determination as described in "Note 2: Significant accounting policies", except the level 3 security, for which the valuation determination is described following the below table:

	December 31, 2021				December 31, 2020			
	Fair value determination				Fair value determination			
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
US government and federal agencies	—	23,040	—	23,040	—	21,566	—	21,566
Non-US governments debt securities	—	1,090	—	1,090	—	1,132	—	1,132
Corporate debt securities	—	45,596	—	45,596	—	45,871	—	45,871
Equity securities and mutual funds	1,111	90,193	—	91,304	925	90,574	—	91,499
Other	180	431	17,384	17,995	727	226	21,495	22,448
Total fair value of plans' assets	1,291	160,350	17,384	179,025	1,652	159,369	21,495	182,516

The Level 3 assets consist of insured annuity policies covering the full pension benefits of certain plan members. The fair value of these policies is deemed equal to the actuarial value of the projected benefit obligation for the insured benefits. At December 31, 2021, 29.2% (December 31, 2020: 28.4%) of the assets of the pension plans were mutual funds and equity securities managed or administered by wholly-owned subsidiaries of the Bank. At December 31, 2021, 0.6% (December 31, 2020: 0.5%) of the plans' assets were invested in common shares of the Bank.

The investments of the pension funds are diversified across a range of asset classes and are diversified within each asset class. The assets are generally actively managed with the goal of adding some incremental value through security selection and asset allocation.

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

Estimated 2022 Bank contribution to and estimated benefit payments for the next ten years under the pension and post-retirement medical benefit plans are as follows:

	Pension plans	Post- retirement medical benefit plan
Estimated Bank contributions for the full year ending December 31, 2022	—	4,798
Estimated benefit payments by year:		
2022	7,500	4,798
2023	7,300	5,044
2024	7,200	5,286
2025	7,400	5,536
2026	7,100	5,786
2027-2031	37,400	31,614

Note 12: Credit related arrangements, repurchase agreements and commitments

Commitments

As at December 31, 2021, the Bank was committed to expenditures under contract for information technology services sourcing of \$53.3 million (December 31, 2020: \$13.0 million). The Bank funded its expenditures with its own resources and plans to fund those currently in progress with its own resources, which may be obtained through cash on hand, cash flows from operations and issuances of debt and equity securities.

The following table summarizes the Bank's commitments for sourcing, long-term leases and other agreements:

Year ending December 31	Sourcing	Other	Total
2022	13,459	19,018	32,477
2023	11,301	13,262	24,563
2024	10,424	4,435	14,859
2025	10,018	1,794	11,812
2026	8,112	309	8,421
2027 & thereafter	—	17	17
Total commitments	53,314	38,835	92,149

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 expected credit losses.

The Bank has a facility with 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 December 31, 2021, \$145.7 million (December 31, 2020: \$153.2 million) of standby letters of credit were issued under this facility.

Outstanding unfunded commitments to extend credit	December 31, 2021	December 31, 2020
Commitments to extend credit	717,077	836,710
Documentary and commercial letters of credit	1,522	981
Total unfunded commitments to extend credit	718,599	837,691
Allowance for credit losses	(551)	(179)

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 are 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.

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

Outstanding financial guarantees	December 31, 2021			December 31, 2020		
	Gross	Collateral	Net	Gross	Collateral	Net
Standby letters of credit	276,464	269,204	7,260	265,959	258,699	7,260
Letters of guarantee	3,588	3,552	36	5,449	5,413	36
Total	280,052	272,756	7,296	271,408	264,112	7,296

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 collateral involved is appropriate and by monitoring the value of the securities posted or received as collateral on a daily basis.

As at December 31, 2021, the Bank had 19 open positions (December 31, 2020: 5) 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 \$96.1 million (December 31, 2020: \$197.0 million) and are included in securities purchased under agreements to resell on the consolidated balance sheets. As at December 31, 2021, there were no positions (December 31, 2020: no positions) which were offset on the consolidated balance sheets 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 paragraph.

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 in connection with a US cross border tax investigation. On August 3, 2021, the Bank announced it had reached a resolution with the United States Department of Justice concerning this inquiry. The resolution is in the form of a non-prosecution agreement with a three-year term. The Bank paid \$5.6 million in respect of Forfeiture and Tax Restitution Amounts which is consistent with that previously provisioned for.

Note 13: 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 2035. Certain lease payments will be adjusted during the related lease's term based on movements in the relevant consumer price index.

	Year ended	
	December 31, 2021	December 31, 2020
Lease costs		
Operating lease costs	8,248	7,932
Short-term lease costs	1,407	1,500
Sublease income	(1,359)	(1,205)
Total net lease cost	8,296	8,227
Operating lease income	1,243	940
Other information for the period		
Right-of-use assets related to new operating lease liabilities	1,575	323
Operating cash flows from operating leases	8,402	8,330

	Year ended	
	December 31, 2021	December 31, 2020
Other information at end of period		
Operating leases right-of-use assets (included in other assets on the balance sheets)	39,525	46,244
Operating lease liabilities (included in other liabilities on the balance sheets)	38,789	44,940
Weighted average remaining lease term for operating leases (in years)	9.81	10.14
Weighted average discount rate for operating leases	5.25 %	5.25 %

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

The following table summarizes the maturity analysis of the Bank's commitments for long-term leases as at December 31, 2021:

Year ending December 31	Operating Leases
2022	8,066
2023	6,895
2024	6,240
2025	3,957
2026	2,998
2027 & thereafter	21,754
Total commitments	49,910
Less: effect of discounting cash flows to their present value	(11,121)
Operating lease liabilities	38,789

Note 14: Loan interest income

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Contractual interest earned	214,539	224,474	228,892
Amortization			
Amortization of fair value hedge	(281)	(300)	(316)
Amortization of loan origination fees (net of amortized costs)	6,847	5,436	5,456
Amortization of fair value adjustment on purchased loans	439	1,046	—
Total loan interest income	221,544	230,656	234,032
Balance of unamortized fair value hedge included in loans as at year end	1,095	1,376	1,676
Balance of unamortized loan fees included in loans as at year end	11,926	12,204	11,628

Note 15: Segmented information

The Bank is managed by the Chairman and Chief Executive Officer ("CEO") on a geographic basis. The Bank presents four reportable segments, three geographical and one other: Bermuda, Cayman, Channel Islands and the UK, and Other. The Other segment is composed of several non-reportable operating segments that have been aggregated in accordance with GAAP. Each reportable segment has a managing director who reports to the Chairman and CEO. The Chairman and CEO and the segment 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 Chairman and CEO. Segment results are determined based on the Bank's management reporting system, which assigns balance sheet and statement of operations 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: Significant accounting policies. 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 expenses. 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 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, 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 intermediaries including mortgage lending, private banking and treasury services, internet banking, wealth management and fiduciary services. The UK jurisdiction provides mortgage services for high-value residential properties.

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

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.

Total Assets by Segment	December 31, 2021	December 31, 2020
Bermuda	5,728,466	5,924,779
Cayman	4,973,402	4,479,937
Channel Islands and the UK	5,234,880	4,826,671
Other	33,059	32,928
Total assets before inter-segment eliminations	15,969,807	15,264,315
Less: inter-segment eliminations	(634,607)	(525,681)
Total	15,335,200	14,738,634

2021 Year ended December 31	Net interest income		Provision for credit recoveries (losses)	Non-interest income	Net revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter-segment							
Bermuda	147,295	(1,304)	2,206	84,641	232,838	880	233,718	186,806	46,912
Cayman	89,757	1,241	1,415	58,058	150,471	213	150,684	58,945	91,739
Channel Islands and the UK	62,752	63	(493)	45,294	107,616	(2,454)	105,162	81,654	23,508
Other	3	—	—	27,549	27,552	—	27,552	27,043	509
Total before eliminations	299,807	—	3,128	215,542	518,477	(1,361)	517,116	354,448	162,668
Inter-segment eliminations	—	—	—	(17,435)	(17,435)	—	(17,435)	(17,435)	—
Total	299,807	—	3,128	198,107	501,042	(1,361)	499,681	337,013	162,668

2020 Year ended December 31	Net interest income		Provision for credit recoveries (losses)	Non-interest income	Net revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter-segment							
Bermuda	158,790	778	(8,750)	85,216	236,034	1,970	238,004	192,781	45,223
Cayman	94,211	1,149	483	49,294	145,137	491	145,628	62,605	83,023
Channel Islands and the UK	64,591	(1,927)	(224)	40,698	103,138	(1,238)	101,900	82,057	19,843
Other	7	—	—	14,384	14,391	(1)	14,390	15,262	(872)
Total before eliminations	317,599	—	(8,491)	189,592	498,700	1,222	499,922	352,705	147,217
Inter-segment eliminations	—	—	—	(5,733)	(5,733)	—	(5,733)	(5,733)	—
Total	317,599	—	(8,491)	183,859	492,967	1,222	494,189	346,972	147,217

2019 Year ended December 31	Net interest income		Provision for credit recoveries (losses)	Non-interest income	Net revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter-segment							
Bermuda	182,674	1,236	(3,088)	89,114	269,936	2,172	272,108	209,417	62,691
Cayman	113,493	1,071	1,893	51,853	168,310	570	168,880	61,057	107,823
Channel Islands and the UK	49,486	(2,307)	1,379	34,319	82,877	43	82,920	74,217	8,703
Other	49	—	—	22,119	22,168	(18)	22,150	24,292	(2,142)
Total before eliminations	345,702	—	184	197,405	543,291	2,767	546,058	368,983	177,075
Inter-segment eliminations	—	—	—	(13,430)	(13,430)	—	(13,430)	(13,430)	—
Total	345,702	—	184	183,975	529,861	2,767	532,628	355,553	177,075

Note 16: 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.

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

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 include designated currency swaps that are used to minimize the Bank's exposure to variability in the fair value of available-for-sale investments due to movements in foreign exchange rates. The effective portion of changes in the fair value of the hedging instrument is recognized in current year earnings consistent with the related change in fair value of the hedged items attributable to foreign exchange rates. For fair value hedges, hedging effectiveness of the hedged item and the hedging instrument are assessed and managed at inception and on an ongoing basis using a partial-term method.

Net investment hedges include 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 AOCI 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 AOCI (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 AOCI 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 AOCI is based on the spot exchange rate between the reporting currency of the Bank and the functional currency of the respective subsidiary. See Note 23: Accumulated other comprehensive income (loss)" for details on the amount recognized into AOCI during the current period from translation gain or loss.

Derivatives not formally designated as hedges are entered into to manage the 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 revenue.

Client service derivatives

The Bank enters into foreign exchange contracts 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 revenue

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.

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

December 31, 2021	Derivative instrument	Number of contracts	Notional amounts	Gross positive fair value	Gross negative fair value	Net fair value
Risk management derivatives						
Net investment hedges	Currency swaps	4	61,641	1,071	(163)	908
Fair value hedges	Currency swaps	4	174,169	1,216	(2,535)	(1,319)
Derivatives not formally designated as hedging instruments	Currency swaps	36	1,552,733	14,538	(9,566)	4,972
Subtotal risk management derivatives			1,788,543	16,825	(12,264)	4,561
Client services derivatives	Spot and forward foreign exchange	125	331,837	1,138	(1,003)	135
Total derivative instruments			2,120,380	17,963	(13,267)	4,696

December 31, 2020	Derivative instrument	Number of contracts	Notional amounts	Gross positive fair value	Gross negative fair value	Net fair value
Risk management derivatives						
Net investment hedges	Currency swaps	4	68,231	—	(4,586)	(4,586)
Fair value hedges	Currency swaps	5	197,987	4,039	—	4,039
Derivatives not formally designated as hedging instruments	Currency swaps	42	1,471,632	2,678	(21,239)	(18,561)
Subtotal risk management derivatives			1,737,850	6,717	(25,825)	(19,108)
Client services derivatives	Spot and forward foreign exchange	241	770,113	7,128	(6,862)	266
Total derivative instruments			2,507,963	13,845	(32,687)	(18,842)

In addition to the above, as at December 31, 2021 foreign denominated deposits of £192.3 million (December 31, 2020: £192.8 million) and CHF 0.4 million (December 31, 2020: CHF 0.4 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 collateral 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.

December 31, 2021	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	
Derivative assets						
Spot and forward foreign exchange and currency swaps	17,963	(9,843)	8,120	—	—	8,120
Derivative liabilities						
Spot and forward foreign exchange and currency swaps	13,267	(9,843)	3,424	—	(818)	2,606
Net positive fair value			4,696			

December 31, 2020	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	
Derivative assets						
Spot and forward foreign exchange and currency swaps	13,845	(7,153)	6,692	—	(3)	6,689
Derivative liabilities						
Spot and forward foreign exchange and currency swaps	32,687	(7,153)	25,534	—	(3,042)	22,492
Net negative fair value			(18,842)			

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

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	Year ended		
		December 31, 2021	December 31, 2020	December 31, 2019
Spot and forward foreign exchange	Foreign exchange revenue	(131)	(191)	(202)
Currency swaps, not designated as hedge	Foreign exchange revenue	23,531	(18,854)	592
Currency swaps - fair value hedges	Foreign exchange revenue	(5,357)	4,039	—
Total net gains (losses) recognized in net income		18,043	(15,006)	390

Derivative instrument	Consolidated statements of comprehensive income line item	Year ended		
		December 31, 2021	December 31, 2020	December 31, 2019
Currency swaps - net investment hedge	Net change in unrealized gains and (losses) on translation of net investment in foreign operations	5,495	(4,469)	(85)
Total net gains (losses) recognized in comprehensive income		5,495	(4,469)	(85)

Note 17: 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: Significant accounting policies".

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 and US and UK Government Treasury notes.

Financial instruments in Level 2 include government debt securities, 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 year ended December 31, 2021 and the year ended December 31, 2020.

	December 31, 2021			Total carrying amount / fair value	December 31, 2020			Total carrying amount / fair value
	Fair value				Fair value			
	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3	
Items that are recognized at fair value on a recurring basis:								
Financial assets								
Equity securities								
Mutual funds	—	222	—	222	7,081	236	—	7,317
Total equity securities	—	222	—	222	7,081	236	—	7,317
Available-for-sale investments								
US government and federal agencies	823,809	2,319,815	—	3,143,624	—	2,566,066	—	2,566,066
Non-US governments debt securities	267,200	22,393	—	289,593	—	22,408	—	22,408
Asset-backed securities - Student loans	—	—	13,174	13,174	—	—	12,945	12,945
Residential mortgage-backed securities	—	27,339	—	27,339	—	59,697	—	59,697
Total available-for-sale	1,091,009	2,369,547	13,174	3,473,730	—	2,648,171	12,945	2,661,116
Other assets - Derivatives	—	8,120	—	8,120	—	6,692	—	6,692
Financial liabilities								
Other liabilities - Derivatives	—	3,424	—	3,424	—	25,534	—	25,534

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

Level 3 Reconciliation

The Level 3 financial instrument, 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 quote from an external security pricing service.

The table below summarizes realized and unrealized gains and losses for Level 3 assets still held at the reporting date.

	December 31, 2021	December 31, 2020	December 31, 2019
	Available- for-sale investments	Available- for-sale investments	Available- for-sale investments
Carrying amount at beginning of year	12,945	12,891	12,626
Change in unrealized gains (losses) recognized in other comprehensive income	229	54	265
Carrying amount at end of year	13,174	12,945	12,891
Cumulative gain (loss) recognized in other comprehensive income	(116)	(345)	(399)

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

	Level	December 31, 2021			December 31, 2020		
		Carrying amount	Fair value	Appreciation / (depreciation)	Carrying amount	Fair value	Appreciation / (depreciation)
Financial assets							
Cash due from banks	Level 1	2,179,833	2,179,833	—	3,289,592	3,289,592	—
Securities purchased under agreements to resell	Level 2	96,107	96,107	—	197,039	197,039	—
Short-term investments	Level 1	1,198,918	1,198,918	—	823,039	823,039	—
Investments held-to-maturity	Level 2	2,763,344	2,786,112	22,768	2,194,371	2,304,756	110,385
Loans, net of allowance for credit losses	Level 2	5,240,670	5,265,049	24,379	5,160,810	5,193,240	32,430
Other real estate owned ¹	Level 2	691	691	—	4,052	4,052	—
Financial liabilities							
Term deposits	Level 2	2,944,946	2,948,625	(3,679)	2,660,082	2,665,463	(5,381)
Long-term debt	Level 2	171,876	158,993	12,883	171,462	170,086	1,376

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

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

Note 18: Interest rate risk

The following tables set out the assets, liabilities and shareholders' equity 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.

December 31, 2021	Earlier of contractual maturity or repricing date						Total
(in \$ millions)	Within 3 months	3 to 6 months	6 to 12 months	1 to 5 years	After 5 years	Non-interest bearing funds	Total
Assets							
Cash due from banks	2,064	—	—	—	—	116	2,180
Securities purchased under agreement to resell	96	—	—	—	—	—	96
Short-term investments	842	252	105	—	—	—	1,199
Investments	14	9	14	1,173	5,027	—	6,237
Loans	4,208	22	91	705	182	33	5,241
Other assets	—	—	—	—	—	382	382
Total assets	7,224	283	210	1,878	5,209	531	15,335
Liabilities and shareholders' equity							
Shareholders' equity	—	—	—	—	—	977	977
Demand deposits	8,077	—	27	—	—	2,821	10,925
Term deposits	1,658	587	602	98	—	—	2,945
Other liabilities	—	—	—	—	—	316	316
Long-term debt	—	—	—	172	—	—	172
Total liabilities and shareholders' equity	9,735	587	629	270	—	4,114	15,335
Interest rate sensitivity gap	(2,511)	(304)	(419)	1,608	5,209	(3,583)	—
Cumulative interest rate sensitivity gap	(2,511)	(2,815)	(3,234)	(1,626)	3,583	—	—
December 31, 2020	Earlier of contractual maturity or repricing date						Total
(in \$ millions)	Within 3 months	3 to 6 months	6 to 12 months	1 to 5 years	After 5 years	Non-interest bearing funds	Total
Assets							
Cash due from banks	3,156	—	—	—	—	134	3,290
Securities purchased under agreement to resell	197	—	—	—	—	—	197
Short-term investments	494	327	2	—	—	—	823
Investments	13	13	27	92	4,711	7	4,863
Loans	4,170	39	71	652	187	42	5,161
Other assets	—	—	—	—	—	405	405
Total assets	8,030	379	100	744	4,898	588	14,739
Liabilities and shareholders' equity							
Shareholders' equity	—	—	—	—	—	982	982
Demand deposits	7,578	—	—	—	—	3,012	10,590
Term deposits	1,584	634	344	99	—	—	2,661
Other liabilities	—	—	—	—	—	335	335
Long-term debt	—	—	—	171	—	—	171
Total liabilities and shareholders' equity	9,162	634	344	270	—	4,329	14,739
Interest rate sensitivity gap	(1,132)	(255)	(244)	474	4,898	(3,741)	—
Cumulative interest rate sensitivity gap	(1,132)	(1,387)	(1,631)	(1,157)	3,741	—	—

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

Note 19: Long-term debt

On June 27, 2005, the Bank issued US \$150 million of Subordinated Lower Tier II capital notes. The notes were issued at par in two tranches, namely US \$90 million in Series A notes due 2015, which were redeemed at face value in January 2014, and US \$60 million in Series B notes due 2020. The issuance was by way of private placement with US institutional investors. The notes were listed on the BSX in the specialist debt securities category. The Series B notes paid a fixed coupon of 5.11% until July 2, 2015 when they became redeemable in whole at the Bank's option. The Series B notes were priced at a spread of 1.10% over the 10-year US Treasury yield. During September 2011, the Bank repurchased \$15 million of the outstanding 5.11% 2005 Series B Subordinated notes and the balance of \$45 million matured on July 2, 2020.

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, which were redeemed at face value in May 2013 and US \$25 million in Series B notes due 2023. The issuance was by way of private placement with US institutional investors. The notes were 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 Series B notes paid 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 and were redeemed at face value in November 2020.

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 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.

On June 11, 2020, the Bank issued US \$100 million of Subordinated Lower Tier II capital notes. The notes were issued at par and due on June 15, 2030. The issuance was by way of a registered offering with US institutional investors. The notes are listed on the BSX in the specialist debt securities category. The proceeds of the issue were used, among others, to repay the entire amount of the US \$45 million outstanding subordinated notes series 2005-B which matured on July 2, 2020. The notes issued pay a fixed coupon of 5.25% until June 15, 2025 when they become redeemable in whole at the option of the Bank. The notes were priced at a spread of 4.43% over the 10-year US Treasury yield. The Bank incurred \$2.3 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 years ended December 31, 2021, 2020 and 2019.

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 December 31, 2021. The interest payments are calculated until contractual maturity using the current LIBOR and Secured Overnight Financing Rate ("SOFR").

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
Bermuda								
2018 issuance	June 1, 2023	June 1, 2028	5.25 %	3 months US\$ LIBOR + 2.255%	75,000	3,938	8,535	2,813
2020 issuance	June 15, 2025	June 15, 2030	5.25 %	3 months US\$ SOFR + 5.060%	100,000	5,250	20,904	18,140
Total					175,000	9,188	29,439	20,953
Unamortized debt issuance costs					(3,124)			
Long-term debt less unamortized debt issuance costs					171,876			

Note 20: Earnings per share

Earnings per share have been calculated using the weighted average number of common shares outstanding during the year 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 year ended December 31, 2021, there were no options to purchase common shares outstanding (December 31, 2020: 0.1 million, December 31, 2019: 0.2 million). During the year ended December 31, 2021, the average number of outstanding awards of unvested common shares was 1.0 million (December 31, 2020: 0.9 million, December 31, 2019: 0.9 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.

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

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Net income	162,668	147,217	177,075
Basic Earnings Per Share			
Weighted average number of common shares issued	50,145	51,128	54,338
Weighted average number of common shares held as treasury stock	(619)	(619)	(1,166)
Weighted average number of common shares (in thousands)	49,526	50,509	53,172
Basic Earnings Per Share	3.28	2.91	3.33
Diluted Earnings Per Share			
Weighted average number of common shares	49,526	50,509	53,172
Net dilution impact related to options to purchase common shares	—	55	118
Net dilution impact related to awards of unvested common shares	349	286	369
Weighted average number of diluted common shares (in thousands)	49,875	50,850	53,659
Diluted Earnings Per Share	3.26	2.90	3.30

Note 21: 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 share 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 5.0 million and 7.5 million shares, respectively.

In May 2020, the Board of Directors approved the 2020 Omnibus Plan (the "2020 Plan") which replaces the 2010 Plan. Under the 2020 Plan, 3.0 million shares are initially available for grant to employees in the form of stock options or unvested share awards. Both types of awards are detailed below.

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 and 2020 Plans

Under the 2010 and 2020 Plans, 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 and 2020 Plans 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 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.

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

Changes in Outstanding Stock Option Plans

Year ended December 31, 2021	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 year	—	—	—	—	—	—	—	—
Exercised	—	—	—	—	—	—	—	—
Forfeitures and cancellations	—	—	—	—	—	—	—	—
Outstanding at end of year	—	—	—	—	—	0.00	0.00	—
Vested and exercisable at end of year	—	—	—	—	—	0.00	0.00	—

Year ended December 31, 2020	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 year	—	159	159	—	12.07	—	—	—
Exercised	—	(143)	(143)	—	12.13	—	—	2,192
Forfeitures and cancellations	—	(16)	(16)	—	11.50	—	—	—
Outstanding at end of year	—	—	—	—	—	0.00	0.00	—
Vested and exercisable at end of year	—	—	—	—	—	0.00	0.00	—

Year ended December 31, 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 year	25	189	214	64.51	11.98	—	—	—
Exercised	—	(30)	(30)	—	11.50	—	—	659
Expiration at end of plan life	(25)	—	(25)	64.51	—	—	—	—
Outstanding at end of year	—	159	159	—	12.07	0.00	0.73	3,958
Vested and exercisable at end of year	—	159	159	—	12.07	0.00	0.73	—

Share-Based Incentive Programs

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 years ended December 31, 2021, 2020 and 2019 was \$33.26, \$33.35 and \$35.77, respectively. The Bank expects to settle these awards by issuing new shares.

Employee Deferred Incentive Program ("EDIP")

Under the Bank's EDIP, shares are 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 Program ("ELTIP")

Under the Bank's ELTIP, 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.

Employee Share Purchase Plan ("ESPP")

The Bank's ESPP was approved in July 2021 and registered in November 2021. The first offering period is planned to start in May 2022. Under the Bank's ESPP, eligible employees may elect to contribute up to 15% of their regular compensation toward the purchase of Bank's shares at a 10% discount from market price on the closing date of each offering period. The ESPP specifies two consecutive six month offering periods per year. In the case of termination of employment or voluntary partial or full withdrawal from the plan, the related current offering period ESPP contributions are refunded to the employee and thus cannot be used to purchase shares under the ESPP.

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

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

	Year ended					
	December 31, 2021		December 31, 2020		December 31, 2019	
	EDIP	ELTIP	EDIP	ELTIP	EDIP	ELTIP
Outstanding at beginning of year	364	658	251	618	234	697
Granted	118	283	245	209	169	317
Vested (fair value in 2021: \$13.9 million, 2020: \$9.6 million; 2019: \$18.9 million)	(183)	(237)	(129)	(162)	(149)	(389)
Forfeitures (resignations, retirements, redundancies)	(2)	—	(3)	(7)	(3)	(7)
Outstanding at end of year	297	704	364	658	251	618

Share-based Compensation Cost Recognized in Net Income

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
	EDIP and ELTIP	EDIP and ELTIP	EDIP and ELTIP
Cost recognized in net income	14,539	14,608	17,459

Unrecognized Share-based Compensation Cost

	December 31, 2021		December 31, 2020	
	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
EDIP	4,896	1.45	6,588	1.91
ELTIP				
Time vesting shares	17	0.12	156	1.09
Performance vesting shares	8,840	1.76	8,187	1.60
Total unrecognized expense	13,753		14,931	

Note 22: Share buy-back plans

From time to time, the Bank may seek to repurchase and retire equity securities of the Bank, through cash purchase, privately negotiated transactions, or otherwise. Such transactions, if any, depend on prevailing market conditions, liquidity and capital requirements, contractual restrictions, and other factors.

Common Share Buy-Back Program

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 of up to 2.5 million common shares.

On December 2, 2019, the Board approved a new \$125 million common share repurchase program, authorizing the purchase of up to 3.5 million common shares through to February 28, 2021. The new program came into effect on December 20, 2019 following the completion of the previous program.

On February 10, 2021, the Board approved a new common share repurchase program, authorizing the purchase of up to 2.0 million common shares through to February 28, 2022.

On February 14, 2022, the Board approved a new common share repurchase program, authorizing the purchase of up to 2.0 million common shares through to February 28, 2023.

In the year ended December 31, 2021, the Bank repurchased and retired 534,828 shares.

Common share buy-backs	Year ended December 31		
	2021	2020	2019
Acquired number of shares (to the nearest 1)	534,828	3,452,000	2,293,788
Average cost per common share	36.93	25.10	35.55
Total cost (in US dollars)	19,753,336	86,639,889	81,534,076

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

Note 23: Accumulated other comprehensive income (loss)

Year ended December 31, 2021	Unrealized net gains (losses) on translation of net investment in foreign operations	Unrealized net gains (losses) on HTM investments	Unrealized net gains (losses) on AFS investments	Employee benefit plans adjustments			Total AOCL
				Pension	Post-retirement healthcare	Subtotal - employee benefits plans	
Balance at beginning of year	(21,065)	(60)	72,779	(72,255)	(29,079)	(101,334)	(49,680)
Other comprehensive income (loss), net of taxes	152	151	(94,761)	15,855	3,366	19,221	(75,237)
Balance at end of year	(20,913)	91	(21,982)	(56,400)	(25,713)	(82,113)	(124,917)

Year ended December 31, 2020	Unrealized net gains (losses) on translation of net investment in foreign operations	Unrealized net gains (losses) on HTM investments	Unrealized net gains (losses) on AFS investments	Employee benefit plans adjustments			Total AOCL
				Pension	Post-retirement healthcare	Subtotal - employee benefits plans	
Balance at beginning of year	(20,818)	(725)	11,808	(66,312)	(11,050)	(77,362)	(87,097)
Other comprehensive income (loss), net of taxes	(247)	665	60,971	(5,943)	(18,029)	(23,972)	37,417
Balance at end of year	(21,065)	(60)	72,779	(72,255)	(29,079)	(101,334)	(49,680)

Year ended December 31, 2019	Unrealized net gains (losses) on translation of net investment in foreign operations	Unrealized net gains (losses) on HTM investments	Unrealized net gains (losses) on AFS investments	Employee benefit plans adjustments			Total AOCL
				Pension	Post-retirement healthcare	Subtotal - employee benefits plans	
Balance at beginning of year	(19,866)	(796)	(43,630)	(64,892)	(19,343)	(84,235)	(148,527)
Other comprehensive income (loss), net of taxes	(952)	71	55,438	(1,420)	8,293	6,873	61,430
Balance at end of year	(20,818)	(725)	11,808	(66,312)	(11,050)	(77,362)	(87,097)

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

Net Change of AOCI Components	Line item in the consolidated statements of operations, if any	Year ended		
		December 31, 2021	December 31, 2020	December 31, 2019
Net unrealized gains (losses) on translation of net investment in foreign operations adjustments				
Foreign currency translation adjustments	N/A	(3,129)	9,991	16,200
Gains (losses) on net investment hedge	N/A	3,281	(10,238)	(17,152)
Net change		152	(247)	(952)
Held-to-maturity investment adjustments				
Amortization of net gains (losses) to net income	Interest income on investments	151	665	71
Net change		151	665	71
Available-for-sale investment adjustments				
Gross unrealized gains (losses)	N/A	(94,960)	62,191	57,062
Transfer of realized (gains) losses to net income	Net realized gains (losses) on AFS investments	239	(1,220)	(1,624)
Foreign currency translation adjustments of related balances	N/A	(40)	—	—
Net change		(94,761)	60,971	55,438
Employee benefit plans adjustments				
Defined benefit pension plan				
Net actuarial gain (loss)	N/A	14,772	(8,363)	(3,472)
Net loss (gain) on settlement reclassified to net income	Net other gains (losses)	—	—	—
Prior service credit (cost) arising during the year	N/A	(399)	(47)	—
Amortization of net actuarial (gains) losses	Non-service employee benefits expense	2,766	2,412	2,407
Change in deferred taxes	N/A	(1,462)	456	149
Amortization of prior service (credit) cost	Non-service employee benefits expense	(25)	20	19
Foreign currency translation adjustments of related balances	N/A	203	(421)	(523)
Net change		15,855	(5,943)	(1,420)
Post-retirement healthcare plan				
Net actuarial gain (loss)	N/A	1,163	(18,553)	10,014
Prior service cost	N/A	—	—	(2,369)
Amortization of net actuarial (gains) losses	Non-service employee benefits expense	1,679	—	272
Amortization of prior service (credit) cost	Non-service employee benefits expense	524	524	376
Net change		3,366	(18,029)	8,293
Other comprehensive income (loss), net of taxes		(75,237)	37,417	61,430

Note 24: Capital structure

Authorized Capital

The Bank trades on the New York Stock Exchange under the ticker symbol "NTB" and on the BSX under the symbol "NTB.BH".

The par value of each issued common share and each authorized but unissued common share is BM\$0.01 and the authorized share capital of the Bank comprises 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.

Dividends Declared

During the year ended December 31, 2021, the Bank declared and paid cash dividends of \$1.76 (December 31, 2020: \$1.76, December 31, 2019: \$1.76) for each common share as of the related record dates. On February 14, 2022, the Board of Directors declared an interim dividend of \$0.44 per common share to be paid on March 14, 2022 to shareholders of record on February 28, 2022.

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 the BMA's letter of no objection for all dividends declared during the periods presented.

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

Regulatory Capital

The Bank's regulatory capital is determined in accordance with current Basel III guidelines as issued by the BMA. The Bank is fully compliant with all regulatory capital requirements to which it is subject, and it maintains capital ratios in excess of regulatory minimums as at December 31, 2021 and 2020. The following table sets forth the Bank's capital adequacy in accordance with the Basel III framework:

	December 31, 2021		December 31, 2020	
	Actual	Regulatory minimum	Actual	Regulatory minimum
Capital				
CET 1 capital	896,263	N/A	816,009	N/A
Tier 1 capital	896,263	N/A	816,009	N/A
Tier 2 capital	183,998	N/A	187,090	N/A
Total capital	1,080,261	N/A	1,003,099	N/A
Risk Weighted Assets	5,101,474	N/A	5,068,590	N/A
Leverage Ratio Exposure Measure	15,921,624	N/A	15,349,363	N/A
Capital Ratios (%)				
CET 1 capital	17.6 %	10.0 %	16.1 %	10.0 %
Tier 1 capital	17.6 %	11.5 %	16.1 %	11.5 %
Total capital	21.2 %	13.5 %	19.8 %	13.5 %
Leverage ratio	5.6 %	5.0 %	5.3 %	5.0 %

Note 25: Income taxes

The Bank is incorporated in Bermuda, and pursuant to Bermuda law is not taxed on either income or capital gains. The Bank's subsidiaries in the Cayman Islands and The Bahamas are not subject to any taxes in their respective jurisdictions on either income or capital gains under current law applicable in the respective jurisdictions. The Bank's subsidiaries in Canada, the United Kingdom, Guernsey, Jersey, Switzerland, Singapore and Mauritius are subject to the tax laws of those jurisdictions.

For the years ended December 31, 2021, 2020, and 2019, the Bank did not record any unrecognized tax benefits or expenses and has no uncertain tax positions as at December 31, 2021, 2020, and 2019.

The Bank records income taxes based on the enacted tax laws and rates applicable in the relevant jurisdictions for the years ended December 31, 2021, 2020, and 2019. For the years ended December 31, 2021, 2020, and 2019, the Bank did not incur any interest or pay any penalties.

Income taxes in consolidated statements of operations	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Current tax expense	2,818	2,382	1,860
Deferred tax (recovery) expense	305	(4)	(3,231)
Total tax (benefit) expense	3,123	2,378	(1,371)

Reconciliation between the Effective Income Tax Rate and the Statutory Income Tax Rate

	Year ended					
	December 31, 2021		December 31, 2020		December 31, 2019	
	\$	%	\$	%	\$	%
Income tax expense in international offices taxed at different rates	3,366	2.0	2,695	1.8	695	0.4
Expenses not deductible for tax purposes	408	0.2	299	0.2	104	0.1
Prior year tax adjustments	(231)	(0.1)	41	—	160	0.1
Effect of change in tax rate	(1,217)	(0.7)	—	—	—	—
Change in valuation allowance	585	0.4	(582)	(0.4)	(2,429)	(1.4)
Other - net	212	0.1	(75)	(0.1)	99	0.1
Income tax (benefit) expense at effective tax rate	3,123	1.9	2,378	1.6	(1,371)	(0.8)

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

	December 31, 2021	December 31, 2020
Deferred income taxes		
Deferred income tax asset		
Tax loss carried forward	8,269	8,134
Pension liability	—	1,448
Fixed assets	—	(905)
Allowance for compensated absence	—	44
Deferred income tax asset before valuation allowance	8,269	8,721
Less: valuation allowance	(4,842)	(4,257)
Deferred income tax asset after valuation allowance	3,427	4,464
Deferred income tax liability		
Fixed assets	(735)	—
Allowance for compensated absence	(27)	—
Other	—	(19)
Total Deferred income tax liability	(762)	(19)
Net deferred income tax assets	2,665	4,445

Management assesses the available positive and negative evidence to evaluate if sufficient future taxable income will be generated to use the existing deferred tax assets. On the basis of this evaluation, as at December 31, 2021, a valuation allowance of \$4.8 million (December 31, 2020: \$4.3 million) has been recognized to record only the portion of the deferred tax asset that more likely than not will be realized. The amount of the deferred tax asset considered realizable, however, could be adjusted if estimates of future taxable income during the carry-forward period change, or if there are changes in the available positive and negative evidence.

The Bank has net taxable loss carry forwards related to the Bank's international operations of approximately \$41.4 million (December 31, 2020: \$47.4 million). Of these losses available to carry forward, \$39.9 million (December 31, 2020: \$45.2 million) have an indefinite life.

Note 26: Business combinations

ABN AMRO (Channel Islands) Limited Acquisition

On April 25, 2019, the Bank announced that it entered into an agreement to acquire all the outstanding shares of ABN AMRO (Channel Islands) Limited ("ABN AMRO Channel Islands"), the Channel Islands-based banking subsidiary of ABN AMRO Bank N.V. via one of the Bank's 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.

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

On July 15, 2019, the transaction completed as planned and the aggregate purchase price of £160.7 million (\$201.1 million) was paid in cash. During 2020, ABN AMRO Channel Islands' business and employees were integrated with the existing Butterfield Guernsey operations and operate under the Butterfield name. In addition to the figures noted below, on July 15, 2019, ABN AMRO Channel Islands had estimated clients' assets under management and custody of \$4.7 billion.

The fair value of the net assets acquired and allocation of purchase price is summarized as follows:

	As at July 15, 2019
Total consideration transferred	201,107
Assets acquired	
Cash due from banks	3,016,859
Loans	654,503
Intangible assets - Customer relationships	24,371
Other assets	31,674
Total assets acquired	3,727,407
Liabilities assumed	
Deposits	(3,493,239)
Other liabilities	(33,061)
Total liabilities assumed	(3,526,300)
Excess purchase price (Goodwill)	—

The acquired customer relationships intangible assets have an estimated finite useful life of 15 years.

The Bank incurred legal and professional transaction expenses related to this acquisition in the amount of \$5.4 million all of which were incurred and expensed during the year ended December 31, 2019.

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

For the period beginning on July 15, 2019 (i.e. acquisition date) to December 31, 2019, the amount of revenues and earnings relating to the acquired ABN AMRO Channel Islands operations that were not inextricably merged into the Bank's operations were \$13.7 million and a net income of \$1.5 million, respectively.

The following selected unaudited pro forma financial information has been provided to present a summary of the combined results of the Bank and the acquired ABN AMRO Channel Islands operations, assuming the transaction had been effected on January 1, 2018. The unaudited pro forma data is for informational purposes only and does not necessarily represent results that would have occurred if the transaction had taken place on the basis assumed above. The pro forma financial information has been prepared based on the actual results realized by ABN AMRO Channel Islands from January 1, 2017 to July 15, 2019, and results estimated at the time of acquisition.

Unaudited pro forma financial information	Year ended	
	December 31, 2019	December 31, 2018
Total net revenue	555,341	563,786
Total non-interest operating (expense)	(372,796)	(351,320)
Pro forma net income post business combination	182,545	212,466

Note 27: 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, and/or are guarantors for loans, deposits 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 for preferential rates. All of these loans were considered performing loans as at December 31, 2021 and December 31, 2020. Loan balances with 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 were as follows:

Balance at December 31, 2019	38,641
Loans issued during the year	37,073
Loan repayments and the effect of changes in the composition of related parties	(33,323)
Balance at December 31, 2020	42,391
Loans issued during the period	6,263
Loan repayments and the effect of changes in the composition of related parties	(41,279)
Balance at December 31, 2021	7,375

Consolidated balance sheets	December 31, 2021	December 31, 2020
Deposits	21,683	19,591

Consolidated statement of operations	Year ended December 31		
	2021	2020	2019
Interest and fees on loans	1,209	1,444	1,887

Certain affiliates of the Bank have loans and deposits with the Bank which were made and are maintained in the ordinary course of business on normal commercial terms. Balances with these parties were as follows:

Consolidated balance sheets	December 31, 2021	December 31, 2020
Loans	10,489	12,939
Deposits	441	423

Consolidated statement of operations	Year ended December 31		
	2021	2020	2019
Interest and fees on loans	618	654	677
Other gains/losses	99	742	—
Total non-interest expense	1,519	1,431	1,717

Investments

The Bank held seed investments in Butterfield mutual funds, which were managed by a wholly-owned subsidiary of the Bank. These investments were sold during the year ended December 31, 2021 and were included in equity securities at their fair value as follows:

Consolidated balance sheets	December 31, 2021	December 31, 2020
Equity securities		
Fair value	—	7,081
Unrealized gain	—	2,531

As at December 31, 2021, several Butterfield mutual funds which are managed by a wholly owned subsidiary of the Bank, had loan balances and deposit balances held with the Bank. The Bank also earned asset management revenue and custody and other administration services revenue from funds managed by a wholly-owned subsidiary of the Bank

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

and from directors and executives, companies in which they are principal owners and/or members of the board and trusts in which they are involved, as well as other income from other related parties.

Consolidated balance sheets	December 31, 2021	December 31, 2020
Loans	—	2,518
Deposits	22,346	26,541

Consolidated statement of operations	Year ended December 31		
	2021	2020	2019
Asset management	5,217	7,131	10,273
Custody and other administration services	622	1,108	1,452
Other non-interest income	6	729	1,458

Note 28: Condensed financial statements of the parent company only

Condensed financial statements of the Bank of N.T. Butterfield & Son Limited (the ultimate parent company) without consolidation of its subsidiaries were as follows:

The Bank of N.T. Butterfield & Son Limited (parent company only)

Condensed Balance Sheets

(In thousands of US dollars)

	As at	
	December 31, 2021	December 31, 2020
Assets		
Cash and demand deposits with banks - Non-interest-bearing	41,993	44,086
Demand deposits with banks - Interest-bearing	135,038	99,035
Cash equivalents - Interest-bearing	591,294	1,244,878
Cash due from banks	768,325	1,387,999
Securities purchased under agreements to resell	96,107	197,039
Short-term investments	242,691	16,277
Investment in securities		
Equity securities at fair value	222	7,316
Available-for-sale (amortized cost: \$1,419,712 (2020: 1,058,195))	1,417,117	1,092,325
Held-to-maturity (fair value: \$1,030,969 (2020: \$1,023,424))	1,011,584	967,926
Total investment in securities	2,428,923	2,067,567
Net assets of subsidiaries - Banks	594,930	618,461
Net assets of subsidiaries - Non-banks	17,091	11,971
Loans to third parties, net of allowance for credit losses	1,966,895	2,025,358
Loans to subsidiaries - Banks	13,534	13,669
Loans to subsidiaries - Non-banks	61,901	58,515
Other assets, including accrued interest, premises, equipment and computer software, equity method investments, receivables from subsidiaries and other real estate owned	188,263	199,273
Total assets	6,378,660	6,596,129
Liabilities		
Deposits		
Non-interest bearing	1,686,985	1,945,042
Interest bearing	3,360,185	3,298,165
Total deposits	5,047,170	5,243,207
Employee benefit plans	125,968	128,167
Other liabilities, including accrued interest and payables to subsidiaries	56,153	71,345
Total other liabilities	182,121	199,512
Long-term debt	171,876	171,462
Total liabilities	5,401,167	5,614,181
Total shareholders' equity	977,493	981,948
Total liabilities and shareholders' equity	6,378,660	6,596,129

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

The Bank of N.T. Butterfield & Son Limited (parent company only)

Condensed Statements of Operations

(In thousands of US dollars)

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Non-interest income			
Banking	24,465	24,429	24,870
Foreign exchange revenue	9,660	9,166	10,613
Custody and other administration services	7,693	6,927	7,625
Other non-interest income	3,372	5,924	5,650
Dividends from subsidiaries - Banks	82,327	121,522	122,776
Dividends from subsidiaries - Non-banks	22,656	19,864	23,371
Total non-interest income	150,173	187,832	194,905
Interest income			
Interest and fees on loans	116,031	123,774	132,104
Investments	44,663	52,135	68,721
Deposits with banks and other	2,056	3,109	9,156
Total interest income	162,750	179,018	209,981
Interest expense			
Deposits	6,405	9,386	17,410
Long-term debt	9,601	9,294	7,876
Securities sold under agreement to resell	—	—	13
Total interest expense	16,006	18,680	25,299
Net interest income before provision for credit losses	146,744	160,338	184,682
Provision for credit recoveries (losses)	2,206	(8,750)	(3,088)
Net interest income after provision for credit losses	148,950	151,588	181,594
Net gains (losses) on equity securities	85	658	925
Net realized gains (losses) on available-for-sale investments	—	702	1,053
Net gains (losses) on other real estate owned	(84)	(104)	(5)
Net other gains (losses)	850	714	2
Total other gains (losses)	851	1,970	1,975
Total net revenue	299,974	341,390	378,474
Non-interest expense			
Salaries and other employee benefits	62,405	69,521	77,923
Technology and communications	35,675	35,434	36,008
Professional and outside services	27,726	27,791	27,954
Property	9,586	9,092	6,927
Indirect taxes	15,906	15,633	15,355
Non-service employee benefits expense	4,493	3,462	5,879
Marketing	2,497	2,418	4,372
Amortization of intangible assets	169	169	169
Other expenses	9,502	9,896	9,260
Total non-interest expense	167,959	173,416	183,847
Net income before equity in undistributed earnings of subsidiaries	132,015	167,974	194,627
Equity in undistributed earnings of subsidiaries	30,653	(20,757)	(17,552)
Net income	162,668	147,217	177,075
Other comprehensive income, net of tax	(75,237)	37,417	61,430
Total comprehensive income	87,431	184,634	238,505

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

The Bank of N.T. Butterfield & Son Limited (parent company only)

Condensed Statements of Cash Flows

(In thousands of US dollars)

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Cash flows from operating activities			
Net income	162,668	147,217	177,075
Adjustments to reconcile net income to operating cash flows			
Depreciation and amortization	28,617	26,562	21,734
Provision for credit (recovery) losses	(2,206)	8,750	3,088
Share-based payments and settlements	15,151	15,245	17,716
Net change in equity securities at fair value	7,096	102	(925)
Net realized (gains) losses on available-for-sale investments	—	(702)	(1,053)
Net (gains) losses on other real estate owned	84	104	5
(Increase) decrease in carrying value of equity method investments	31	(1,376)	(290)
Dividends received from equity method investments	291	2,710	385
Equity in undistributed earnings of subsidiaries	(30,653)	20,757	17,552
Changes in operating assets and liabilities			
(Increase) decrease in accrued interest receivable and other assets	10,665	754	6,808
Increase (decrease) in employee benefit plans, accrued interest payable and other liabilities	(14,597)	9,456	(3,753)
Cash provided by (used in) operating activities	177,147	229,579	238,342
Cash flows from investing activities			
(Increase) decrease in securities purchased under agreements to resell	100,932	(54,756)	(114,942)
Short-term investments other than restricted cash: proceeds from maturities and sales	163,396	68,272	—
Short-term investments other than restricted cash: purchases	(391,996)	(35,319)	(32,953)
Available-for-sale investments: proceeds from sale	367	205,770	114,058
Available-for-sale investments: proceeds from maturities and pay downs	299,367	295,547	204,105
Available-for-sale investments: purchases	(669,391)	(317,451)	(196,652)
Held-to-maturity investments: proceeds from maturities and pay downs	269,311	229,576	137,622
Held-to-maturity investments: purchases	(316,820)	(195,898)	(53,228)
Net (increase) decrease in loans to third parties	60,395	8,263	(99,793)
Net (increase) decrease in loans to bank subsidiaries	135	(428)	(487)
Net (increase) decrease in loans to non-bank subsidiaries	(3,386)	(1,564)	(930)
Additions to premises, equipment and computer software	(10,372)	(11,313)	(14,009)
Proceeds from sale of other real estate owned	314	—	1,102
Injection of capital in subsidiary	(1,465)	(1,522)	(175,107)
Return of capital from a subsidiary	—	3,314	12,972
Cash provided by (used in) investing activities	(499,213)	192,491	(218,242)

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

The Bank of N.T. Butterfield & Son Limited (parent company only)

Condensed Statements of Cash Flows

(In thousands of US dollars)

	Year ended		
	December 31, 2021	December 31, 2020	December 31, 2019
Cash flows from financing activities			
Net increase (decrease) in demand and term deposit liabilities	(192,756)	630,141	(64,027)
Issuance of subordinated capital, net of underwriting fees	—	97,647	—
Repayment of long-term debt	—	(70,000)	—
Common shares repurchased	(19,754)	(86,640)	(81,534)
Proceeds from stock option exercises	—	1,739	349
Cash dividends paid on common shares	(87,285)	(88,932)	(93,636)
Cash provided by (used in) financing activities	(299,795)	483,955	(238,848)
Net increase (decrease) in cash, cash equivalent and restricted cash	(621,861)	906,025	(218,748)
Cash, cash equivalents and restricted cash: beginning of year	1,404,276	498,251	716,999
Cash, cash equivalents and restricted cash: end of year	782,415	1,404,276	498,251
Components of cash, cash equivalents and restricted cash at end of year			
Cash due from banks	768,325	1,387,999	486,692
Restricted cash included in short-term investments on the consolidated balance sheets	14,090	16,277	11,559
Total cash, cash equivalents and restricted cash at end of year	782,415	1,404,276	498,251
Supplemental disclosure of cash flow information			
Cash interest paid	15,156	19,532	24,190
Supplemental disclosure of non-cash items			
Transfer to (out of) other real estate owned	307	314	—
Initial recognition of right-of-use assets and operating lease liabilities	536	—	133
Reduction in net loans due to initial adoption of a current expected credit loss model	—	3,899	—

Note 29: Subsequent events

On February 14, 2022, the Board of Directors declared an interim dividend of \$0.44 per common share to be paid on March 14, 2022 to shareholders of record on February 28, 2022.

On February 14, 2022, the Board approved a new common share repurchase program, authorizing the purchase of up to 2.0 million common shares through to February 28, 2023.

ITEM 18. FINANCIAL STATEMENTS

Not applicable.

ITEM 19. EXHIBITS

The SEC maintains an internet site at <https://www.sec.gov> that contains reports and other information regarding issuers that file electronically with the SEC. These SEC filings are also available to the public from commercial document retrieval services.

(a) The following documents are filed as exhibits hereto:

<u>Exhibit No.</u>	<u>Description</u>
<u>1.1</u>	Amended and Restated Bye-laws of The Bank of N.T. Butterfield & Son Limited (incorporated by reference to Exhibit 1.1 to the registrant's Annual Report on Form 20-F for the year ended December 31, 2018)
<u>1.2</u>	The N.T. Butterfield & Son Bank Act, 1904 (incorporated by reference to Exhibit 3.2 to the registrant's registration statement on Form F-1, filed on August 4, 2016)
<u>2.1</u>	Form of Specimen of Common Registered Share Certificate (incorporated by reference to Exhibit 4.1 to the registrant's registration statement on Form F-1/A, filed on August 30, 2016)
<u>2.2</u>	Description of Securities
<u>4.1</u>	The Bank of N.T. Butterfield & Son Limited 2010 Omnibus Share Incentive Plan (incorporated by reference to Exhibit 10.2 to the registrant's registration statement on Form F-1, filed on August 4, 2016)
<u>4.2</u>	First Amendment to The Bank of N.T. Butterfield & Son Limited 2010 Omnibus Share Incentive Plan (incorporated by reference to Exhibit 99.1 to the registrant's registration statement on Form S-8, filed on October 27, 2016)
<u>4.3</u>	Subordinated Debt Securities Indenture between The Bank of N.T. Butterfield & Son Limited and The Bank of New York Mellon Trust Company, N.A., as Trustee, dated as at May 24, 2018 (incorporated by reference to Exhibit 4.1 to the registrant's report on Form 6-K filed on May 24, 2018)
<u>4.4</u>	First Supplemental Indenture, between The Bank of N.T. Butterfield & Son Limited and The Bank of New York Mellon Trust Company, N.A., as Trustee, dated as at May 24, 2018, to Subordinated Debt Securities Indenture, dated as at May 24, 2018 (incorporated by reference to Exhibit 4.2 to the registrant's report on Form 6-K filed on May 24, 2018)
<u>4.5</u>	Purchase Agreement, dated April 24, 2019, by and among Bank of N.T. Butterfield & Son Limited, Butterfield Bank (Guernsey) Limited and ABN AMRO (Channel Islands) Limited (incorporated by reference to Exhibit 2.1 to the registrant's report on Form 6-K filed on April 25, 2019)
<u>4.6</u>	The Bank of N.T. Butterfield & Son Limited 2020 Omnibus Share Incentive Plan (incorporated by reference to Exhibit 4.4 to the registrant's registration statement on Form S-8, filed on May 6, 2020)
<u>4.7</u>	Second Supplemental Indenture, between The Bank of N.T. Butterfield & Son Limited and The Bank of New York Mellon Trust Company, N.A., as Trustee, dated as at June 11, 2020, to Subordinated Debt Securities Indenture, dated as at May 24, 2018 (incorporated by reference to Exhibit 4.1 to the registrant's report on Form 6-K filed on June 11, 2020)
<u>4.8</u>	The Bank of N.T. Butterfield & Son Limited 2021 Employee Share Purchase Plan (incorporated by reference to Exhibit 4.4 to the registrant's registration statement on Form S-8, filed on November 2, 2021)
<u>8</u>	List of Subsidiaries
<u>12.1</u>	Certification of the Chairman and Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934
<u>12.2</u>	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934
<u>13.1</u>	Certification of the Chairman and Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
<u>15.1</u>	Consent of PricewaterhouseCoopers Ltd.
101	The following materials from our annual report on Form 20-F for the year ended December 31, 2021 formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Financial Statements and (ii) the Notes to the Consolidated Financial Statements, tagged as blocks of text and in detail.
104	Cover page interactive data file (formatted as Inline XBRL and included in Exhibit 101)

SIGNATURES

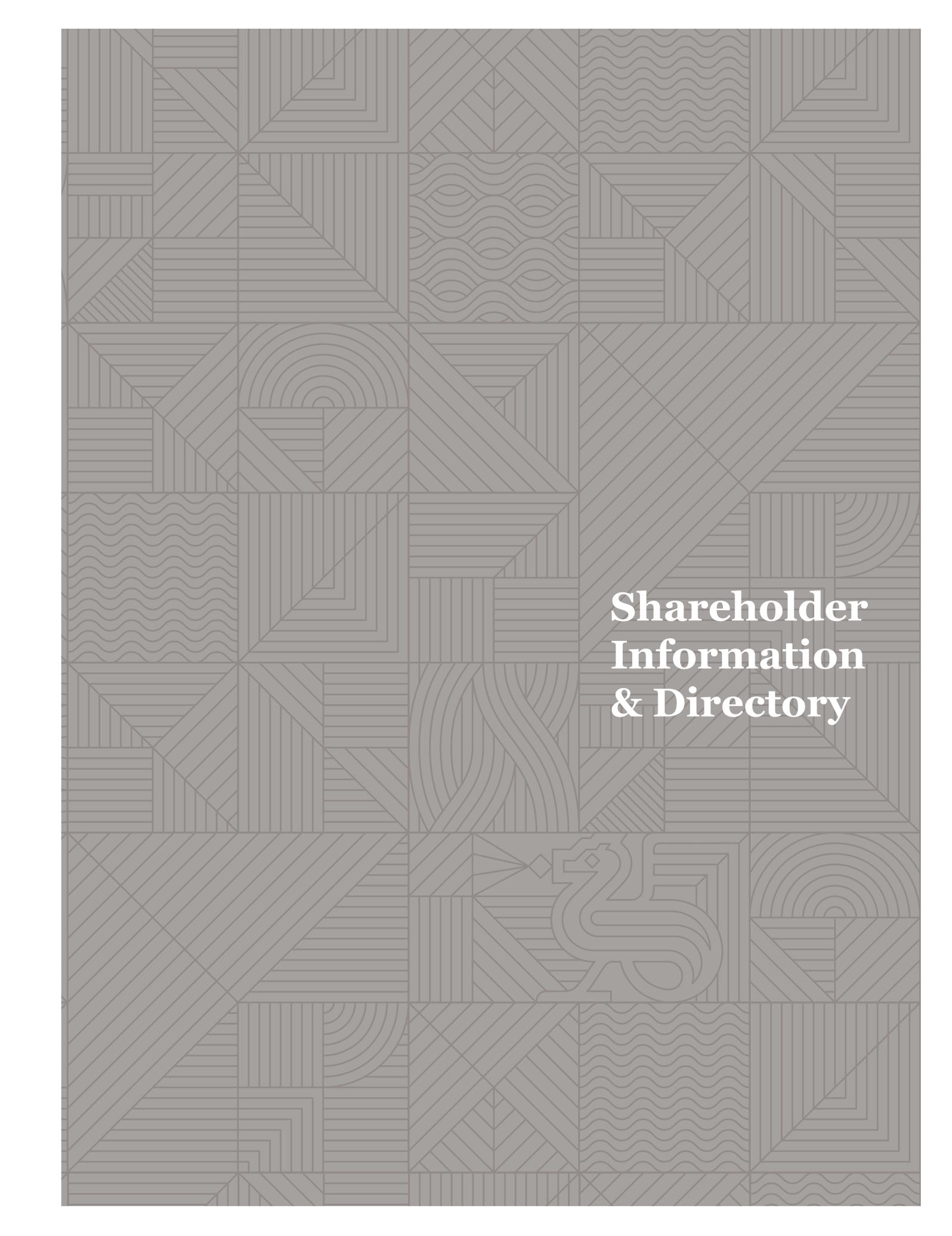
The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

The Bank of N.T. Butterfield & Son Limited

By: /s/ Michael Collins
Name: Michael Collins
Title: Chairman and Chief Executive Officer
Date: February 23, 2022

Glossary of abbreviations and defined terms

AFS	Available-for-sale	IGAs	Intergovernmental Agreements
AMLA	Swiss Federal Act on Combating Money Laundering and Terrorist Financing of 10 October 1997	IRC	Internal Revenue Code of 1986
AOCIL	Accumulated other comprehensive income (loss)	IRS	US Internal Revenue Service
AT1	Additional Tier 1 capital	IRRBB	Interest Rate Risk in the Banking Book
AUA	Assets Under Administration	ISDA	International Swaps and Derivatives Association
AUC	Assets Under Custody	Jersey DCS	Jersey Bank Deposit Compensation Scheme
AUM	Assets Under Management	JFSC	Jersey Financial Services Commission
Basel III	Basell III Accord	JOIC	Jersey Office of the Information Commissioner
BATCA	Banks and Trust Companies Act (2020 Revision)	KBRA	Kroll Bond Rating Agency
BBH	Brown Brothers Harriman	LCR	Liquidity Coverage Ratio
BBL	Banking Business (Jersey) Law 1991	LIBOR	London Interbank Offered Rate
BCBS	Basel Committee on Banking Supervision	LGD	Loss-Given Default
BDCA	Banks and Deposit Companies Act 1999	LTV	Loan-to-Value
BMA	Bermuda Monetary Authority	MAS	Monetary Authority of Singapore
BNYM	Bank of New York Mellon	MIPRU	Mortgage and Home Finance Firms and Insurance Intermediaries
Board	Board of Directors	Moody's	Moody's Investor Service
BRR	Borrower Risk Ratings	NACL	Non-Accrual Loan
BSL	Banking Supervision (Bailiwick of Guernsey) Law, 1994	NCO	Net Charge-Off
BSX Act	Bermuda Stock Exchange Company Act 1992	NII	Net Interest Income
BSX	Bermuda Stock Exchange	NIM	Net interest margin
CARP	Capital Assessment and Risk Profile	NPA	Non-Performing Assets
CCR	Counterparty Credit Risk	NPL	Non-Performing Loan
CD	Certificates of Deposit	NRSROs	Nationally recognized statistical rating organizations
CEACS	Core net income attributable to common shareholders	NSFR	Net Stable Funding Ratio
CECL	Current Expected Credit Loss Model	NYSE	New York Stock Exchange
CEO	Chairman and Chief Executive Officer	OCL	Other comprehensive loss
CET1	Common Equity Tier 1 capital	OFAC	US Treasury Department's Office of Foreign Assets Control
CFO	Chief Financial Officer	OREO	Other Real Estate Owned
CIMA	Cayman Islands Monetary Authority	OTC	Over-the-counter
Core ROATA	Core return on average tangible assets	PCD	Purchased Credit-Deteriorated
Core ROATCE	Core return on average tangible common equity	PCI	Purchased Credit-Impaired
CP	Commercial Paper	PCL	Proceeds of Crime Act (2020 Revision)
CRM	Credit Risk Management	PD	Probability of Default
CSPB	Corporate Service Provider Business Act 2012	PFIC	Passive Foreign Investment company
CTA	Cumulative translation adjustment	PIPA	Personal Information Protection Act 2016
DIS	Deposit Insurance Scheme	Regulation FD	Regulation Fair Disclosure
DPA	Data Protection Act	ROA	Return on average assets
DPAJL	Data Protection Authority (Jersey) Law 2018	ROE	Return on average common shareholders' equity
DPJL	Data Protection (Jersey) Law 2018	RPCC	Risk Policy and Compliance Committee
DPL 2017	Data Protection (Bailiwick of Guernsey) Law, 2017	RWA	Risk-weighted Assets
D-SIB	Domestic Systemically Important Bank	SA-CCR	Standardised Approach for measuring Counterparty Credit Risk exposures
DXC	DXC Technologies	SREP	Supervisory Review and Evaluation Process
EAD	Exposure at Default	S&P	Standard & Poor's
ECAIs	External Credit Assessment Institutions	SEC	Securities and Exchange Commission
ECOFIN	EU's Economic and Financial Affairs Council	SIBA	Securities Investment Business Act (2020 Revision)
EVE	Economic Value of Equity	SWIFT	Society for Worldwide Interbank Financial Telecommunication
Exchange Act	Securities Exchange Act of 1934	TCA	Trust Companies Act
FATCA	Foreign Account Tax Compliance Act	TCE/TA	Tangible Common Equity/Tangible Assets
FATF	Financial Action Task Force	TDR	Troubled debt restructuring
FCA	Financial Conduct Authority	TE/TA	Tangible total Equity/Tangible Assets
FCRA	Fair Credit Reporting Act	USAO	U.S Attorney's Office for the Southern District of New York
FIC	Financial Institutions Committee		
FinIA	Swiss Federal Financial Institutions Act		
FinIO	Swiss Federal Financial Institutions Act		
FINMA	Swiss Financial Market Supervisory Authority		
FPI	Foreign Private Issuers		
FSMA	Financial Services and Markets Act 2000		
GAAP	Generally Accepted Accounting Principles in the United States of America		
GALCO	Group Asset and Liability Committee		
GCC	Group Credit Committee		
GDPR	EU General Data Protection Regulation (EU) 2016/679		
GDP	Gross Domestic Product		
GFSC	Guernsey Financial Services Commission		
GRC	Group Risk Committee		
Guernsey DCS	Guernsey Deposit Compensation Scheme		
HTM	Held-to-maturity		



**Shareholder
Information
& Directory**



Shareholder Information

DIRECTORS' AND EXECUTIVE OFFICERS' SHARE INTERESTS AND DIRECTORS' SERVICE CONTRACTS

In accordance with Regulation 6.8(3) of Section IIA of the Bermuda Stock Exchange Listing Regulations, the total interests in common shares of the Bank held by all Directors and Executive Officers* are noted on page 100 of the Annual Report on Form 20-F within this publication. For information on equity compensation for Directors and Executive Officers, please see page 96 of the Annual Report on Form 20-F within this publication.

Save for those arrangements described in Note 27 to the Bank's December 31, 2021 consolidated financial statements, there are no contracts of significance subsisting during or at the end of the financial year ended December 31, 2021 in which a Director of the Bank is or was materially interested, either directly or indirectly.

**As listed on pages 93 and 95 of the Annual Report on Form 20-F within this publication.*

WRITTEN NOTICE OF SHARE REPURCHASE PROGRAM — BSX REGULATION 6.38

On February 14, 2022, the Board approved, with effect from March 1, 2022 through to February 28, 2023, a common share repurchase program, authorizing the purchase for treasury of up to 2.0 million common shares or \$75 million.

The repurchase of shares pursuant to the repurchase program was confirmed by way of non-objection from the Bermuda Monetary Authority. The timing and amount of repurchase transactions will be based on market conditions, share price, legal requirements and other factors. No assurances can be given as to the amount of common shares that may actually be repurchased.

Under the Bank's share repurchase programs, the total shares acquired or purchased for cancellation during the year ended December 31, 2021 amounted to 534,828 common shares to be held as treasury shares or cancelled.

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 the program, but under BSX regulations, such trades must not be pre-arranged and all repurchases must be made in the open market. Prices paid by the Bank must not, according to BSX regulations, be higher than the last independent trade for a "round lot" defined as 100 shares or more.

The Bank will advise the BSX monthly of the number of shares repurchased by the Bank.

LARGE SHAREHOLDERS

See page 100 of the Annual Report on Form 20-F within this publication for a listing of registered holders of 5% or more of the issued share capital as at February 15, 2022.

EXCHANGE LISTING

The Bank's shares are listed on the following stock exchanges:

BERMUDA STOCK EXCHANGE

110 Pitts Bay
4th Floor
Pembroke, HM 08
Bermuda
Tel: (441) 292 7212
Fax: (441) 292 7619
www.bsx.com

NEW YORK STOCK EXCHANGE

11 Wall Street
New York, NY 10005
United States of America
Tel: (212) 656 3000
www.nyse.com

SHARE DEALING SERVICE

Butterfield Securities (Bermuda) Limited
65 Front Street
Hamilton, HM 12
Bermuda
Tel: (441) 299 3972
Fax: (441) 292 9947
E-mail: info@butterfieldgroup.com

REGISTRAR AND TRANSFER AGENT

For Bermuda-registered securities:
MUFG Fund Services (Bermuda) Limited
4th Floor North, Cedar House
41 Cedar Avenue
Hamilton, HM 12
Bermuda
Tel: (441) 295 1355
Fax: (441) 295 6759
E-mail: bntbshareholders2@mfsadmin.com

For US-registered securities:

Computershare
462 South 4th Street
Suite 1600
Louisville, KY 40202
United States of America
Tel: (800) 736 3001
(781) 575 3100

MEDIA RELATIONS / PUBLICATION REQUESTS

Nicky Stevens
Group Strategic Marketing & External Communications
Tel: (441) 299 1624
E-mail: nicky.stevens@butterfieldgroup.com

INVESTOR RELATIONS

Noah Fields
Head of Investor Relations
Tel: (441) 299 3816
E-mail: noah.fields@butterfieldgroup.com

FOR ADDITIONAL SHAREHOLDER INFORMATION

Please visit www.butterfieldgroup.com

Directory

PRINCIPAL OFFICES & SUBSIDIARIES

This list does not include all companies in the Group.

The Bank of N.T. Butterfield & Son Limited
Group Parent Company, Community Banking, Corporate Banking, Private Banking, Credit and Treasury Services, Custody

Head Office

65 Front Street
Hamilton, HM 12
Bermuda
Tel: (441) 295 1111
Fax: (441) 292 4365
E-mail: info@butterfieldgroup.com

Mailing Address:

P.O. Box HM 195
Hamilton, HM AX
Bermuda

BERMUDA

Managing Director: Michael Neff

Butterfield Asset Management Limited

Asset Management
Head of Global Asset Management:
Dwayne Outerbridge
65 Front Street
Hamilton, HM 12
Bermuda
Tel: (441) 299 3817
Fax: (441) 292 9947
E-mail: info@butterfieldgroup.com

Butterfield Securities (Bermuda) Limited

Brokerage Services
65 Front Street
Hamilton, HM 12
Bermuda
Tel: (441) 299 3972
Fax: (441) 292 9947
E-mail: info@butterfieldgroup.com

Bermuda Trust Company Limited Butterfield Trust (Bermuda) Limited Grosvenor Trust Company Limited

Trust and Fiduciary Services
Managing Director: John Richmond
Rosebank Centre
11 Bermudiana Road
Hamilton, HM 08
Bermuda
Tel: (441) 299 3980
Fax: (441) 292 1258
E-mail: info@butterfieldgroup.com

THE BAHAMAS

Butterfield Trust (Bahamas) Limited
Trust and Fiduciary Services
Managing Director: Craig Barley
3rd Floor, Montague Sterling Centre
East Bay Street
P.O. Box N-3242
Nassau, N.P.
The Bahamas
Tel: (242) 393 8622
Fax: (242) 393 3772
E-mail: bahamas@butterfieldgroup.com

CAYMAN ISLANDS

Butterfield Bank (Cayman) Limited
Community Banking, Corporate Banking, Private Banking, Asset Management, Credit and Treasury Services, Custody
Managing Director: Michael McWatt
Butterfield Place
12 Albert Panton Street
P.O. Box 705
Grand Cayman KY1-1107
Cayman Islands
Tel: (345) 949 7055
Fax: (345) 949 7004
E-mail: info.cayman@butterfieldgroup.com

Butterfield Trust (Cayman) Limited

Trust and Fiduciary Services
Managing Director: Andrew Leggatt
68 Fort Street
P.O. Box 705
Grand Cayman KY1-1107
Cayman Islands
Tel: (345) 949 7055
Fax: (345) 949 7004
E-mail: trust.cayman@butterfieldgroup.com

GUERNSEY

Butterfield Bank (Guernsey) Limited
Community Banking, Corporate and Intermediary Banking, Private Banking, Credit and Treasury Services, Custody
Managing Director: Richard Saunders
P.O. Box 25
Regency Court
Gategny Esplanade
St. Peter Port
Guernsey GY1 3AP
Channel Islands
Tel: (44) 1481 711 521
Fax: (44) 1481 714 533
E-mail: guernsey@butterfieldgroup.com

Butterfield Trust (Guernsey) Limited

Trust and Fiduciary Services
Managing Director: Lindsay Ozanne
P.O. Box 25
Regency Court
Gategny Esplanade
St Peter Port
Guernsey GY1 3AP
Channel Islands
Tel: (44) 1481 711 521
Fax: (44) 1481 728 665
E-mail: guernsey@butterfieldgroup.com

JERSEY

Butterfield Bank (Jersey) Limited
Community Banking, Corporate and Intermediary Banking, Private Banking, Credit and Treasury Services, Custody
Managing Director: Noel McLaughlin
P.O. Box 250
St. Paul's Gate
New Street
St. Helier
Jersey JE4 5PU
Channel Islands
Tel: (44) 1534 843 333
Fax: (44) 1534 843 334
E-mail: jersey@butterfieldgroup.com

SINGAPORE

Butterfield Trust (Asia) Limited
Trust and Fiduciary Services
Managing Director: Mark Florance
#14 02-04
6 Battery Road
Singapore 049909
Tel: (65) 6916 3636
E-mail: singapore@butterfieldgroup.com

SWITZERLAND

Butterfield Trust (Switzerland) Limited
Trust and Fiduciary Services
Managing Director: Jim Parker
Boulevard des Tranchées 16
1206 Geneva
Switzerland
Tel: (41) 22 839 0000
Fax: (41) 22 839 0099
E-mail: switzerland@butterfieldgroup.com

UNITED KINGDOM

Butterfield Mortgages Limited
UK Residential Property Lending
Chief Executive Officer: Alpa Bhakta
Sun Court
66-67 Cornhill
London EC3V 3NB
United Kingdom
Tel: (44) 020 3871 6900
Fax: (44) 020 3871 6901
E-mail: ukmortgages@butterfieldgroup.com



