

2019

HSBC 

HSBC BANK BERMUDA LIMITED
Consolidated Financial Statements



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Independent auditor's report

To the Board of Directors and Shareholder of HSBC Bank Bermuda Limited

Our opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of HSBC Bank Bermuda Limited (the Company) and its subsidiaries (together 'the Group') as at 31 December 2019, and their consolidated financial performance and their consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards.

What we have audited

The Group's consolidated financial statements comprise:

- the consolidated income statement for the year ended 31 December 2019;
 - the consolidated statement of comprehensive income for the year ended 31 December 2019;
 - the consolidated balance sheet as at 31 December 2019;
 - the consolidated statement of cash flows for the year ended 31 December 2019;
 - the consolidated statement of changes in equity for the year ended 31 December 2019; and
 - the notes to the consolidated financial statements, which include a summary of significant accounting policies.
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Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the ethical requirements of the Chartered Professional Accountants of Bermuda Rules of Professional Conduct (CPA Bermuda Rules) that are relevant to our audit of the consolidated financial statements in Bermuda. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code and the ethical requirements of the CPA Bermuda Rules.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
 - Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
 - Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
 - Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
 - Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
 - Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.
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Independent auditor's report

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PricewaterhouseCoopers Ltd.

Hamilton, Bermuda
27 February 2020

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Consolidated income statement

for the year ended 31 December 2019

	Notes	2019 US\$000	2018 US\$000
Net interest income	3	187,492	197,815
– interest income		217,627	214,549
– interest expense		(30,135)	(16,734)
Net fee income	3	55,167	53,888
– fee income		78,357	80,027
– fee expense		(23,190)	(26,139)
Net income from financial instruments held for trading or managed on a fair value basis		36,229	29,117
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss		149	(383)
Gains less (losses) from financial investments	11	1,560	(443)
Total operating income before change in expected credit losses		280,597	279,994
Change in expected credit losses and other credit impairment charges	9	(8,600)	2,528
Net operating income		271,997	282,522
Employee compensation and benefits	4,5	(82,002)	(87,318)
General and administrative expenses		(42,678)	(53,550)
Depreciation and impairment of property and equipment	13	(4,486)	(2,619)
Total operating expenses		(129,166)	(143,487)
Operating profit		142,831	139,035
Share of (loss) profit in associates	14	(77)	3
Profit before tax		142,754	139,038
Tax expense	6	–	–
Profit for the year		142,754	139,038

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated statement of comprehensive income

for the year ended 31 December 2019

	Notes	2019 US\$000	2018 US\$000
Profit for the year		142,754	139,038
Other comprehensive income			
Items that will be reclassified subsequently to profit or loss when specific conditions are met:			
Debt instruments at fair value through other comprehensive income		27,037	(4,913)
– fair value gains (losses)		28,568	(5,349)
– amounts reclassified to the income statement on disposal		(1,560)	443
– expected credit losses recognised in the income statement		29	(7)
Other movements		415	64
Items that will not be reclassified subsequently to profit or loss:			
Actuarial (losses) gains on defined benefit and healthcare plans	4	(3,663)	2,194
Other comprehensive income (loss) for the year		23,789	(2,655)
Total comprehensive income for the year		166,543	136,383

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated balance sheet

as at 31 December 2019

	Notes	2019 US\$000	2018 US\$000
Assets			
Cash and balances at central banks		27,139	34,078
Items in the course of collection from other banks		120	62
Derivatives	7,12	14,851	17,878
Loans and advances to banks	8,9	2,138,542	2,161,827
Loans and advances to customers	9,10	2,174,485	2,190,969
Financial investments	11,12	3,846,898	3,487,194
Prepayments and accrued income		50,662	50,891
Other assets		11,834	8,862
Interest in associate	14	1,557	1,634
Property and equipment	13	112,226	123,441
Total assets		8,378,314	8,076,836
Liabilities and equity			
Liabilities			
Deposits by banks		31,810	263,255
Customer accounts		7,472,725	6,922,203
Items in the course of transmission to other banks		1,262	5,446
Derivatives	7,12	30,820	15,384
Accruals and deferred income		32,718	32,581
Provisions	15	611	805
Other liabilities		31,491	31,734
Retirement benefit liabilities	4	9,279	10,511
Total liabilities		7,610,716	7,281,919
Equity			
Called up share capital	23	30,027	30,027
Share premium	23	388,652	388,652
Other reserves		6,586	(20,589)
Retained earnings		342,333	396,827
Total equity		767,598	794,917
Total liabilities and equity		8,378,314	8,076,836

The accompanying notes are an integral part of the Consolidated Financial Statements.



Anthony Joaquin
Director



Stephen Banner
Director

Consolidated financial statements

Consolidated statement of cash flows

for the year ended 31 December 2019

	2019 US\$000	2018 US\$000
Cash flows from operating activities		
Profit for the year	142,754	139,038
Adjustments for:		
Net interest income	(187,492)	(197,815)
Non-cash items in profit for the year	2,907	63,532
Change in loans and advances to banks greater than 3 months	(100,000)	258,260
Change in loans and advances to customers	12,052	96,575
Change in other operating assets	(6,356)	(3,253)
Change in deposits by banks	(231,445)	217,498
Change in customer accounts	550,522	(1,162,798)
Change in other operating liabilities	8,230	(47,221)
Net (gain) loss from investing activities	(15,804)	4,614
Interest received	219,314	213,157
Interest paid	(27,709)	(11,762)
Net cash flows from (used) in operating activities	366,973	(430,175)
Cash flows from investing activities		
Purchase of financial investments	(3,247,280)	(2,097,421)
Proceeds from the sale and maturity of financial investments	2,939,628	2,448,259
Net cash flow from the purchase and sale of property and equipment	6,729	(2,330)
Net cash flows from investing activities	(300,923)	348,508
Cash flows from financing activities		
Dividends paid	(194,000)	(104,000)
Net cash flows used in financing activities	(194,000)	(104,000)
Net decrease in cash and cash equivalents	(127,950)	(185,667)
Cash and cash equivalents at the beginning of the year	1,660,521	1,848,266
Effect of exchange rate changes on cash and cash equivalents	1,968	(2,078)
Cash and cash equivalents at the end of the year	1,534,539	1,660,521
Cash and cash equivalents comprise		
Cash and balances at central banks	27,139	34,078
Items in the course of collection from other banks	120	62
Loans and advances to banks less than 3 months	1,508,542	1,631,827
Items in the course of transmission to other banks	(1,262)	(5,446)
Total cash and cash equivalents	1,534,539	1,660,521

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated statement of changes in equity

for the year ended 31 December 2019

	Other reserves					Total equity
	Called up share capital	Share premium	Financial Assets at FVOCI reserve	Share-based payment reserve	Retained earnings	
	US\$000	US\$000	US\$000	US\$000	US\$000	
At 1 Jan 2019	30,027	388,652	(24,028)	3,439	396,827	794,917
Total comprehensive income for the year						
Profit for the year	–	–	–	–	142,754	142,754
Change in fair value of financial assets measured at fair value through other comprehensive income	–	–	27,037	–	–	27,037
Actuarial losses on defined benefit and healthcare plans	–	–	–	–	(3,663)	(3,663)
Other movements	–	–	–	–	415	415
Total comprehensive income for the year	–	–	27,037	–	139,506	166,543
Transactions with the shareholder recorded directly in equity						
Dividends	–	–	–	–	(194,000)	(194,000)
Share-based plan movements	–	–	–	138	–	138
Total transactions with the shareholder recorded directly in equity	–	–	–	138	(194,000)	(193,862)
At 31 Dec 2019	30,027	388,652	3,009	3,577	342,333	767,598
As at 1 Jan 2018	30,027	388,652	(19,115)	3,205	359,531	762,300
Total comprehensive income for the year						
Profit for the year	–	–	–	–	139,038	139,038
Change in fair value of financial assets measured at fair value through other comprehensive income	–	–	(4,913)	–	–	(4,913)
Actuarial gains on defined benefit and healthcare plans	–	–	–	–	2,194	2,194
Other movements	–	–	–	–	64	64
Total comprehensive income for the year	–	–	(4,913)	–	141,296	136,383
Transactions with the shareholder recorded directly in equity						
Dividends	–	–	–	–	(104,000)	(104,000)
Share-based plan movements	–	–	–	234	–	234
Total transactions with the shareholder recorded directly in equity	–	–	–	234	(104,000)	(103,766)
At 31 Dec 2018	30,027	388,652	(24,028)	3,439	396,827	794,917

The accompanying notes are an integral part of the Consolidated Financial Statements.

Notes on the consolidated financial statements

(In US dollar thousands)

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1 Basis of preparation

(a) General

HSBC Bank Bermuda Limited (the 'Bank') was established in 1889 and incorporated in 1891. The address of its registered office is 37 Front Street, Hamilton HM11, Bermuda. The consolidated financial statements of the Bank for the year ended 31 December 2019 comprise the Bank and its subsidiaries (together referred to as the 'group') and the group's interests in associates. The Bank is domiciled in Bermuda and provides personal and corporate banking, investment, trust, custody and fund administration services to international and local clients. The immediate parent company of the Bank is HSBC Overseas Holdings (UK) Limited. The ultimate parent company is HSBC Holdings plc ('HSBC'). Copies of the financial statements of HSBC may be obtained from its registered office at 8 Canada Square, London, E14 5HQ, United Kingdom, or from the HSBC website, www.hsbc.com.

These consolidated financial statements were authorised for issue by the Board of Directors on 27 February 2020.

The consolidated financial statements are presented in US dollars, which is the presentational currency of HSBC. The functional currency of the group is primarily Bermuda dollars. Bermuda dollars are translated into US dollars at par. All amounts and figures are rounded to the nearest thousand except where explicitly stated.

The consolidated financial statements have been prepared on a historical cost basis except for fair value measurement where stated.

The group has prepared its consolidated financial statements in accordance with International Financial Reporting Standards ('IFRSs'). IFRSs comprise accounting standards issued by the International Accounting Standards Board ('IASB'), as well as interpretations issued by the International Financial Reporting Interpretations Committee ('IFRIC').

Certain reclassifications have been made to the 2018 corresponding figures in order to conform to the current year presentation.

The consolidated financial statements are prepared on a going concern basis, as the Directors are satisfied that the group has the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including projections of profitability, cash flows and capital resources.

Standards adopted during the year ended 31 December 2019

IFRS 16 'Leases'

IFRS 16 'Leases' has an effective date for annual periods beginning on or after 1 January 2019. IFRS 16 results in lessees accounting for most leases within the scope of the standard in a manner similar to the way in which finance leases are currently accounted for under IAS 17 'Leases'. Lessees recognise a 'right of use' asset and a corresponding financial liability on the balance sheet. The asset is amortised over the length of the lease, and the financial liability measured at amortised cost. Lessor accounting remains substantially the same as under IAS 17. The new standard has not had a significant effect on the consolidated financial statements.

(b) Basis of consolidation

The Bank controls and consequently consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The Bank is considered to have power over an entity when it has existing rights that give it the current ability to direct the relevant activities. For the Bank to have power over an entity, it must have the practical ability to exercise those rights. In the rare situations where potential voting rights exist, these are taken into account if the Bank has the practical ability to exercise those rights.

The acquisition method of accounting is used when subsidiaries are acquired. The cost of an acquisition is measured at the fair value of the consideration, including contingent consideration, given at the date of exchange. Acquisition related costs are recognised as an expense in the consolidated income statement in the period in which they are incurred. The acquired identifiable assets, liabilities and contingent liabilities are measured at their fair values at the date of acquisition. Goodwill is measured as the excess of the aggregation of the consideration transferred, the amount of non-controlling interest and the fair value of the acquirer's previously held equity interest, if any, over the net of the amounts of the identifiable assets acquired and the liabilities assumed. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. In a business combination achieved in stages, the previously held equity interest is remeasured at the acquisition date fair value with any resulting gain or loss recognised in the consolidated income statement or other comprehensive income as appropriate. In the event that the fair value of net assets acquired is in excess of the aggregation of the consideration transferred, the amount of non-controlling interest and the fair value of the previously held equity interest, the difference is recognised immediately in the consolidated income statement.

Entities that are controlled by the Bank are consolidated. Subsidiaries are consolidated from the date the group gains control, until the date that control ceases. The Bank performs a re-assessment of consolidation whenever there is a change in the facts and circumstances of determining the control of all entities.

All intra-group transactions are eliminated on consolidation.

The consolidated financial statements of the group include the attributable share of the results of any interests in associates, based on either financial statements made up to 31 December or pro-rated amounts adjusted for any material transactions or events occurring between the date of financial statements available and 31 December.

(c) Critical accounting estimates and judgements

The preparation of financial information requires the use of estimates and assumptions about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items listed below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based, resulting in materially different conclusions from those reached by management for the purposes of the 2019 consolidated financial statements. Management's selection of accounting policies which contain critical estimates and judgements are those which relate to; the impairment of loans and advances, the valuation of healthcare benefits, fair value of assets held for sale, the valuation of financial instruments, the impairment of financial assets measured at fair value through other comprehensive income and provisions for liabilities.

Further information about key assumptions concerning the future, and other key sources of estimation uncertainty, are set out in these notes on the consolidated financial statements.

(d) Future accounting developments

The IASB has published a number of minor amendments to IFRSs which are effective from 1 January 2020. These amendments will have an insignificant effect when adopted.

2 Significant accounting policies

(a) Interest income and expense

Interest income and expense for all financial instruments is recognised in 'Interest income' and 'Interest expense' in the consolidated income statement using the effective interest rate method. The effective interest rate method is a way of calculating the amortised cost of a financial asset or a financial liability (or groups of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the group estimates cash flows considering all contractual terms of the financial instrument but not future credit losses. The calculation includes all amounts paid or received by the group that are an integral part of the effective interest rate, including transaction costs and all other premiums or discounts.

Interest on impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

(b) Non-interest income and expense

(i) Fee income

Fee income is recognised as services are provided to our customers. It is commonly from services provided at a fixed price over time, such as account services and card fees, or at the point in time the group delivers a specific transaction. With the exception of certain fund management and performance fees which can be variable depending on the size of the customer portfolio over the period, all other fees are generated at a fixed price. Variable fees are recognised when all uncertainties are resolved. Fee revenue is generally earned from short term contracts with payment terms that do not include significant financing arrangements.

The group is principal in the majority of contracts with customers, with the exception of broking income fees. For most brokerage trades, the group acts as agent in the transaction, and recognises broking income net of fees payable to third parties.

Fees from transaction based arrangements, are recognised as revenue at the point in time the group provides the service to the customer. Where the performance obligation associated with the contract will be satisfied as an obligation to provide services over time, which is the case for account services fees, income is recognised on a straight-line basis over the life of the agreement.

The transaction price is fully allocated to the performance obligation when the contract contains only a single obligation. Where the group offers a package of services that contain multiple non-separable performance obligations, such as account services fees, the contracted services are considered a single performance obligation. Where a contract contains a separable performance obligation, such as providing loyalty programmes on credit cards, the corresponding transaction price is allocated on a stand-alone selling price basis.

(ii) Net income from financial instruments held for trading or managed on a fair value basis

Net fee income from financial instruments held for trading or managed on a fair value basis comprises exchange differences on translation of monetary assets and liabilities denominated in foreign currencies and commissions earned on foreign exchange trading transactions and gains and losses from changes in the fair value of derivatives that do not qualify for hedge accounting.

(iii) Dividend income

Dividend income is recognised net of withholding taxes when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders have approved the dividend for unlisted equity securities.

(c) Cash and cash equivalents

For the purpose of the consolidated statement of cash flows, cash and cash equivalents include highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value. Such investments are normally those with less than three months maturity from the date of acquisition.

(d) Loans and advances to banks and customers

Loans and advances to banks and customers include loans and advances originated by the group which are not classified as held for trading or designated at fair value. They are recognised when cash is advanced to a borrower and are derecognised when either the borrower repays its obligations, or the loans are sold or written off, or substantially all the risks and rewards of ownership are transferred.

Notes on the consolidated financial statements

(In US dollar thousands)

They are initially recorded at fair value plus any directly attributable transaction costs and are subsequently measured at amortised cost using the effective interest rate method, less expected credit losses.

Loans and advances are reclassified to 'Assets held for sale' when they meet the criteria presented in Note 2(k) though their measurement remains in accordance with this policy.

When the group purchases a financial asset and simultaneously enters into an agreement to resell the asset (or a substantially similar asset) at a fixed price on a future date ('reverse repo' or 'stock borrowing'), the arrangement is accounted for as a loan or advance, and the underlying asset is not recognised in the group's consolidated financial statements.

(e) Valuation of financial instruments

All financial instruments are initially recognised at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, the group recognises the difference as a trading gain or loss at inception (a 'day 1 gain or loss'). In all other cases, the entire day one gain or loss is deferred and recognised in the income statement over the life of the transaction either until the transaction matures or is closed out, the valuation inputs become observable or the group enters into an offsetting transaction.

The fair value of financial instruments is generally measured on an individual basis. However, in cases where the group manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the financial statements, unless they satisfy the IFRS offsetting criteria.

Fair values are subject to a control framework designed to ensure that they are either determined or validated by a function independent of the risk taker.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is used. For inactive markets, the group sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

For fair value through other comprehensive income ('FVOCI') securities that are quoted in active markets, fair values are determined by reference to the current quoted bid prices. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where independent prices are not available, fair values may be determined using valuation techniques with reference to observable market data. These include comparison to similar instruments where market observable prices exist, discounted cash flow analysis and other valuation techniques commonly used by market participants. Fair values of financial instruments may be determined in whole or in part using valuation techniques based on assumptions that are not supported by prices from current market transactions or observable market data, where current prices or observable market data are not available.

Fair values of financial assets and liabilities are determined according to the following hierarchy:

Level 1 – valuation technique using quoted market price: financial instruments with quoted prices for identical instruments in active markets that HSBC can access at the measurement date.

Level 2 – valuation technique using observable inputs: financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.

Level 3 – valuation technique with significant unobservable inputs: financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

The judgement as to whether a market is active may include, but is not restricted to, the consideration of factors such as the magnitude and frequency of trading activity, the availability of prices and the size of bid/offer spreads. The bid/offer spread represents the difference in prices at which a market participant would be willing to buy compared with the price at which they would be willing to sell. In inactive markets, obtaining assurance that the transaction price provides evidence of fair value or determining the adjustments to transaction prices that are necessary to measure the fair value of the instrument requires additional work during the valuation process.

(f) Financial instruments measured at amortised cost

Financial assets that are held to collect the contractual cash flows and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest, such as most loans and advances to banks and customers and some debt securities, are measured at amortised cost. In addition, most financial liabilities are measured at amortised cost. The group accounts for amortised cost financial instruments using trade date accounting. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan through the recognition of interest income.

The group may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When the group intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

(g) Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading

repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

Contracts that are economically equivalent to reverse repurchase or repurchase agreements (such as sales or purchases of debt securities entered into together with total return swaps with the same counterparty) are accounted for similarly to, and presented together with, reverse repurchase or repurchase agreements.

(h) Financial assets measured at fair value through other comprehensive income ('FVOCI')

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at FVOCI. These comprise primarily debt securities. They are recognised on the trade date when the group enters into contractual arrangements to purchase and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses) are recognised in other comprehensive income until the assets are sold. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial investments'. Financial assets measured at FVOCI are included in the expected credit losses ('ECL') calculations set out below and changes in expected credit losses are recognised in profit or loss.

(i) Financial assets designated at fair value through profit and loss ('FVPL')

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where the financial liability contains one or more non-closely related embedded derivatives.

The group has not designated any financial assets as FVPL.

(j) Trading assets and liabilities

Treasury bills, debt securities, equity securities, loans, deposits, debt securities in issue, and short positions in securities are classified as held for trading if they have been acquired or incurred principally for the purpose of selling or repurchasing in the near term, or they form part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent pattern of short-term profit-taking. These financial assets or financial liabilities are recognised on trade date, when the group enters into contractual arrangements with counterparties to purchase or sell the financial instruments, and are normally derecognised when either sold (assets) or extinguished (liabilities). Measurement is initially at fair value, with transaction costs recognised in the consolidated income statement. Subsequently, the fair values are remeasured, and gains and losses from changes therein are recognised in the consolidated income statement in 'Net income from financial instruments held for trading or managed on a fair value basis'.

(k) Assets and liabilities held for sale

Assets and liabilities of disposal groups and non-current assets are classified as held for sale ('HFS') when their carrying amounts will be recovered principally through sale rather than through continuing use. HFS assets are generally measured at the lower of their carrying amount and fair value less cost to sell.

Immediately before the initial classification as held for sale, the carrying amounts of the relevant assets and liabilities are measured in accordance with applicable IFRSs. On subsequent remeasurement of a disposal group, fair value less costs to sell of the disposal group is determined after each HFS asset and liability is individually measured under applicable IFRSs.

Income earned and expenses incurred on assets held for sale and liabilities of disposal groups held for sale continue to be recognised in the appropriate line items in the consolidated income statement until the transaction is complete. Once classified as held for sale, movements arising from the initial measurement or subsequent remeasurement of the non-current assets (or disposal groups) are recognised in the consolidated income statement.

(l) Derivatives and hedge accounting

Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative. This includes embedded derivatives in financial liabilities which are bifurcated from the host contract when they meet the definition of a derivative on a stand-alone basis.

Hedge accounting

When derivatives are not part of fair value designated relationships, if held for risk management purposes they are designated in hedge accounting relationships where the required criteria for documentation and hedge effectiveness are met. The group uses these derivatives or, where allowed, other non-derivative hedging instruments in fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

Fair value hedge

Fair value hedge accounting does not change the recording of gains and losses on derivatives and other hedging instruments, but results in recognising changes in the fair value of the hedged assets or liabilities attributable to the hedged risk that would not otherwise be recognised in the income statement. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued; the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

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(In US dollar thousands)

Cash flow hedge

The effective portion of gains and losses on hedging instruments is recognised in other comprehensive income; the ineffective portion of the change in fair value of derivative hedging instruments that are part of a cash flow hedge relationship is recognised immediately in the income statement within 'Net income from financial instruments held for trading or managed on a fair value basis'. The accumulated gains and losses recognised in other comprehensive income are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. In hedges of forecast transactions that result in recognition of a non-financial asset or liability, previous gains and losses recognised in other comprehensive income are included in the initial measurement of the asset or liability. When a hedge relationship is discontinued, or partially discontinued, any cumulative gain or loss recognised in other comprehensive income remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in other comprehensive income is immediately reclassified to the income statement.

Hedge effectiveness testing

To qualify for hedge accounting, the group requires that at the inception of the hedge and throughout its life each hedge must be expected to be highly effective both prospectively and retrospectively on an ongoing basis.

The documentation of each hedging relationship sets out how the effectiveness of the hedge is assessed and the method adopted by an entity to assess hedge effectiveness will depend on its risk management strategy.

For prospective effectiveness, the hedging instrument must be expected to be highly effective in offsetting changes in fair value or cash flows attributable to the hedged risk during the period for which the hedge is designated with the effectiveness range being defined as 90% to 110% at inception and between 80-125% on an ongoing basis.

Hedge ineffectiveness is recognised in the consolidated income statement in 'Net income from financial instruments held for trading or managed on a fair value basis'.

(m) Impairment of amortised cost and FVOCI financial assets

ECL is recognised for loans and advances to banks and customers, other financial assets held at amortised cost, debt instruments measured at fair value through other comprehensive income, and certain loan commitments and financial guarantee contracts.

At initial recognition, allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months (or less, where the remaining life is less than 12 months) ('12-month ECL'). In the event of a significant increase in credit risk, allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL').

Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are classified as 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit-impaired are classified as 'stage 3'. Purchased or originated credit-impaired financial assets ('POCI') are treated differently as set out below.

Credit-impaired (stage 3)

The group determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default.

If such unlikelihood to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due. Therefore, the definitions of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans which are considered defaulted or otherwise credit-impaired.

Interest income is recognised by applying the effective interest rate to the amortised cost amount, i.e. gross carrying amount less ECL allowance.

Write-off

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Renegotiation

Loans are identified as renegotiated and classified as credit-impaired when we modify the contractual payment terms due to significant credit distress of the borrower. Renegotiated loans remain classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows and retain the designation of renegotiated until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement is made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is a substantially different financial instrument. Any new loans that arise following derecognition events in these circumstances are considered to be POCI and will continue to be disclosed as renegotiated loans.

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit-impaired and, in the case of renegotiated loans, there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, over the minimum observation period, and there are no other indicators of impairment. These loans could be transferred to stage 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition

(based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

Loan modifications that are not credit-impaired

Loan modifications that are not identified as renegotiated are considered to be commercial restructuring. Where a commercial restructuring results in a modification (whether legalised through an amendment to the existing terms or the issuance of a new loan contract) such that the group's rights to the cash flows under the original contract have expired, the old loan is derecognised and the new loan is recognised at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided.

Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared to that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multifactor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk and these criteria will differ for different types of lending, particularly between retail and wholesale. However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when 30 days past due. In addition to the 30 days past due backstop, the actual movement to stage 2 is also decided by the modelling approach and transfer criteria. Wholesale loans that are individually assessed, typically corporate and commercial customers, and included on a watch or worry list are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default which encompasses a wide range of information including the obligor's customer risk rating ('CRR'), macroeconomic condition forecasts and credit transition probabilities. For origination CRRs up to 3.3, significant increase in credit risk is measured by comparing the average probability of default ('PD') for the remaining term estimated at origination with the equivalent estimation at reporting date. The quantitative measure of significance varies depending on the credit quality at origination as follows:

Origination CRR	Significance trigger – PD to increase by
0.1–1.2	15bps
2.1–3.3	30bps

Origination CRR	Additional significance criteria – Number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1–4.2	4 notches
4.3–5.1	3 notches
5.2–7.1	2 notches
7.2–8.2	1 notch
8.3	0 notch

Further information about the CRR scales can be found on page 43 and 44 (credit quality of financial instruments).

For certain portfolios of debt securities where external market ratings are available and credit ratings are not used in credit risk management, the debt securities will be in stage 2 if their credit risk increases to the extent they are no longer considered investment grade. Investment grade is where the financial instrument has a low risk of incurring losses, the structure has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil their contractual cash flow obligations.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores which incorporate all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogeneous portfolios by country and product. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgement is that no prior increase in credit risk is significant. This portfolio-specific threshold identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than that which would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

Unimpaired and without significant increase in credit risk – (stage 1)

Financial assets that have not had a significant increase in credit risk since initial recognition or that have low credit risk at the reporting date are included in stage 1.

Purchased or originated credit-impaired

Financial assets that are purchased or originated at a deep discount that reflects the incurred credit losses are considered to be POCI. This population includes the recognition of a new financial instrument following a renegotiation where concessions have been granted for economic or contractual reasons relating to the borrower's financial difficulty that otherwise would not have been considered. The amount of change-in-lifetime ECL is recognised in profit or loss until the POCI is derecognised, even if the lifetime ECL are less than the amount of ECL included in the estimated cash flows on initial recognition.

Movement between stages

Financial assets can be transferred between the different categories (other than POCI) depending on their relative increase in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. Except for renegotiated loans, financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment as described above. Renegotiated loans that are

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(In US dollar thousands)

not POCI will continue to be in stage 3 until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period and there are no other indicators of impairment. For loans that are assessed for impairment on a portfolio basis, the evidence typically comprises a history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case-by-case basis.

Measurement of ECL

The assessment of credit risk, and the estimation of ECL, are unbiased and probability-weighted, and incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money.

In general, the group calculates ECL using three main components, a probability of default ('PD'), a loss given default ('LGD') and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flow ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as at the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest. Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realisation of collateral based on its estimated fair value of collateral at the time of expected realisation, less costs for obtaining and selling the collateral. The cash flows are discounted at a reasonable approximation of the original effective interest rate.

Period over which ECL is measured

Expected credit loss is measured from the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which the group is exposed to credit risk. For wholesale overdrafts, which have a maximum tenor of one year, credit risk management actions are taken no less frequently than on an annual basis and therefore this period is to the expected date of the next substantive credit review. The date of the substantive credit review also represents the initial recognition of the new facility. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit the group's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period the group remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between two and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.

Forward-looking economic inputs

The group will in general apply three forward-looking global economic scenarios determined with reference to external forecast distributions, the Consensus Economic Scenario approach. This approach is considered sufficient to calculate unbiased expected loss in most economic environments. They represent a 'most likely outcome' (the Central scenario) and two, less likely, 'Outer' scenarios on either side of the Central, referred to as an Upside and a Downside scenario respectively. The Central scenario is used by the annual operating planning process and, with regulatory modifications, will also be used in enterprise-wide stress tests. The Upside and Downside are constructed following a standard process supported by a scenario narrative reflecting the group's current top and emerging risks and by consulting external and internal subject matter experts. The relationship between the Outer scenarios and Central scenario will generally be fixed with the Central scenario being assigned a weighting of 80% and the Upside and Downside scenarios 10% each, with the difference between the Central and Outer scenarios in terms of economic severity being informed by the spread of external forecast distributions among professional industry forecasts. The Outer scenarios are economically plausible, internally consistent states of the world and will not necessarily be as severe as scenarios used in stress testing. The period of forecast is five years, after which the forecasts will revert to a view based on average past experience. The central forecast and spread between the Central and Outer scenarios for Retail is grounded on the expected gross domestic product of Bermuda and for Wholesale is grounded on a US gross domestic product proxy. The economic factors include, but are not limited to, gross domestic product, unemployment, interest rates, inflation and commercial property prices across all the countries in which HSBC operates.

In general, the consequences of the assessment of credit risk and the resulting ECL outputs will be probability-weighted using the standard probability weights. This probability weighting may be applied directly or the effect of the probability weighting determined on a periodic basis, at least annually, and then applied as an adjustment to the outcomes resulting from the central economic forecast. The central economic forecast is updated quarterly.

The group recognises that the consensus economic scenario approach using three scenarios will be insufficient in certain economic environments. Additional analysis may be requested at management's discretion, including the production of extra scenarios. If conditions warrant, this could result in a management overlay for economic uncertainty which is included in the ECL.

(n) Impairment of assets other than financial instruments

In assessing whether an asset is impaired, the recoverable amount of the asset is calculated as the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets.

Impairment losses are recognised in the consolidated income statement.

(o) Derecognition of financial assets and financial liabilities

Financial assets are derecognised when the contractual right to receive cash flows from the assets has expired; or when the group has transferred its contractual right to receive the cash flows of the financial assets, and either:

- substantially all the risks and rewards of ownership have been transferred; or
- the group has neither retained nor transferred substantially all the risks and rewards, but has not retained control.

Financial liabilities are derecognised when they are extinguished, that is when the obligation is discharged, is cancelled, or expires.

(p) Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount reported in the consolidated balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

(q) Subsidiaries and associates

The group classifies investments in entities which it controls as subsidiaries. The group classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint ventures, as associates.

Interests in associates are recognised using the equity method. Under this method, such investments are initially stated at cost, including attributable goodwill, and adjusted thereafter for the post-acquisition change in the group's share of net assets.

Profits on transactions between the group and its associates are eliminated to the extent of the group's interests in the respective associates. Losses are also eliminated to the extent of the group's interests in the associates unless the transaction provides evidence of an impairment of the asset transferred.

(r) Property and equipment

Land and buildings are stated at historical cost, or fair value at the date of transition to IFRSs ('deemed cost'), less impairment losses and depreciated, using the straight-line method, over their estimated useful lives as follows:

Freehold land	not depreciated
Buildings	lesser of 50 years or the remaining useful lives

Equipment, fixtures and fittings and software are stated at cost less impairment losses and depreciated, using the straight-line method, over their estimated useful lives, which is generally between three and seven years.

Property and equipment is subject to an impairment review if the carrying amount may not be recoverable.

(s) Leases

Leases are recognised as a right of use ('ROU') asset and a corresponding liability at the date at which the leased asset is made available for use. Lease payments are allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease term so as to produce a constant period rate of interest on the remaining balance of the liability. The ROU asset is depreciated over the shorter of the ROU asset's useful economic life and the lease term on a straight-line basis.

In determining the lease term, we consider all facts and circumstances that create an economic incentive to exercise an extension option or not exercise a termination option over the planning horizon of five years.

In general, it is not expected that the discount rate implicit in the lease is available so the lessee's incremental borrowing rate is used. This is the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions. The rates are determined for each economic environment in which we operate and for each term by adjusting swap rates with funding spreads (own credit spread) and cross-currency basis where appropriate.

(t) Income tax

When applicable, income tax on the profit or loss for the year comprises current tax and deferred tax. Income tax is recognised in the consolidated income statement except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is also recognised in the same statement in which the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year, and any adjustment to tax payable in respect of previous years. Current tax assets and liabilities are offset when the group intends to settle on a net basis and the legal right to offset exists.

Deferred tax is recognised on temporary differences between the carrying amount of assets and liabilities in the consolidated balance sheet and the amount attributed to such assets and liabilities for tax purposes. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilised.

Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled. Deferred tax assets and liabilities are offset when they arise in the same tax reporting group, relate to income taxes levied by the same taxation authority and a legal right to offset exists in the group.

Current and deferred tax are calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

(u) Pension and other post-employment benefits

The group operates defined contribution pension plans and defined benefit pension plans, as well as a post-employment healthcare benefits plan.

(i) Defined contribution pension plans

Payments to the defined contribution pension plans are charged as an expense as the employee renders service. The group has no legal or constructive obligations to pay further contributions if the plan does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.

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(ii) Defined benefit pension plans

The defined benefit pension costs and the present value of defined benefit obligations are calculated at the reporting date by the schemes' actuaries using the projected unit method. The net charge to the consolidated income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability and is presented in operating expenses under 'Employee compensation and benefits'.

The past service cost, which is charged immediately to the consolidated income statement, is the change in the present value of the defined benefit obligation for employee service in prior periods resulting from plan amendment (the introduction or withdrawal of, or changes to, a defined benefit plan) or curtailment (a significant reduction by the entity in the number of employees covered by the plan).

A settlement is a transaction that eliminates all further legal and constructive obligations for part or all of the benefits provided under a defined benefit plan, other than a payment of benefits to, or on behalf of, employees that is set out in the terms of the plan and included in the actuarial assumptions.

Remeasurements of the net defined benefit asset or liability, which comprise actuarial gains and losses and return on plan assets (excluding interest), are recognised immediately in other comprehensive income.

Actuarial gains and losses comprise experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred), as well as the effects of changes in actuarial assumptions.

The net defined benefit pension liability recognised in the consolidated balance sheet represents the present value of the defined benefit obligations reduced by the fair value of plan assets, after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

(iii) Post-employment healthcare benefits plan

The costs of obligations arising from other post-employment benefits such as post-employment healthcare are accounted for on the same basis as defined benefit pension plans in accordance with IAS 19 'Employee Benefits'.

(v) Share-based payments

The group enters into both equity-settled and cash-settled share-based payment arrangements with its employees as compensation for services provided by employees.

Equity-settled share-based payment arrangements entitle employees to receive equity instruments of HSBC. The cost of share-based payment arrangements with employees is measured by reference to the fair value of equity instruments on the date they are granted and recognised as an expense on a straight-line basis over the vesting period, with a corresponding credit to the 'Share-based payment reserve' in equity. The vesting period is the period during which all the specified vesting conditions of the arrangement are to be satisfied. The fair value of equity instruments that are made available immediately, with no vesting period attached to the award, are expensed immediately.

For cash-settled share-based payment arrangements, the services acquired and liability incurred are measured at the fair value of the liability and recognised as the employees render service. Until settlement, the fair value of the liability is re-measured, with changes to the fair value recognised in the consolidated income statement.

Fair value is determined using appropriate valuation models. Vesting conditions include service conditions and performance conditions; any other features of the arrangement are non-vesting conditions. Market performance conditions and non-vesting conditions are taken into account when estimating the fair value of the award at the date of grant.

Vesting conditions, other than market performance conditions, are not taken into account in the initial estimate of the fair value at the grant date. They are taken into account by adjusting the number of equity instruments included in the measurement of the transaction. On a cumulative basis, no expense is recognised for equity instruments that do not vest because of a failure to satisfy non-market performance or service conditions.

A cancellation that occurs during the vesting period is treated as an acceleration of vesting, and recognised immediately for the amount that would otherwise have been recognised for services over the vesting period.

(w) Foreign currencies

Transactions in foreign currencies are recorded in the functional currency at the rate of exchange prevailing on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the rate of exchange ruling at the balance sheet date. Any resulting exchange differences are included in the consolidated income statement. Non-monetary assets and liabilities that are measured at historical cost in a foreign currency are translated into the functional currency using the rate of exchange at the date of the initial transaction. Non-monetary assets and liabilities measured at fair value in a foreign currency are translated into the functional currency using the rate of exchange at the date the fair value was determined. Any exchange component of a gain or loss on a non-monetary item is recognised either in other comprehensive income or in the consolidated income statement depending where the gain or loss on the underlying non-monetary item is recognised.

(x) Deposits by banks and customer accounts

Financial liabilities are recognised when the group enters into the contractual provisions of the arrangements with counterparties, which is generally on trade date, and initially measured at fair value, which is normally the consideration received, net of directly attributable transaction costs incurred. Subsequent measurement of financial liabilities, other than those measured at fair value through profit or loss and financial guarantees, is at amortised cost, using the effective interest rate method.

(y) Provisions

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a current legal or constructive obligation which has arisen as a result of past events, and for which a reliable estimate can be made. Judgement is involved in determining whether a present obligation exists and in estimating the probability, timing and amount of any outflows. Professional expert advice is taken on the assessment of litigation, property (including onerous contracts) and similar obligations.

(z) Contingent liabilities, contractual commitments and financial guarantee contracts

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security as well as contingent liabilities related to legal proceedings or regulatory matters, are possible obligations that arise from past events whose existence will be confirmed only by the occurrence, or non-occurrence, of one or more uncertain future events not wholly within the control of the group; or are present obligations that have arisen from past events but are not recognised because it is not probable that settlement will require the outflow of economic benefits, or because the amount of the obligations cannot be reliably measured. Contingent liabilities are not recognised in the consolidated financial statements but are disclosed unless the probability of settlement is remote.

Contractual commitments include loan commitments to provide credit under pre-specified terms and conditions.

Financial guarantee contracts are contracts that require the group to make specific payments to reimburse the holder for a loss incurred because a specific debtor fails to make payment when due. Liabilities under financial guarantee contracts which are not classified as insurance contracts are recorded initially at their fair value which is generally the fee received or receivable and are amortised over the lives of the contracts. Subsequently, financial guarantee liabilities are measured at the higher of the initial fair value, less cumulative amortisation, and the best estimate of the expenditure required to settle the obligations. Financial guarantee contracts are included in 'Other liabilities'.

(aa) Fiduciary activities

The group commonly acts as trustee and in other fiduciary capacities resulting in the holding or placing of assets on behalf of individuals, trusts, post-employment benefit plans and other institutions. The assets and liabilities and income and expenditure arising from these assets and liabilities are excluded from the consolidated financial statements, as they are not assets of the group. The group earns a fee for acting in these capacities.

3 Net interest income and net fee income

Analysis of net interest income

	2019	2018
Interest income		
Financial investments ¹	61,420	55,661
Loans and advances to banks	23,623	26,564
Loans and advances to customers	129,515	128,443
Other	3,069	3,881
Total interest income	217,627	214,549
Interest expense		
Customer accounts	(30,135)	(16,734)
Total interest expense	(30,135)	(16,734)
Net interest income	187,492	197,815

¹ Financial investments interest income is all derived from FVOCI financial instruments.

Analysis of net fee income

	2019	2018
Fee income		
Custody and fund administration	4,166	5,233
Trust	188	287
Banking	45,293	44,163
Management	20,340	21,257
Other	8,370	9,087
Total fee income	78,357	80,027
Total fee expense	(23,190)	(26,139)
Net fee income	55,167	53,888

Notes on the consolidated financial statements

(In US dollar thousands)

4 Employee compensation and benefits

Post-employment benefit plans

	2019	2018
Income Statement		
Defined contribution pension plans	(3,595)	(3,721)
Defined benefit pension plans	(39)	(75)
Post-employment healthcare benefits plan	(318)	(327)
Total post-employment benefit income (expense)	(3,952)	(4,123)
Balance Sheet		
Defined benefit pension plans	(1,007)	(1,262)
Post-employment healthcare benefits plan	(8,272)	(9,249)
Total post-employment benefit plan deficit	(9,279)	(10,511)

(a) Defined contribution pension plans

The group provides defined contribution pension plans to its employees in Bermuda and Cayman. Employees are able to make additional voluntary payments to the defined contribution pension plans.

The group's expense for the defined contribution pension plans in 2019 was \$3,595 (2018: \$3,721), of which \$3,564 (2018: \$3,693) relates to the Bermuda-based plan.

(b) Defined benefit pension plans

HSBC has a funded defined benefit pension plan, a closed plan with no active employees, known as the 'Sterling area' plan. This plan is divided into four regional subsets, namely Isle of Man, Guernsey, Jersey and a fourth subset covering international managers ('Plan B').

The group continues to assume responsibility for the entire Plan B and a plan comprising previous employees of the Bank of Bermuda (Isle of Man) Limited for a combined total of 42 individuals (2018: 43).

The net deficit at 31 December 2019 and 31 December 2018 relates only to the components of the plan over which the group maintains current and future legal responsibility.

All the group's defined benefit plans are closed plans not subject to new membership from current employees.

These defined benefit plans expose the group to actuarial risks, such as longevity risk, and to currency risk, interest rate risk and market (investment) risk.

Summary

The net deficit amount recognised in the consolidated balance sheet in respect of the group's pension plan is as follows:

	2019	2018
Defined benefit obligations	(12,420)	(9,817)
Fair value of plan assets	11,413	8,555
Net deficit	(1,007)	(1,262)

The changes in the present value of the defined benefit obligation in respect of the group's pension plan are presented below:

	2019	2018
At 1 Jan	9,817	10,833
Interest cost	286	280
Actuarial losses (gains)	2,146	(522)
Benefits paid	(110)	(336)
Exchange and other movements	281	(438)
At 31 Dec	12,420	9,817

The changes in the fair value of the group's pension plan assets are presented below:

	2019	2018
At 1 Jan	8,555	8,639
Return on plan assets excluding interest income	94	(14)
Interest income	247	205
Contributions by the group	2,158	615
Actuarial gains (losses)	162	(119)
Benefits paid	(110)	(336)
Exchange and other movements	307	(435)
At 31 Dec	11,413	8,555

The fair value of the group's pension plan assets are comprised of:

	2019	2018
Equities	2,672	2,544
Bonds	3,517	3,133
Property and other	5,224	2,878
Fair value of plan assets	11,413	8,555

The total net expense recognised in the consolidated income statement in 'Employee compensation and benefits' in respect of the pension plans comprises:

	2019	2018
Interest cost	(39)	(75)
Total net expense	(39)	(75)

Actuarial valuation of the assets and liabilities of the group's defined benefit pension plans are carried out annually to determine their financial position and to ensure that benefit obligations are adequately funded. The group's pension expense for the defined benefit pension plans was \$39 (2018: \$75).

An actuarial loss of \$1,984 (2018: gain of \$403) was included in the consolidated statement of comprehensive income for the defined benefit pension plans. The cumulative amount of actuarial losses recognised in the consolidated statement of comprehensive income is \$6,378 (2018: \$4,394).

The group determines the discount rate to be applied to its obligations in consultation with the plan's actuaries, on the basis of current average yields of high quality (AA-rated or equivalent) debt instruments with maturities consistent with those of the defined benefit obligations.

The weighted average key actuarial assumptions at 31 December are:

Year	Discount Rate	Inflation Rate	Pension payment Rate increase
	%	%	%
2019	1.9	3.4	3.4
2018	2.9	3.7	3.7

Effect of changes in key assumptions on the defined benefit obligation:

	Financial impact of increase		Financial impact of decrease	
	2019	2018	2019	2018
Discount rate – increase/decrease of 0.25%	(247)	(179)	265	192
Inflation rate – increase/decrease of 0.25%	157	110	(150)	(104)
Pension payments – increase/decrease of 0.25%	237	165	(221)	(153)

(c) Post-employment healthcare benefits plan

The group provides an unfunded post-employment healthcare benefits plan (the 'plan') for certain Bermuda-based retired employees. To qualify, employees must have a minimum of 15 or 20 years (depending on their hire date) of successive service at the date of retirement. Independent, qualified actuaries carry out an actuarial assessment of the liabilities of the plan on an annual basis using the PRH-2014 Total Data Set Mortality Table rolled back to 2006 and then projected fully generationally with the MP-2017 Mortality Improvement Scale. The liabilities are evaluated by discounting the expected future claims to a net present value.

During 2017 the terms of the plan were amended. The amendments included closing the post-employment healthcare benefits plan to new employees from September 2017 and shifting the retiree's cost of the premiums on a gradual basis each year to achieve a fully funded premium by retirees by 2022.

The latest actuarial assessment was carried out in December 2019 in accordance with IAS 19. At 31 December 2019, the estimated present value of the post-employment healthcare benefit obligation was \$8,272 (2018: \$9,249). The main financial assumptions used to estimate the obligation at 31 December 2019 are current and ultimate healthcare claims trend rate of 6.5% and 4.5% per annum respectively (2018: 7.0% and 4.5%) and a discount rate of 2.9% (2018: 3.9%) per annum.

The changes in the present value of the post-employment healthcare benefit obligations are as follows:

	2019	2018
At 1 Jan	9,249	12,548
Current service cost	–	1
Interest cost	317	326
Contributions by employees	2,090	1,829
Actuarial losses (gains)	1,679	(1,791)
Benefits paid	(5,063)	(3,664)
At 31 Dec	8,272	9,249

The total net income (expense) recognised in the consolidated income statement within 'Employee compensation and benefits' in respect of the post-employment healthcare benefits plan is comprised of:

	2019	2018
Current service cost	–	(1)
Interest cost	(317)	(326)
Total net expense	(317)	(327)

Total net actuarial results recognised in the consolidated statement of comprehensive income in 2019 in respect of the post-employment healthcare benefits plan are a loss of \$1,679 (2018: gain of \$1,791). The total cumulative net actuarial loss to date, which has been recognised in the consolidated statement of comprehensive income, is \$21,125 (2018: \$19,446).

Notes on the consolidated financial statements

(In US dollar thousands)

The net deficits and the experience adjustments on plan liabilities expressed as an amount and as a percentage of the net deficit for the current and previous annual period are as follows:

	2019	2018
Net obligation	8,272	9,249
Experience adjustments on plan liabilities expressed as an amount	(1,679)	(1,791)
Experience adjustments on plan liabilities expressed as a percentage	(20)%	(19)%

The actuarial assumptions related to the healthcare cost trend rates may have a significant effect on the amounts recognised. A one-percentage point change in assumed healthcare cost trend rates would have the following effects on amounts recognised in 2019:

	2019	2018
	1% increase	1% increase
Effect on the aggregate of the current service cost and interest cost	24	25
Effect on present value of the benefit obligation	708	741
	1% decrease	1% decrease
Effect on the aggregate of the current service cost and interest cost	(21)	(22)
Effect on present value of the benefit obligation	(626)	(657)

5 Share-based payments

During 2019, \$644 was charged to the consolidated income statement in respect of share-based payment transactions relating to deferred share awards (2018: \$626). This expense, which was computed from the fair values of the share-based payments on transaction dates, arose under employee share awards made in accordance with the group's reward structures. All share plans are based on ordinary \$0.50 par value shares in the ultimate parent company HSBC Holdings plc.

The HSBC share plan

The HSBC share plan was adopted by HSBC Holdings plc in 2005. Under this plan, performance share awards, restricted share awards, employee share purchase and share option awards may be made. The aim of the HSBC share plan is to align the interests of executives and employees with the creation of shareholder value and recognise individual performance and potential. Awards are also made under this plan for recruitment and retention purposes.

Restricted share awards

Restricted shares are awarded to employees on the basis of their performance, potential and retention requirements, to aid retention or as a part-deferral of annual bonuses. Shares are awarded without corporate performance conditions and generally vest between one and three years from the date of award, providing the employees have remained continually employed by the group for this period.

International Employee Share Purchase Plan ('ShareMatch')

In 2015 the group joined the Sharematch Plan replacing the Savings related share option plan highlighted below. Shares are purchased in the market each month up to a maximum value of three hundred and two dollars (2018 – three hundred and twenty dollars). Matching awards are added at a ratio of one free share for every three purchased. Matching awards vest subject to continued employment and the retention of the purchased shares for a maximum period of two years and nine months.

Savings-related share option plans

During 2013, the savings-related share option plans were suspended. Prior to 2013 eligible employees were invited to enter into savings contracts to save up to \$350 per month, with the option to use the savings to acquire shares. The aim of the plans is to align the interests of all employees with the creation of shareholder value. The options are exercisable within three months following the first anniversary of the commencement of a one-year savings contract or within six months following either the third or fifth anniversaries of the commencement of three-year or five-year savings contracts, respectively. The exercise price is set at a 20% discount to the average market value immediately preceding the date of invitation.

6 Tax expense

Under current Bermuda law the group is not required to pay any corporate taxes in Bermuda on either income or capital gains. All overseas subsidiaries also operate in jurisdictions where no corporate taxes are levied on either income or capital gains, consequently there was no deferred tax in 2019 and 2018.

7 Derivatives

Fair values of derivatives by product type

	2019		2018	
	Fair value		Fair value	
	Assets	Liabilities	Assets	Liabilities
Foreign exchange	6,948	4,540	11,149	12,149
Interest rate	7,233	8,018	2,598	3,086
Trading derivatives	14,181	12,558	13,747	15,235
Fair value hedges – Interest rate	670	18,262	4,131	149
Total derivatives	14,851	30,820	17,878	15,384

The notional contract amounts of derivatives held for trading purposes indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.

Notional contract amounts of derivatives by product type

	2019	2018
Foreign exchange	1,256,288	1,492,225
Interest rate	212,371	94,638
Trading derivatives	1,468,659	1,586,863
Fair value hedges – Interest rate	858,850	246,250
Total derivatives	2,327,509	1,833,113

Derivatives are financial instruments that derive their value from the price of an underlying item such as equities, bonds, interest rates, foreign exchange rates, credit spreads, commodities and equity or other indices. Derivatives enable users to increase, reduce or alter exposure to credit or market risks. The group makes markets in derivatives for its customers and uses derivatives to manage its exposure to market risks (Note 20).

Derivatives are carried at fair value and shown in the consolidated balance sheet gross. Asset values represent the cost to the group of replacing all transactions with a fair value in the group's favour assuming that the entire group's relevant counterparties default at the same time, and that transactions can be replaced instantaneously. Liability values represent the cost to the group's counterparties of replacing all their transactions with the group with a fair value in their favour if the group were to default. Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Use of derivatives

The group uses derivatives for two primary purposes: to create risk management solutions for clients and to manage and hedge the group's own risks. For accounting purposes, derivative instruments are classified as held either for trading or hedging. Derivatives that are held as hedging instruments are formally designated as hedges as defined in IAS 39. IFRS 9 includes an accounting policy choice to remain with IAS 39 hedge accounting, which the group has exercised. All other derivative instruments are classified as held for trading. The held for trading classification includes two types of derivative instruments: those used in sales and trading activities; and those instruments that are used for risk management purposes but which for various reasons do not meet the qualifying criteria for hedge accounting.

The group's derivative activities give rise to significant open positions in portfolios of derivatives. These positions are managed frequently to ensure that they remain within acceptable risk levels, with matching deals being utilised to achieve this where necessary. When entering into derivative transactions, the group employs the same credit risk management procedures to assess and approve potential credit exposures as are used for traditional lending.

With respect to derivative contracts, the notional or contractual amounts of these instruments indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.

(a) Trading derivatives

The derivative transactions of the group relate to foreign exchange and interest rate sales trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks.

As mentioned above, other derivatives classified as held for trading may include non-qualifying hedging derivatives, ineffective hedging derivatives and the components of hedging derivatives that are excluded from assessing hedge effectiveness. Non-qualifying hedging derivatives are entered into for risk management purposes but do not meet the criteria for hedge accounting.

Gains and losses from changes in the fair value of derivatives that do not qualify for hedge accounting are reported in 'Net income from financial instruments held for trading or managed on a fair value basis'.

A three level fair value hierarchy, which reflects the availability of observable market inputs, is used when estimating fair values. All derivatives are considered Level 2 as they are based upon observable market inputs. Total exposure to HSBC Group counterparties at 31 December 2019 amounted to an unrealised loss of \$23,559 (2018: gain of \$557) and cash collateral was \$22,330 (2018: \$3,710). Where the group receives collateral from customers related to outstanding derivative contracts, these comprise cash and cash equivalents, securities and mortgage interests over property. Credit concentrations with large counterparties are controlled through counterparty limits. Credit exposures, incorporating derivative exposures, to single names are capped and monitored by senior management as detailed in Note 20.

(b) Hedging accounting derivatives

The group uses derivatives (principally interest rate swaps) for hedging purposes in the management of its own asset and liability portfolios and structural positions. This enables the group to optimise the overall cost of accessing debt capital markets, and to mitigate the market risk which would otherwise arise from structural imbalances in the maturity and other profiles of its assets and liabilities.

Fair value hedges

The group's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate long-term financial instruments due to movements in market interest rates. For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the item in relation to the risk being hedged are recognised in the consolidated income statement. If the hedge relationship is terminated, the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and is amortised to the consolidated income statement as a yield adjustment over the remainder of the hedging period.

Gains or (losses) arising from fair value hedges

	2019	2018
Gains (losses)		
– on hedging instruments	(19,130)	(2,065)
– on hedged items attributable to the hedged risk	19,043	2,059
Net (loss)	(87)	(6)

Notes on the consolidated financial statements

(In US dollar thousands)

Offsetting of financial assets and financial liabilities

The following table presents the recognised financial instruments that are subject to enforceable master netting arrangements.

Amounts subject to enforceable netting arrangements not offset in the Balance Sheet

	Gross amounts	Amounts offset in the balance sheet	Amounts reported in the balance sheet	Cash collateral	Net amount	Amounts not subject to enforceable netting arrangements	Balance sheet total
At 31 Dec 2019							
Derivatives assets	5,621	—	5,621	3,710	1,911	9,230	14,851
Derivatives liabilities	28,829	—	28,829	26,040	2,789	1,991	30,820
At 31 Dec 2018							
Derivatives assets	12,866	—	12,866	4,690	8,176	5,012	17,878
Derivatives liabilities	10,407	—	10,407	980	9,427	4,977	15,384

For the financial assets and liabilities subject to enforceable master netting arrangements above, the agreement between the group and the counterparty allows for automatic net settlement of the relevant financial assets and financial liabilities when each party's obligation would otherwise be payable in the same currency in respect of the same transactions. In addition, the parties may elect in respect of two or more transactions, that a net amount will be determined in respect of all amounts payable on the same date in the same currency.

8 Loans and advances to banks

Maturity analysis

	2019	2018
One year or less	1,508,542	1,631,827
More than one year	630,000	530,000
Total loans and advances to banks	2,138,542	2,161,827

There are no past due loans (2018: \$NIL) and \$38 expected credit losses (2018: \$15) included in loans and advances to banks. There are no netting agreements or collateral held in respect of loans and advances to banks (2018: \$NIL).

Fair value of all loans and advances are calculated using observable market inputs and therefore are classified as Level 2 in the fair value hierarchy.

Loans and advances to banks by country and credit rating

	AAA	AA+, AA, AA-	A+, A, A-	BBB+, BBB, BBB-	BB+, BB, BB-	Not rated	Total
Australia	—	—	9,569	—	—	—	9,569
Belgium	—	7,160	—	—	—	—	7,160
Bermuda	9,042	—	—	1,551	—	128	10,721
Canada	—	148,867	—	—	—	—	148,867
Cayman Islands	—	—	—	—	—	6,155	6,155
Chile	—	—	80,000	—	—	—	80,000
China	—	1,901	—	—	—	—	1,901
Czech Republic	—	—	6	—	—	—	6
Denmark	—	—	522	—	—	—	522
France	—	29,594	—	—	—	—	29,594
Germany	—	—	196,035	1	—	—	196,036
Hungary	—	—	2	—	—	—	2
Israel	—	—	9	—	—	—	9
Japan	—	5,347	179,500	—	—	—	184,847
Mexico	—	—	—	197	—	—	197
New Zealand	—	92	—	—	—	—	92
Norway	—	76	—	—	—	—	76
Poland	—	—	146	—	—	—	146
Singapore	—	203	—	—	—	—	203
South Africa	—	—	—	—	35	—	35
Sweden	—	—	34	—	—	—	34
Switzerland	—	10	809	—	—	—	819
Turkey	—	—	—	—	—	1	1
United Arab Emirates	—	—	550,000	—	—	—	550,000
United Kingdom	—	380,618	—	—	—	—	380,618
United States	—	512,828	18,104	—	—	—	530,932
At 31 Dec 2019	9,042	1,086,696	1,034,736	1,749	35	6,284	2,138,542

Loans and advances to banks by country and credit rating (continued)

	AAA	AA+, AA, AA-	A+, A, A-	BBB+, BBB, BBB-	BB+, BB, BB-	Not rated	Total
Australia	—	—	10,076	—	—	—	10,076
Belgium	—	5,135	—	—	—	—	5,135
Bermuda	6,967	—	—	1,069	—	139	8,175
Canada	—	150,735	145,000	—	—	—	295,735
Cayman Islands	—	—	—	—	—	4,436	4,436
Chile	—	—	80,000	—	—	—	80,000
China	—	837	—	—	—	—	837
Czech Republic	—	—	16	—	—	—	16
Denmark	—	—	1,436	—	—	—	1,436
France	—	—	—	—	—	—	—
Germany	—	200,000	—	52,493	—	—	252,493
Hungary	—	—	3	—	—	—	3
Israel	—	—	12	—	—	—	12
Japan	—	5,320	550,000	—	—	—	555,320
Mexico	—	—	—	133	—	—	133
New Zealand	—	103	—	—	—	—	103
Norway	—	—	3,159	—	—	—	3,159
Poland	—	—	166	—	—	—	166
Singapore	—	493	—	—	—	—	493
South Africa	—	—	—	—	78	—	78
Sweden	—	—	110	—	—	—	110
Switzerland	—	—	1,516	—	—	4	1,520
Turkey	—	—	—	—	1	—	1
United Arab Emirates	—	450,000	—	—	—	—	450,000
United Kingdom	—	229,477	—	—	—	—	229,477
United States	—	259,317	3,596	—	—	—	262,913
At 31 Dec 2018	6,967	1,301,417	795,090	53,695	79	4,579	2,161,827

Loans and advances to banks are rated using a hierarchy of rating agencies. The Standard & Poor's ('S&P') ratings are used where available, followed by Fitch then Moody's. If no rating is provided by S&P, Fitch or Moody's, the balance is classified as not rated. Loans and advances to banks are unsecured.

Collateral may be held for the group's securities lending activity, for which the Bank normally accepts collateral in the form of cash, US government or federal agency securities, letters of credit or OECD debt instruments approved by the group.

9 Credit risk

The following table provides an overview of the group's credit risk by stage and the associated ECL coverage. The financial assets recorded in each stage have the following characteristics:

Stage 1: Unimpaired and without significant increase in credit risk on which a 12-month allowance for ECL is recognised.

Stage 2: A significant increase in credit risk has been experienced since initial recognition on which a lifetime ECL is recognised.

Stage 3: Objective evidence of impairment, and are therefore considered to be in default or otherwise credit-impaired on which a lifetime ECL is recognised.

Summary of credit risk by stage distribution and ECL coverage by industry sector

	Gross carrying/nominal amount				Allowance for ECL				Net total per balance sheet
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Loans and advances to customers:	1,816,873	121,263	364,453	2,302,589	(3,098)	(5,177)	(119,829)	(128,104)	2,174,485
– Residential mortgages	857,149	31,733	310,339	1,199,221	(1,876)	(3,425)	(87,847)	(93,148)	1,106,073
– Other personal	178,573	7,432	17,741	203,746	(681)	(945)	(6,473)	(8,099)	195,647
– Industrial and international trade	24,434	376	3,381	28,191	(14)	(8)	(1,966)	(1,988)	26,203
– Commercial real estate	189,347	76,457	26,389	292,193	(251)	(767)	(18,396)	(19,414)	272,779
– Government	241,168	—	—	241,168	(34)	—	—	(34)	241,134
– Other commercial	207,728	4,972	1,979	214,679	(165)	(31)	(1,040)	(1,236)	213,443
– Non-bank financial institutions	118,474	293	4,624	123,391	(77)	(1)	(4,107)	(4,185)	119,206
Loans and advances to banks:	2,138,580	—	—	2,138,580	(38)	—	—	(38)	2,138,542
Financial guarantees and similar contracts:	454,562	19	14,092	468,673	(74)	—	—	(74)	N/A²
At 31 Dec 2019	4,410,015	121,282	378,545	4,909,842	(3,210)	(5,177)	(119,829)	(128,216)	

² Financial guarantees and similar contracts nominal amount represents off-balance sheet positions. The corresponding allowance for ECL is included on the balance sheet hence no net total is presented.

Notes on the consolidated financial statements

(In US dollar thousands)

Summary of credit risk by stage distribution and ECL coverage by industry sector (continued)

	Gross carrying/nominal amount				Allowance for ECL				Net total per balance sheet
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Loans and advances to customers:	1,718,204	243,262	362,904	2,324,370	(2,326)	(7,655)	(123,420)	(133,401)	2,190,969
– Residential mortgages	820,613	117,131	296,153	1,233,897	(957)	(5,173)	(87,177)	(93,307)	1,140,590
– Other personal	185,553	11,726	17,587	214,866	(1,004)	(1,163)	(7,296)	(9,463)	205,403
– Industrial and international trade	58,523	3,899	4,922	67,344	(37)	(75)	(3,137)	(3,249)	64,095
– Commercial real estate	272,325	85,184	38,059	395,568	(191)	(1,068)	(21,808)	(23,067)	372,501
– Government	150,000	–	–	150,000	(29)	–	–	(29)	149,971
– Other commercial	137,262	23,849	1,544	162,655	(87)	(168)	(598)	(853)	161,802
– Non-bank financial institutions	93,928	1,473	4,639	100,040	(21)	(8)	(3,404)	(3,433)	96,607
Loans and advances to banks:	2,161,842	–	–	2,161,842	(15)	–	–	(15)	2,161,827
Financial guarantees and similar contracts:	408,045	2,447	14,092	424,584	(70)	(6)	–	(76)	N/A ²
At 31 Dec 2018	4,288,091	245,709	376,996	4,910,796	(2,411)	(7,661)	(123,420)	(133,492)	

² Financial guarantees and similar contracts nominal amount represents off-balance sheet positions. The corresponding allowance for ECL is included on the balance sheet hence no net total is presented.

Unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when they are 30 days past due ('DPD') and are transferred from stage 1 to stage 2. The disclosure below presents the ageing of stage 2 financial assets by those less than 30 and greater than 30 days past due and therefore presents those financial assets classified as stage 2 due to ageing (30 days past due) and those identified at an earlier stage (less than 30 days past due). Past due financial instruments are those loans where customers have failed to make payments in accordance with the contractual terms of their facilities.

Stage 2 days past due analysis at 31 December 2019

	Gross carrying amount			Allowance for ECL		
	Stage 2	Of which:		Stage 2	Of which:	
		1 to 29 DPD ³	30 and > DPD ³		1 to 29 DPD ³	30 and > DPD ³
Loans and advances to customers:	121,263	14,442	5,758	(5,177)	(1,239)	(448)
– Residential mortgages	31,733	10,828	3,352	(3,425)	(834)	(169)
– Other personal	7,432	3,410	1,637	(945)	(405)	(248)
– Industrial and international trade	376	–	–	(8)	–	–
– Commercial real estate	76,457	–	764	(767)	–	(31)
– Other commercial	4,972	204	5	(31)	–	–
– Non-bank financial institutions	293	–	–	(1)	–	–
Loans and advances to banks:	–	–	–	–	–	–

³ Days past due ('DPD'). Up to date accounts in Stage 2 are not shown in the amounts.

Stage 2 days past due analysis at 31 December 2018

	Gross carrying amount			Allowance for ECL		
	Stage 2	Of which:		Stage 2	Of which:	
		1 to 29 DPD ³	30 and > DPD ³		1 to 29 DPD ³	30 and > DPD ³
Loans and advances to customers:	243,262	37,962	9,859	(7,655)	(2,509)	(1,136)
– residential mortgages	117,131	30,127	8,182	(5,173)	(2,077)	(847)
– Other personal	11,726	5,109	1,677	(1,163)	(397)	(289)
– Industrial and international trade	3,899	1,258	–	(75)	(2)	–
– Commercial real estate	85,184	1,125	–	(1,068)	(33)	–
– Other commercial	23,849	333	–	(168)	–	–
– Non-bank financial institutions	1,473	10	–	(8)	–	–
Loans and advances to banks:	–	–	–	–	–	–

³ Days past due ('DPD'). Up to date accounts in Stage 2 are not shown in the amounts.

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments, financial guarantees and debt instruments measured at FVOCI

	Non-credit impaired				Credit impaired		Total	
	Stage 1		Stage 2		Stage 3		Gross carrying/nominal amount	Allowance for ECL
	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL		
At 1 Jan 2019	4,288,091	(2,411)	245,709	(7,661)	376,996	(123,420)	4,910,796	(133,492)
Loans and advances to customers:								
Transfers	50,361	(2,756)	(85,381)	4,146	35,020	(1,390)	–	–
– Transfers from Stage 1 to Stage 2	(21,948)	53	21,948	(53)	–	–	–	–
– Transfers from Stage 2 to Stage 1	86,010	(2,857)	(86,010)	2,857	–	–	–	–
– Transfers to Stage 3	(14,554)	48	(21,674)	1,359	36,228	(1,407)	–	–
– Transfers from Stage 3	853	–	355	(17)	(1,208)	17	–	–
Net remeasurement of ECL including transfer of stage	–	1,538	–	(2,594)	–	(10,580)	–	(11,636)
New financial assets originated	239,501	(322)	–	–	–	–	239,501	(322)
Assets derecognised (including final repayments)	(191,193)	768	(36,618)	926	(19,936)	583	(247,747)	2,277
Assets written off	–	–	–	–	(13,535)	14,978	(13,535)	14,978
Loans and advances to banks:								
– Net movement	(23,262)	(23)	–	–	–	–	(23,262)	(23)
Financial guarantees and similar contracts:								
– Net movement	46,517	(4)	(2,428)	6	–	–	44,089	2
At 31 Dec 2019	4,410,015	(3,210)	121,282	(5,177)	378,545	(119,829)	4,909,842	(128,216)
– ECL release/(charge) for the period		(799)		2,484		(11,387)		(9,702)
– Recoveries								1,132
Others								–
Total ECL charge for the period								(8,570)

	At 31 Dec 2019		Twelve months ended 31 Dec 2019
	Gross carrying/nominal amount	Allowance for ECL	ECL charge
As above	4,909,842	(128,216)	(8,570)
Debt instruments measured at FVOCI	3,845,556	(92)	(30)
Total allowance for ECL/total income statement ECL charge for the period	N/A	(128,308)	(8,600)

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(In US dollar thousands)

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments, financial guarantees and debt instruments measured at FVOCI (continued)

	Non-credit impaired				Credit impaired		Total	
	Stage 1		Stage 2		Stage 3		Gross carrying/ nominal amount	Allowance for ECL
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL		
At 1 Jan 2018	4,867,971	(2,161)	399,314	(8,858)	362,843	(138,000)	5,630,128	(149,019)
Loans and advances to customers:								
Transfers	(12,241)	(1,564)	(24,061)	2,391	36,302	(827)	—	—
– Transfers from Stage 1 to Stage 2	(59,904)	81	59,904	(81)	—	—	—	—
– Transfers from Stage 2 to Stage 1	63,844	(1,637)	(63,844)	1,637	—	—	—	—
– Transfers to Stage 3	(16,540)	71	(20,639)	1,017	37,179	(1,088)	—	—
– Transfers from Stage 3	359	(79)	518	(182)	(877)	261	—	—
Net remeasurement of ECL including transfer of stage	—	1,335	—	(1,776)	—	(11,975)	—	(12,416)
New financial assets originated	258,994	(381)	—	—	—	—	258,994	(381)
Assets derecognised (including final repayments)	(221,234)	376	(112,671)	570	(18,700)	6,960	(352,605)	7,906
Assets written off	—	—	—	—	(17,541)	20,422	(17,541)	20,422
Loans and advances to banks:								
– Net movement	(445,712)	6	—	—	—	—	(445,712)	6
Financial guarantees and similar contracts:								
– Net movement	(159,687)	(22)	(16,873)	12	14,092	—	(162,468)	(10)
At 31 Dec 2018	4,288,091	(2,411)	245,709	(7,661)	376,996	(123,420)	4,910,796	(133,492)
– ECL release/(charge) for the period		(250)		1,197		(5,842)		(4,895)
– Recoveries								3,633
Others								3,783
Total ECL release for the period								2,521

	At 31 Dec 2018		Twelve months ended 31 Dec 2018
	Gross carrying/ nominal amount	Allowance for ECL	ECL charge
As above	4,910,796	(133,492)	2,521
Debt instruments measured at FVOCI	3,482,566	(62)	7
Total allowance for ECL/total income statement ECL release for the period	N/A	(133,463)	2,528

Distribution of financial instruments to which the impairment requirements in IFRS 9 are applied, by credit quality and stage allocation (see note 20(e) for credit quality classification definitions)

	Gross carrying/notional amount					Total	Allowance for ECL	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired			
Loans and advances to banks at amortised cost	2,138,580	—	—	—	—	2,138,580	(38)	2,138,542
– Stage 1	2,138,580	—	—	—	—	2,138,580	(38)	2,138,542
– Stage 2	—	—	—	—	—	—	—	—
– Stage 3	—	—	—	—	—	—	—	—
Loans and advances to customers at amortised cost	731,332	533,314	657,144	16,346	364,453	2,302,589	(128,104)	2,174,485
– Stage 1	730,545	524,140	554,033	8,155	—	1,816,873	(3,098)	1,813,775
– Stage 2	787	9,174	103,111	8,191	—	121,263	(5,177)	116,086
– Stage 3	—	—	—	—	364,453	364,453	(119,829)	244,624
Financial guarantees and similar contracts	276,973	173,228	4,366	14	14,092	468,673	(74)	N/A ⁴
– Stage 1	276,973	173,228	4,347	14	—	454,562	(74)	
– Stage 2	—	—	19	—	—	19	—	
– Stage 3	—	—	—	—	14,092	14,092	—	
At 31 Dec 2019	3,146,885	706,542	661,510	16,360	378,545	4,909,842	(128,216)	

⁴ Financial guarantees and similar contracts nominal amount represents off-balance sheet positions. The corresponding allowance for ECL is included on the balance sheet hence no net total is presented.

Distribution of financial instruments to which the impairment requirements in IFRS 9 are applied, by credit quality and stage allocation (see note 20(e) for credit quality classification definitions) (continued)

	Gross carrying/notional amount					Total	Allowance for ECL	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired			
Loans and advances to banks at amortised cost	2,161,842	–	–	–	–	2,161,842	(15)	2,161,827
– Stage 1	2,161,842	–	–	–	–	2,161,842	(15)	2,161,827
– Stage 2	–	–	–	–	–	–	–	–
– Stage 3	–	–	–	–	–	–	–	–
Loans and advances to customers at amortised cost	625,634	638,003	666,389	31,440	362,904	2,324,370	(133,401)	2,190,969
– Stage 1	601,445	620,655	487,092	9,012	–	1,718,204	(2,326)	1,715,878
– Stage 2	24,189	17,348	179,297	22,428	–	243,262	(7,655)	235,607
– Stage 3	–	–	–	–	362,904	362,904	(123,420)	239,484
Financial guarantees and similar contracts	217,416	186,523	6,469	84	14,092	424,584	(76)	N/A ⁴
– Stage 1	217,416	186,523	4,106	–	–	408,045	(71)	
– Stage 2	–	–	2,363	84	–	2,447	(5)	
– Stage 3	–	–	–	–	14,092	14,092	–	
At 31 Dec 2018	3,004,892	824,526	672,858	31,524	376,996	4,910,796	(133,492)	

⁴ Financial guarantees and similar contracts nominal amount represents off-balance sheet positions. The corresponding allowance for ECL is included on the balance sheet hence no net total is presented.

10 Loans and advances to customers

The group has the following concentration of loans and advances to customers.

Where customers have both a borrowing and a deposit relationship with the group, loans and deposits are presented gross:

	2019	2018
Personal		
– Residential mortgages	1,199,221	1,233,897
– Other personal	203,746	214,866
Total personal	1,402,967	1,448,763
Wholesale		
Corporate and Commercial		
– Industrial and international trade	28,191	67,344
– Commercial real estate	292,193	395,568
– Government	241,168	150,000
– Other commercial	214,679	162,655
Total corporate and commercial	776,231	775,567
Financial		
– Non-bank financial institutions	123,391	100,040
Total wholesale	899,622	875,607
Gross loans and advances to customers	2,302,589	2,324,370
Expected credit losses	(128,104)	(133,401)
Loans and advances to customers	2,174,485	2,190,969

Gross loans with variable rates are \$2,249,518 (2018: \$2,282,372) and fixed rates are \$53,071 (2018: \$41,998).

The following table provides an analysis of remaining contractual maturities and measurement bases of loans and advances to customers:

Maturity analysis

	2019		2018	
	Amortised cost	Fair value	Amortised cost	Fair value
One year or less	528,414	528,168	222,106	221,866
More than one year	1,646,071	1,608,270	1,968,863	1,930,112
	2,174,485	2,136,438	2,190,969	2,151,978

The loan fair values disclosed above are based on weighted average estimated remaining maturities and are determined using a valuation technique supported by market interest rates and estimated future cash flows. As there is no secondary liquid market, they are classified as Level 3. Additional information about the interest rate risk exposure pertaining to loans and advances to customers is presented in Note 20.

Notes on the consolidated financial statements

(In US dollar thousands)

The following tables provide further analyses of customer loans and collateral types at 31 December:

Gross loans and advances to customers

	2019	2018
Neither past due nor impaired	1,894,579	1,869,565
Past due but not impaired:		
Past due less than 30 days	37,799	82,042
Past due between 30 and 60 days	3,671	6,362
Past due between 60 and 90 days	2,087	3,497
Credit impaired	364,453	362,904
Total	2,302,589	2,324,370

Gross loans and advances to customers by type of collateral

	2019			2018		
	Mortgage interest	Assets other than mortgage interest	Unsecured	Mortgage interest	Assets other than mortgage interest	Unsecured
Neither past due nor impaired	1,038,315	96,594	759,670	1,088,480	107,041	674,044
Past due but not impaired:						
Past due less than 30 days	30,695	1,157	5,947	39,869	2,566	39,607
Past due between 30 and 60 days	2,502	74	1,095	5,438	1	923
Past due between 60 and 90 days	1,613	–	474	2,744	311	442
Credit impaired	326,187	23,026	15,240	326,654	24,181	12,069
Total	1,399,312	120,851	782,426	1,463,185	134,100	727,085

The group holds collateral against loans and advances to customers in the form of mortgage interests over property and pledges, other charges over real and financial assets, and guarantees. Estimates of fair value are based on the value of collateral assessed at the time of borrowing, and updated at a minimum of every three years for performing facilities but more frequently where the market is subject to significant changes in condition. In the case of performing personal mortgages the value of collateral is adjusted annually to reflect overall movements in the market. Where a loan is showing signs of potential impairment, or is classified as credit impaired, collateral values are updated annually. Collateral held for impaired loans amounts to \$428,334 (2018: \$409,496).

The group adheres to HSBC policy and monitors credit concentration risk in accordance with local regulatory requirements. A substantial portion of the loans and advances to customers are due from residents of Bermuda and is secured by residential or commercial property in Bermuda. The only exposures of significance to customers with principal operations outside of Bermuda are \$150,000 (2018: \$150,000) in Qatar, \$50,000 (2018: \$50,000) in Mexico, \$12,770 (2018: \$14,908) in Canada, \$NIL (2018: \$75,000) in UAE and \$NIL (2018: \$22,500) in Brazil.

The group regularly reviews loans and advances to customers and allocates a risk rating against each loan or advance based on performance criteria. The breakdown of loans and advances to customers by risk category at 31 December 2019 is 83.5% (2018: 83.0%) performing, 0.7% (2018: 1.4%) sub-standard and 15.8% (2018: 15.6%) credit impaired.

'Performing' exposures demonstrate a strong to fair capacity to meet financial commitments, with low to moderate probability of default. Personal accounts meet commitments as agreed or show only short periods of delinquency. ('Performing' encompasses the 'Strong,' 'Good' and 'Satisfactory' categories outlined in Note 20). 'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern. Personal portfolio segments show longer delinquency periods, of up to 90 days past due. 'Credit impaired' exposures include wholesale exposures where the group considers that either the customer is unlikely to pay its credit obligations in full, without recourse by the group to actions such as realising security if held, or the customer is past due more than 90 days on any material credit obligation.

The breakdown of credit impaired exposures by customer category is as follows: Personal \$328,080 (2018: \$313,740), Wholesale \$36,373 (2018: \$49,164).

Interest receivable on credit impaired facilities at 31 December 2019 amounted to \$11,344 (2018: \$12,746).

At 31 December 2019, the group held repossessed collateral relating to stage 3 loans with a carrying value of \$13,968 (2018: \$20,768), split between Personal \$11,814 (2018: \$10,851) and Wholesale \$2,154 (2018: \$9,917).

Change in expected credit losses and other credit impairment charges on loans and advances to customers during 2019 are split between Personal \$8,742 (2018: \$4,145) and Wholesale \$193 release (2018: \$6,670 release).

Expected credit losses are split between Personal \$101,247 (2018: \$102,770) and Wholesale \$26,857 (2018: \$30,631).

Renegotiated loans

The group proactively works with financially distressed clients, to manage customer relationships, improve collection opportunities and, where possible, to avoid repossession. The vast majority of loans renegotiated with customers are on amortising terms. Renegotiated loans are designated as credit impaired until the customer has demonstrated long term ability to repay the loan.

Of the total renegotiated loans and advances \$NIL (2018: \$NIL) relates to loans that were derecognised for accounting purposes and a new asset recognised following renegotiation. On derecognition, an expected credit loss charge of the difference between the previous carrying value of the derecognised loan and the new loan recorded at fair value would be recognised.

Renegotiated loans by delinquency

	2019				Total
	Current	1 – 30 days past due	31 – 90 days past due	> 90 days past due	
Personal					
Residential mortgages	143,309	19,257	15,992	91,813	270,371
Other personal	5,992	1,381	63	4,254	11,690
Total personal	149,301	20,638	16,055	96,067	282,061
Wholesale					
Corporate and Commercial					
Industrial and international trade	497	–	–	2,237	2,734
Commercial real estate	57,916	316	–	16,109	74,341
Other commercial	174	104	5	647	930
Total corporate and commercial	58,587	420	5	18,993	78,005
Financial					
Non-bank financial institutions	–	–	–	1,604	1,604
Total wholesale	58,587	420	5	20,597	79,609
Total renegotiated loans and advances to customers	207,888	21,058	16,060	116,664	361,670
	2018				
Personal					
Residential mortgages	140,981	24,690	15,538	76,931	258,140
Other personal	6,041	1,864	1,743	1,007	10,655
Total personal	147,022	26,554	17,281	77,938	268,795
Wholesale					
Corporate and Commercial					
Industrial and international trade	154	7	–	3,411	3,572
Commercial real estate	59,756	328	–	26,986	87,070
Other commercial	249	15	–	157	421
Total corporate and commercial	60,159	350	–	30,554	91,063
Financial					
Non-bank financial institutions	–	–	–	1,604	1,604
Total wholesale	60,159	350	–	32,158	92,667
Total renegotiated loans and advances to customers	207,181	26,904	17,281	110,096	361,462

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(In US dollar thousands)

11 Financial investments

Carrying amount of financial investments

	2019	2018
Debt instruments measured at FVOCI		
– Treasury and other eligible bills	496,353	297,028
– Debt securities	3,349,203	3,185,538
Total debt instruments measured at FVOCI	3,845,556	3,482,566
Debt instruments held for trading at FVPL		
– Structured certificates of deposit	–	3,435
Total debt instruments held for trading at FVPL	–	3,435
Total debt securities	3,845,556	3,486,001
Financial investments mandatorily measured at FVPL		
– Equity securities	1,342	1,193
Total financial investments mandatorily measured at FVPL	1,342	1,193
Total financial investments	3,846,898	3,487,194

Maturity analysis of debt securities

	2019	2018
One year or less	1,164,145	1,308,838
More than one year	2,681,411	2,177,163
Total financial investments	3,845,556	3,486,001

Credit rating analysis of debt securities

	2019	2018
AAA	1,705,972	1,520,417
AA+	935,625	779,481
AA	117,623	86,461
AA-	66,810	211,270
A+	969,048	854,126
A	50,478	34,246
Total debt securities	3,845,556	3,486,001

Total gains or losses included in profit and loss for the period are presented in the consolidated income statement in 'Gains less losses from financial investments'. Expected credit losses on debt securities measured at FVOCI amounting to \$92 are included in other reserves (2018: \$62). All debt securities measured at FVOCI are classified as stage 1.

Debt securities are rated using a hierarchy of rating agencies. The Standard & Poor's ('S&P') ratings are used where available, followed by Fitch then Moody's. All securities guaranteed by the US Government are assigned the US Government's sovereign rating. The structured certificates of deposit have been assigned the issuer's rating.

Financial investments by country and sector

Country	2019			
	Sovereign	Bank	Equities	Total
Belgium	–	–	51	51
Bermuda	21,548	–	79	21,627
Canada	25,257	698,181	–	723,438
Cayman Islands	–	–	1,212	1,212
Finland	–	25,879	–	25,879
France	–	20,228	–	20,228
Germany	–	369,214	–	369,214
Japan	496,353	87,767	–	584,120
Netherlands	–	83,387	–	83,387
Norway	–	32,776	–	32,776
Supranational	–	1,027,785	–	1,027,785
Sweden	–	47,434	–	47,434
United States	909,747	–	–	909,747
Total financial investments	1,452,905	2,392,651	1,342	3,846,898

Financial investments by country and sector (continued)

	2018			Total
	Sovereign	Bank	Equities	
Country				
Belgium	–	–	53	53
Bermuda	28,899	–	79	28,978
Canada	24,419	730,707	–	755,126
Cayman Islands	–	–	1,061	1,061
Finland	–	44,523	–	44,523
France	19,977	66,484	–	86,461
Germany	–	313,438	–	313,438
Japan	297,028	87,509	–	384,537
Netherlands	–	92,237	–	92,237
Norway	–	16,072	–	16,072
Supranational	–	1,031,777	–	1,031,777
Sweden	–	22,867	–	22,867
United States	688,860	21,204	–	710,064
Total financial investments	1,059,183	2,426,818	1,193	3,487,194

Supranational entities, reflected in the above tables, are formed by two or more central governments to promote economic development for the member countries.

No debt securities (2018: \$NIL) have been pledged to third parties as collateral in the normal course of business and debt securities amounting to \$NIL (2018: \$NIL) have been transferred to third parties under securities lending agreements. The group is unable to use, sell or pledge the transferred assets for the duration of the transaction, and remains exposed to interest rate risk and credit risk on pledged assets.

The group is carrying all financial investments at fair value. During the year the group received proceeds of \$2,939,628 (2018: \$2,447,169) from the sale or maturity of financial investments, including \$NIL (2018: \$NIL) from financial investments classified as cash and cash equivalents and realised a net gain of \$1,560 (2018 loss: \$443). The group monitors interest rate sensitivity under varying interest rate scenarios as summarised in Note 20.

12 Fair values of financial investments carried at fair value

The fair value of financial instruments is generally measured on the basis of the individual financial instrument. A three level fair value hierarchy, which reflects the significance of observable market inputs, is used when estimating fair values and is summarised below:

Financial Investments fair value hierarchy summary by sector

	2019			
	Level 1	Level 2	Level 3	Total
Sovereign	909,746	543,159	–	1,452,905
Bank	–	2,392,651	–	2,392,651
Equities	–	–	1,342	1,342
Total financial investments	909,746	2,935,810	1,342	3,846,898
Derivatives				
Assets	–	14,851	–	14,851
Liabilities	–	30,820	–	30,820
	2018			
	Level 1	Level 2	Level 3	Total
Sovereign	688,860	370,323	–	1,059,183
Bank	–	2,423,383	3,435	2,426,818
Equities	–	–	1,193	1,193
Total financial investments	688,860	2,793,706	4,628	3,487,194
Derivatives				
Assets	–	17,878	–	17,878
Liabilities	–	15,384	–	15,384

For Levels 1 and 2 the fair values of these securities have been measured using quoted market prices for identical or similar instruments in active markets.

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(In US dollar thousands)

There have been no transfers between the Levels. The following table shows the reconciliation from the beginning balance to the ending balance for fair value measurements in Level 3 of the fair value hierarchy:

	Footnotes	2019			2018		
		Debt Securities	Equities	Total	Debt Securities	Equities	Total
At 1 Jan		3,435	1,193	4,628	12,311	3,437	15,748
Purchases		—	—	—	—	—	—
Sales		(3,386)	—	(3,386)	(5,000)	—	(5,000)
Total gains or losses:				—			
– in profit or loss	5	(49)	149	100	(3,876)	(2,244)	(6,120)
– in other comprehensive income		—	—	—	—	—	—
At 31 Dec		—	1,342	1,342	3,435	1,193	4,628

5 Included in 'Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss' in the consolidated income statement.

Level 3 securities comprise (i) FVPL equities and (ii) equity and equity-linked securities ('structured CDs'). In the absence of an active market, an investment's fair value is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors, as well as by reference to market valuations for similar entities quoted in an active market, or the price at which similar companies have changed ownership.

The fair value of structured CDs valued using a valuation technique with significant unobservable inputs is derived from the fair value of the underlying debt security, and the fair value of the embedded derivative. Level 3 structured CDs principally comprise equity-linked notes which are issued by HSBC and provide the counterparty with a return that is linked to the performance of certain equity securities which are capped. The structured CDs are classified as Level 3 due to the unobservability of parameters such as long-dated equity volatilities and correlations between equity prices. As the performance of the equity securities are capped, a range cannot be placed on it.

Included in customer accounts are structured certificates of deposit liabilities ('CD liabilities') in the amount of \$NIL (2018: \$3,435) including Level 3 securities of \$NIL (2018: \$3,435). The movement in Level 3 CD liabilities mirrors the movement in the structured CDs as shown in the above table.

13 Property and equipment

	Land and buildings	Equipment, fixtures and fittings and software	Total
Cost			
Cost at 1 Jan 2019	187,015	84,051	271,066
Additions at cost	119	6,167	6,286
Disposals and write-offs	(55,000)	(23,780)	(78,780)
Cost at 31 Dec 2019	132,134	66,438	198,572
Accumulated depreciation			
Accumulated depreciation at 1 Jan 2019	70,926	76,699	147,625
Depreciation charge for the year	2,149	2,337	4,486
Impairment losses	—	—	—
Disposals and write-offs	(42,205)	(23,560)	(65,765)
Accumulated depreciation at 31 Dec 2019	30,870	55,476	86,346
Net book value at 31 Dec 2019	101,264	10,962	112,226

Cost			
Cost at 1 Jan 2018	186,738	103,730	290,468
Additions at cost	277	2,053	2,330
Disposals and write-offs	—	(21,732)	(21,732)
Cost at 31 Dec 2018	187,015	84,051	271,066
Accumulated depreciation			
Accumulated depreciation at 1 Jan 2018	71,320	95,418	166,738
Depreciation charge for the year	2,137	3,013	5,150
Impairment losses	(2,531)	—	(2,531)
Disposals and write-offs	—	(21,732)	(21,732)
Accumulated depreciation at 31 Dec 2018	70,926	76,699	147,625
Net book value at 31 Dec 2018	116,089	7,352	123,441

During 2018 there was recognition of a partial impairment reversal on a portfolio of land and buildings of \$2,531. The reversal reflects a change in estimate of the previous impairment charge. The impairment reversal has been included in the consolidated income statement as part of 'Depreciation and impairment of property and equipment'.

14 Group entities

(a) Principal subsidiaries

The Bank has a 100% interest in the legal entities listed below:

Legal Entity	Country of incorporation or registration	Activity
HSBC Global Asset Management (Bermuda) Limited	Bermuda	Investment management
HSBC Institutional Trust Services (Bermuda) Limited	Bermuda	Custodial and other fiduciary services
HSBC Securities Services (Bermuda) Limited	Bermuda	Fund administration
HSBC Cayman Services Limited	Cayman	Fund and Trust administration

All of the above entities prepare their financial statements up to 31 December.

(b) Principal associate

Movement in investment in associate

	2019	2018
At 1 Jan	1,634	1,631
Share of (loss) profit	(77)	3
At 31 Dec	1,557	1,634

Summarised aggregate financial information on associate at 31 December

	2019	2018
Assets	3,645	3,858
Liabilities	466	536
Operating income	3,692	3,946
(Loss) Profit for the year	(154)	6

The associate investment is accounted for using the equity method.

15 Provisions

	Restructuring	Legal	Contingent liabilities, contractual commitments and guarantees	Total
At 1 Jan 2019	729	–	76	805
Increase in provisions	–	–	–	–
Provisions utilised	(192)	–	–	(192)
Amounts reversed	–	–	–	–
Net change in expected credit loss	–	–	(2)	(2)
At 31 Dec 2019	537	–	74	611
At 1 Jan 2018	8,145	55,000	–	63,145
Increase in provisions	176	–	–	176
Provisions utilised	(6,634)	(55,000)	–	(61,634)
Amounts reversed	(958)	–	–	(958)
Impact on transition to IFRS 9	–	–	66	66
Net change in expected credit loss	–	–	10	10
At 31 Dec 2018	729	–	76	805

Restructuring provisions relate to an onerous contract, debt collection and redundancy costs associated with discontinued operations. Legal provisions relate to ongoing legal proceedings, which are undertaken in the normal course of business.

16 Contingent liabilities, contractual commitments and guarantees

Contingent liabilities and commitments are credit-related instruments, which include letters of credit, guarantees and commitments to extend credit. The contractual amounts represent the amounts at risk should the contract be fully drawn upon and the client defaults. Since a significant portion of guarantees and commitments are expected to expire without being drawn upon, the total of the contractual amounts is not indicative of future liquidity requirements.

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The following table gives the nominal principal amounts of off-balance sheet transactions:

	2019	2018
Guarantees and contingent liabilities		
Guarantees in the form of irrevocable letters of credit	107,531	80,667
Total guarantees and contingent liabilities	107,531	80,667
Commitments		
Documentary credits and short-term trade-related transactions	–	238
Standby facilities, credit lines and other commitments to lend		
– remaining contractual maturity one year or less	245,519	261,506
– remaining contractual maturity more than one year	115,623	82,173
Total commitments	361,142	343,917
Total guarantees, contingent liabilities and commitments	468,673	424,584

At 31 December 2019 approximately 99% (2018: 84%) of the above guarantees have an original contractual term of less than one year. Guarantees with a term of more than one year are subject to the group's annual credit review process. When the group has given a guarantee on behalf of a customer, it will have the right to recover from that customer any amounts paid under the guarantee. At 31 December 2019, the group holds collateral amounting to \$95,092 (2018: \$73,805), which could be used to recover amounts paid under the above guarantees. The expected credit loss provisions relating to guarantees and commitments under IFRS 9 are disclosed in Note 15.

17 Maturity analysis of financial assets and financial liabilities

The following is an analysis of financial assets and financial liabilities by remaining contractual maturities at the date of the consolidated balance sheet:

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
31 Dec 2019									
Cash and balances at central banks	27,139	–	–	–	–	–	–	–	27,139
Items in the course of collection from other banks	120	–	–	–	–	–	–	–	120
Derivatives	2,683	2,442	1,401	421	–	697	284	6,923	14,851
Loans and advances to banks	1,312,507	196,035	–	–	–	80,000	550,000	–	2,138,542
Loans and advances to customers	95,494	27,515	37,228	179,316	188,861	250,505	364,164	1,031,402	2,174,485
– of which:									
Personal	62,191	15,203	22,602	22,363	21,701	86,800	232,360	838,500	1,301,720
Corporate and commercial	24,773	12,046	14,444	156,769	166,973	101,924	84,290	192,338	753,557
Financial and other	8,530	266	182	184	187	61,781	47,514	564	119,208
Financial investments	144,574	537,303	64,194	99,450	318,624	997,252	1,662,610	22,891	3,846,898
Total financial assets	1,582,517	763,295	102,823	279,187	507,485	1,328,454	2,577,058	1,061,216	8,202,035
Other assets	62,496	–	–	–	–	–	–	113,783	176,279
Total assets	1,645,013	763,295	102,823	279,187	507,485	1,328,454	2,577,058	1,174,999	8,378,314
Deposits by banks	31,810	–	–	–	–	–	–	–	31,810
Customer accounts	6,871,451	248,162	171,298	78,365	61,639	16,244	25,566	–	7,472,725
– of which:									
Personal	1,785,194	159,442	146,627	72,260	53,528	12,961	20,405	–	2,250,417
Corporate and commercial	1,174,903	30,955	21,671	4,270	1,725	3,174	5,161	–	1,241,859
Financial and other	3,911,354	57,765	3,000	1,835	6,386	109	–	–	3,980,449
Items in course of transmission to other banks	1,262	–	–	–	–	–	–	–	1,262
Derivatives	921	1,805	1,397	416	–	1,854	16,696	7,731	30,820
Total financial liabilities	6,905,444	249,967	172,695	78,781	61,639	18,098	42,262	7,731	7,536,617
Other liabilities	56,723	100	378	678	721	1,036	1,420	13,043	74,099
Total liabilities	6,962,167	250,067	173,073	79,459	62,360	19,134	43,682	20,774	7,610,716

6 Deposits by banks are predominantly Bermuda (30%), USA (23%), Japan (22%), UK (12%), Other (13%) and are included in Level 2 of the fair value levelling hierarchy. The carrying amounts equal the fair value as these are typically short term in nature.

7 Customer accounts are predominantly Bermuda (93%), Other (7%) and are included in Level 2 of the fair value levelling hierarchy. The carrying amounts equal the fair value as these are typically short term in nature.

'Other assets' comprise 'Prepayments and accrued income' classified within 'Due not more than 1 month' and 'Interest in associate', 'Property and equipment' classified as 'Due over 5 years'. 'Other liabilities' comprise 'Accruals' and 'Provisions' classified within 'Due not more than 1 month'; 'Retirement benefit liabilities' within 'Due over 5 years' and 'Deferred income' which is reflected across all periods.

'Off balance sheet commitments' are classified 'Due not more than 1 month'. 'Off balance sheet commitments' were further classified as 'Personal' \$151,214 (2018: \$151,728), 'Corporate and commercial' \$302,889 (2018: \$104,951), and 'Financial and other' \$14,570 (2018: \$167,905).

	Footnotes	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
31 Dec 2018										
Cash and balances at central banks		34,078	—	—	—	—	—	—	—	34,078
Items in the course of collection from other banks		62	—	—	—	—	—	—	—	62
Derivatives		5,117	3,029	2,982	21	—	—	4,387	2,342	17,878
Loans and advances to banks		1,431,827	200,000	—	—	—	450,000	80,000	—	2,161,827
Loans and advances to customers		80,892	22,654	35,976	43,171	39,413	340,581	532,829	1,095,453	2,190,969
– of which:										
Personal		59,984	15,308	22,756	23,076	22,382	91,345	236,731	874,410	1,345,992
Corporate and commercial		18,693	6,923	12,578	19,444	16,370	247,756	206,478	220,128	748,370
Financial and other		2,215	423	642	651	661	1,480	89,620	915	96,607
Financial investments		124,297	355,232	52,858	294,533	481,918	721,856	1,426,408	30,092	3,487,194
Total financial assets		1,676,273	580,915	91,816	337,725	521,331	1,512,437	2,043,624	1,127,887	7,892,008
Other assets		59,753	—	—	—	—	—	—	125,075	184,828
Total assets		1,736,026	580,915	91,816	337,725	521,331	1,512,437	2,043,624	1,252,962	8,076,836
Deposits by banks	⁸	263,255	—	—	—	—	—	—	—	263,255
Customer accounts	⁹	6,439,942	213,906	95,058	79,035	55,283	11,752	27,227	—	6,922,203
– of which:										
Personal		1,724,696	148,392	87,734	68,826	45,774	9,722	21,019	—	2,106,163
Corporate and commercial		1,252,194	35,322	3,889	4,439	4,130	2,030	6,208	—	1,308,212
Financial and other		3,463,052	30,192	3,435	5,770	5,379	—	—	—	3,507,828
Items in course of transmission to other banks		5,446	—	—	—	—	—	—	—	5,446
Derivatives		6,147	3,016	2,966	21	—	—	362	2,872	15,384
Total financial liabilities		6,714,790	216,922	98,024	79,056	55,283	11,752	27,589	2,872	7,206,288
Other liabilities		55,987	89	142	246	885	1,344	2,103	14,835	75,631
Total liabilities		6,770,777	217,011	98,166	79,302	56,168	13,096	29,692	17,707	7,281,919

⁸ Deposits by banks are predominantly Bermuda (84%), USA (10%), Other (6%) and are included in Level 2 of the fair value levelling hierarchy. The carrying amounts equal the fair value as these are typically short term in nature.

⁹ Customer accounts are predominantly Bermuda (91%), Other (9%) and are included in Level 2 of the fair value levelling hierarchy. The carrying amounts equal the fair value as these are typically short term in nature.

'Other assets' comprise 'Prepayments and accrued income' classified within 'Due not more than 1 month' and 'Interest in associate', 'Property and equipment' classified as 'Due over 5 years'. 'Other liabilities' comprise 'Accruals' and 'Provisions' classified within 'Due not more than 1 month'; 'Retirement benefit liabilities' within 'Due over 5 years' and 'Deferred income' which is reflected across all periods.

'Off balance sheet commitments' are classified 'Due not more than 1 month'.

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18 Interest rate analysis of financial instruments

The table below discloses the mismatch of the dates on which interest on financial assets and financial liabilities are next reset to market rate on a contractual basis, or if earlier, the dates on which the instruments mature. Contractual terms may not be representative of the behaviour of financial assets and liabilities and the group therefore manages interest rate risk based on the behavioural characteristics of the relevant financial assets and liabilities.

31 Dec 2019	Up to 3 months	From 3 months to 6 months	From 6 months to 1 year	From 1 year to 5 years	From 5 years to 10 years	Non-interest bearing	Total	Range of weighted average effective interest rates
Financial assets								
Cash and balances at central banks	–	–	–	–	–	27,139	27,139	
Items in the course of collection from other banks	–	–	–	–	–	120	120	
Derivatives	–	–	–	–	–	14,851	14,851	
Loans and advances to banks	2,138,542	–	–	–	–	–	2,138,542	1.21-2.00%
Loans and advances to customers	2,034,168	93,161	257	46,899	–	–	2,174,485	5.53-5.87%
Financial investments	1,073,425	48,172	308,030	2,394,381	21,548	1,342	3,846,898	1.45-1.87%
Total at 31 Dec 2019	5,246,135	141,333	308,287	2,441,280	21,548	43,452	8,202,035	
Financial liabilities								
Deposits by banks	21,959	–	–	–	–	9,851	31,810	0.00-0.11%
Customer accounts	7,119,613	171,298	140,004	41,810	–	–	7,472,725	0.37-0.44%
Items in course of transmission to other banks	–	–	–	–	–	1,262	1,262	
Derivatives	–	–	–	–	–	30,820	30,820	
Total at 31 Dec 2019	7,141,572	171,298	140,004	41,810	–	41,933	7,536,617	
Interest rate sensitivity gap	(1,895,437)	(29,965)	168,283	2,399,470	21,548	–	–	
Cumulative interest rate sensitivity gap	(1,895,437)	(1,925,402)	(1,757,119)	642,351	663,899	–	–	

Financial instruments included within 'Prepayments and accrued income', 'Other assets', 'Accruals and deferred income', 'Provisions', 'Other liabilities' and 'Retirement benefit liabilities' have not been included in the analysis above and are all considered non-interest bearing. The interest rate sensitivity gap on non-interest bearing assets and liabilities is considered to be \$NIL.

31 Dec 2018	Up to 3 months	From 3 months to 6 months	From 6 months to 1 year	From 1 year to 5 years	From 5 years to 10 years	Non-interest bearing	Total	Range of weighted average effective interest rates
Financial assets								
Cash and balances at central banks	–	–	–	–	–	34,078	34,078	
Items in the course of collection from other banks	–	–	–	–	–	62	62	
Derivatives	–	–	–	–	–	17,878	17,878	
Loans and advances to banks	2,161,827	–	–	–	–	–	2,161,827	1.20-3.08%
Loans and advances to customers	2,131,025	21,895	3,208	34,841	–	–	2,190,969	5.16-5.90%
Financial investments	1,109,026	34,468	676,498	1,637,110	28,899	1,193	3,487,194	1.29-1.62%
Total at 31 Dec 2018	5,401,878	56,363	679,706	1,671,951	28,899	53,211	7,892,008	
Financial liabilities								
Deposits by banks	21,528	–	–	–	–	241,727	263,255	0.00-0.08%
Customer accounts	6,657,284	91,622	134,318	38,979	–	–	6,922,203	1.28-1.99%
Items in course of transmission to other banks	–	–	–	–	–	5,446	5,446	
Derivatives	–	–	–	–	–	15,384	15,384	
Total at 31 Dec 2018	6,678,812	91,622	134,318	38,979	–	262,557	7,206,288	
Interest rate sensitivity gap	(1,276,934)	(35,259)	545,388	1,632,972	28,899	–	–	
Cumulative interest rate sensitivity gap	(1,276,934)	(1,312,193)	(766,805)	866,167	895,066	–	–	

Financial instruments included within 'Prepayments and accrued income', 'Other assets', 'Accruals and deferred income', 'Provisions', 'Other liabilities' and 'Retirement benefit liabilities' have not been included in the analysis above and are all considered non-interest bearing. The interest rate sensitivity gap on non-interest bearing assets and liabilities is considered to be \$NIL.

19 Foreign currency exposures

(a) Balance sheet denominated in foreign currency

The group recognises that changes in foreign exchange rates can result in changes to profit and loss and other comprehensive income. In order to mitigate this risk, the group matches assets and liabilities by currency to the greatest extent possible including using forward foreign exchange contracts to reduce potential mismatches. The table below shows the extent of foreign currency mismatch including the impact of the forward foreign exchange contracts.

	At 31 Dec					
	2019			2018		
	Assets	Liabilities and Equity	Net foreign exchange exposure	Assets	Liabilities and Equity	Net foreign exchange exposure
Euro	426,186	438,828	(12,642)	546,746	564,074	(17,328)
Pound sterling	299,808	318,361	(18,553)	354,456	389,568	(35,112)
Japanese yen	292,860	294,281	(1,421)	261,850	262,343	(493)
Canadian dollars	148,304	145,183	3,121	138,444	128,607	9,837
Australian dollars	168,460	169,115	(655)	231,535	229,706	1,829
New Zealand dollars	38,935	40,172	(1,237)	34,116	36,651	(2,535)
Swiss franc	21,828	19,737	2,091	18,410	17,202	1,208
Other currencies	65,322	66,527	(1,205)	57,801	43,937	13,864
Total foreign currency	1,461,703	1,492,204	(30,501)	1,643,358	1,672,088	(28,730)
US and Bermuda dollars	6,916,611	6,886,110	30,501	6,433,478	6,404,748	28,730
Total	8,378,314	8,378,314	–	8,076,836	8,076,836	–

Considering the foreign exchange exposures as at 31 December 2019 and 31 December 2018, shareholder's equity, which is in Bermuda dollars (2019: \$767,598; 2018: \$794,917), would decrease by US\$1,475 (2018: US\$2,155) if Pound sterling, Euro, Japanese yen and Canadian dollar foreign currency exchange rates all weakened by 5% relative to the US dollar. The group therefore considers that the overall risk of changes in foreign exchange rates to profit and loss and equity is not significant.

(b) Structural currency exposures

The group's structural foreign currency exposure is represented by the net asset value of its foreign currency equity in subsidiary undertakings and associates. Gains or losses arising from structural foreign currency exposures are recognised in other comprehensive income. The group's management of structural foreign currency exposures is discussed in the 'Market risk management' section in Note 20.

20 Risk management

The most important types of risk categories that the group are exposed to are market risk (including interest rate, equity price, foreign exchange and credit spread risk), liquidity and funding risk, operational risks (including financial crime and compliance risks), credit risk (including cross-border risk) and reputational risk. This note presents information about the group's risk management framework, objectives, policies and processes for measuring and managing risk, the group's exposure to each of the material risks, and the group's management of capital.

Managing risk

The group maintains a conservative and consistent approach to risk, ensuring we protect customers' funds, lend responsibly and support economies. By carefully aligning our risk appetite to our strategy, we are able to deliver long-term shareholder returns. All employees are responsible for the management of risk, with the ultimate accountability residing with the Board. We have a strong risk culture, which is embedded through clear and consistent communication and appropriate training for all employees.

A comprehensive risk management framework is applied throughout the group, with effective governance and corresponding risk management tools. Our dedicated HSBC Global Risk function supported by the Bermuda Risk function oversees the framework, and is led by the HSBC Group Chief Risk Officer supported by the Bermuda Chief Risk Officer. It is independent from our sales and trading functions to help provide challenge, appropriate oversight, and balance in risk/reward decisions. The group's risk appetite defines its desired forward-looking risk profile, and informs the strategic and financial planning process.

The following principles guide the group's overarching risk appetite and determine how its businesses and risks are managed.

Financial position

- Strong capital position, defined by regulatory and internal capital ratios.
- Liquidity and funding management for each operating entity, on a stand-alone basis.

Operating model

- Returns generated in line with risk taken.
- Sustainable and diversified earnings mix, delivering consistent returns for shareholders.

Business practice

- Zero tolerance for knowingly engaging in any business, activity or association where foreseeable reputational risk or damage has not been considered and/or mitigated.
- No appetite for deliberately or knowingly causing detriment to consumers arising from our products and services or incurring a breach of the letter or spirit of regulatory requirements.

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- No appetite for inappropriate market conduct by a member of staff or by any group business.
- Robust risk governance and accountability is embedded into our risk management framework.

Our risk management framework

Our risk management framework is underpinned by a strong risk culture and reinforced by the HSBC Values and our Global Standards. These are instrumental in aligning the behaviours of individuals with the group's attitude to assuming and managing risk and ensuring that our risk profile remains in line with our risk appetite.

The risk management framework promotes continuous monitoring of the risk environment, and an integrated evaluation of risks and their interactions. It also ensures a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities.

The key aspects of the framework include (i) our risk culture; (ii) governance and structure; (iii) our responsibilities; and (iv) risk management policies and risk appetite.

(i) Our risk culture

The group has long recognised the importance of a strong risk culture, the fostering of which is a key responsibility of senior executives. We use clear and consistent employee communication on risk to convey strategic messages and set the tone from senior management. We also deploy mandatory training on risk and compliance topics to embed skills and understanding in order to strengthen our risk culture and reinforce the attitude to risk in the behaviour expected of employees, as described in our risk policies. Mandatory training materials are updated regularly, describing technical, cultural and ethical aspects of the various risks assumed by the group and how they should be managed effectively. A whistleblowing policy is in place to allow people to raise concerns confidentially. Our risk culture is also reinforced by our approach to remuneration. Individual awards, including those for senior executives, are based on compliance with HSBC Values and the achievement of financial and non-financial objectives, which are aligned to our risk appetite and global strategy.

(ii) Governance and structure

Robust risk governance and accountability are embedded throughout the group through an established framework that ensures appropriate oversight of and accountability for the effective management of risk. The Board has ultimate responsibility for the effective management of risk and approves the group's risk appetite. The Board is advised on risk-related matters primarily by the Risk Management Meeting ('RMM').

Our strong risk governance reflects the importance placed by the Board and the RMM on shaping the group's risk strategy and managing risks effectively. It is supported by a clear policy framework of risk ownership, a risk appetite process through which the types and levels of risk that we are prepared to accept in executing our strategy are articulated and monitored, performance scorecards cascaded that align business and risk objectives, and the accountability of all staff for identifying, assessing and managing risks within the scope of their assigned responsibilities. This personal accountability, reinforced by the governance structure, mandatory learning and our approach to remuneration, helps to foster a disciplined and constructive culture of risk management and control.

Primary responsibility for managing risk at the group's operating entity levels lies with the relevant Chief Executive Officer, as custodian of the relevant balance sheets. In turn, the Chief Risk Officer has functional responsibility for financial risks (including credit and market risk) and non-financial risks. The Risk Function co-ordinates the development of the risk appetite statement. Finance (including asset and liability management) is primarily responsible for the economic capital and stress-testing frameworks. Risk is responsible for economic capital and stress-testing is jointly managed by Risk and Finance.

(iii) Our responsibilities

All employees are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model. We use an activity-based three lines of defence model to delineate management accountabilities and responsibilities for risk management and the control environment. This creates a robust control environment in which to manage residual risks. The model underpins our approach to risk management by clarifying responsibility, encouraging collaboration, and enabling efficient coordination of risk and control activities.

The three lines of defence are summarised below:

First line of defence	Owns the risk and is responsible for identifying, recording, reporting, managing risks and ensuring that the right controls and assessments are in place to mitigate these risks.
Second line of defence	Sets the policy and guidelines for managing the risks and provides advice, guidance and challenge to the first line of defence on effective risk management.
Third line of defence	The third line of defence is the Internal Audit function, which provides independent and objective assurance of the adequacy of the design and operational effectiveness of the group's risk management framework and control governance process.

(iv) Risk management policies and risk appetite

The group's risk appetite defines its desired forward-looking risk profile, and informs the strategic and financial planning process. The group's approach to risk appetite reinforces the integration of risk considerations into key business goals and planning processes. Preserving the strong capital position remains a key priority for the group, and the level of integration of risk and capital management helps to optimise response to business demand for regulatory and economic capital.

As risk is not static, the group's risk profile continually alters as a result of change in the scope and impact of a wide range of factors, from geopolitical to transactional. The risk environment requires continual monitoring and holistic assessment in order to understand and manage its complex interactions across the group.

The group's risk management policies are designed to communicate standards, instructions and guidance to employees. They support the formation of risk appetite and establish procedures for monitoring and controlling risks, with timely and reliable reporting to management. Risk management policies, systems and methodologies are regularly reviewed and updated to reflect changes in law, regulation, markets, products and emerging best practice. Functional Instruction Manuals ('FIM') are the vehicles by which policies on risk and capital governance are articulated. All senior managers are required to have read and adhere to all relevant FIMs.

Each business area is responsible for creating and maintaining its own business-specific procedures. Staff are trained using the procedures which are reviewed on a regular basis. The second line of defence performs independent oversight and highlights any control gaps. In addition, HSBC Group Audit conducts periodic audits of functions and businesses.

The group's Risk Appetite Statement ('RAS') is the written articulation of the aggregated level and types of risk that we are willing to accept in our business activities in order to achieve our business objectives. It is central to an integrated approach to risk, capital and business management. The RAS is a key component in our management of risk and is reviewed on an ongoing basis, with formal annual approval from the Board on recommendation from the RMM and Audit Risk Committee ('ARC').

The formulation of risk appetite considers the group's risk capacity, its financial position, the strength of its core earnings and the resilience of its reputation and brand. The RAS includes measures on earnings, capital and liquidity, market risk, credit risk, financial crime risk, along with other financial and non-financial risks.

Senior management attach quantitative metrics within the risk appetite framework in order that (i) underlying business activity may be guided and controlled so it continues to align with risk appetite; (ii) key assumptions underpinning the risk appetite can be monitored and, as necessary, adjusted through subsequent business plan iterations; and (iii) anticipated mitigating business decisions are flagged and acted upon promptly.

The risk appetite framework covers both the beneficial and adverse aspects of risk. It is used as the basis for risk evaluation, capital ratio monitoring and performance measurement for the group and across customer groups. Risk appetite is executed through the operational limits that control the levels of risk run by the group and customer groups and is measured using risk-adjusted performance metrics.

(a) Market risk management

Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.

The group has been in compliance with the Volcker Rule since its introduction on 21 July 2016. The Volcker Rule prohibits 'banking entities from (i) engaging in short-term proprietary trading of securities, derivatives, commodity futures and options on these instruments for their own account and (ii) owning, sponsoring, or having certain relationships with hedge funds or private equity funds, referred to as covered funds.'

Certain activities are excluded from the scope of the rule, including transactions in spot foreign exchange, spot commodities and loans and deposits. The rules require banking entities to establish an internal compliance program in order to monitor compliance with the rules. The group does not engage in proprietary trading however implementation of the rule requires an extensive compliance programme and includes additional reporting and record keeping requirements. Mandatory training has been completed by all group personnel whose roles have been identified as being affected by the Volcker rule compliance programme.

Exposure to market risk relating to the non-trading portfolios comprises positions that primarily arise from the interest rate management of personal and wholesale banking assets and liabilities, financial investments designated as available for sale and fair value hedges and these activities are considered out of scope for Volcker reporting. The group's trading portfolio related to balance sheet risk hedging activity is considered exempt through the 'Risk Mitigating Hedging Exemption'. In addition, the foreign exchange client sales activity is exempt through the 'Market Making Exemption'.

The group is not required to report under market risk methodologies as its trading book does not exceed the De Minimis threshold, resulting in an exemption as defined in the Bermuda Monetary Authority ('BMA') Framework. Further details are noted below in the capital management section explanations regarding Basel III Pillar 1 regulatory reporting requirements.

Market risk is:

- **measured** in terms of value at risk ('VaR'), which measures the potential losses on risk positions over a specified time horizon for a given level of confidence, and assessed using stress testing and sensitivity analysis;
- **monitored** using VaR, stress testing and other measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and
- **managed** using approved risk limits applied to our businesses.

The objectives of the group's market risk management strategy are to manage and control market risk exposures in order to optimise return within the group's risk appetite.

The management of market risk is undertaken mainly in Global Markets using risk limits approved by the HSBC Group Management Board ('GMB'). Limits are set for portfolios, products and risk types with market liquidity being a primary factor in determining the level of limits set. Final approval of limits resides with local entity Boards.

Global Risk is responsible for our market risk management policies and measurement techniques. The group has an independent market risk management and control function which is responsible for measuring market risk exposures in accordance with the policies defined by Global Risk, and for monitoring and reporting exposures against the prescribed limits on a daily basis in accordance with our risk appetite. Interest rate risk in the banking book ('IRBB') is defined as the exposure of our non-trading products to interest rates. This risk arises in such portfolios principally from mismatches between the future yield on assets and their funding costs, as a result of interest rate changes. Analysis of this risk is complicated by behavioural assumptions regarding the economic duration of liabilities which are contractually repayable on demand such as current accounts.

The group assesses the structural interest rate risks which arise in the businesses and transfers these risks to the group's balance sheet management ('BSM') team. Our aim is to ensure that all market risks are consolidated within operations that have the necessary skills, tools, management and governance to manage them. When the behavioural characteristics of a product differ from its contractual characteristics, the behavioural characteristics are assessed to determine the appropriate underlying interest rate risk. The Asset and Liability Management Committee ('ALCO') regularly monitors all such behavioural assumptions and interest rate risk positions to ensure they comply with established interest rate risk limits.

In executing the management of the liquidity risk on behalf of ALCO, and managing the non-trading interest rate positions transferred to it, BSM invests in highly-rated liquid assets in line with the group's liquid asset policy. The majority of the liquidity is invested in central bank deposits and government, supranational and agency securities with most of the remainder held in short-term interbank and central bank loans. BSM is permitted to use derivatives as part of its mandate to manage interest rate risk. Derivative activity is predominantly through the use of interest rate swaps which are part of cash flow hedging and fair value hedging relationships.

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In the course of managing interest rate risk, quantitative techniques and simulation models are used where appropriate to identify the potential net interest income and market value effects of these interest rate positions under different scenarios. We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, value at risk and stress testing. The primary objective of such interest rate risk management is to limit potential adverse effects of interest rate movements on net interest income whilst balancing the effect on the current net operating income stream and unrealised mark-to-market positions.

A principal part of the group's management of market risk is to monitor the sensitivity of projected net interest income under varying interest rate scenarios (simulation modelling). The group aims to mitigate the effect of prospective interest rate movements which could reduce future net interest income by utilising interest rate hedges, while balancing the cost of such hedging activities on the current net operating income stream. The table below sets out the effect of a 100 basis point shock at the beginning of the year on our accounting net interest income projections compared to the current actual interest rates by product. The sensitivities shown represent the change in the expected base case net interest income that would be expected under the rate scenarios assuming that all other non-interest rates risk variables remain constant and current management policies are applied. The model measures the effect on net interest income due to parallel movements of plus or minus 100 basis points in all yield curves. The results represent the effect of the pro-forma movements in net interest income.

Change in 2019 projected net interest income arising from 100 basis points movement in yield curves

	At 31 Dec	
	2019 increase (decrease)	2018 increase (decrease)
+100 basis points parallel	16,630	15,057
-100 basis points parallel	(26,997)	(29,291)

The scenarios are calculated by first establishing a base case projection for the following financial year using the current consolidated balance sheet. In deriving our base case net interest income projections, the re-pricing rates of assets and liabilities used are derived from current yield curves, thereby reflecting current market expectations of the future path of interest rates. The scenarios therefore represent interest rate shocks which occur to the current market implied path of rates. The interest rate sensitivities are indicative and based on simplified scenarios for product groups. The base case assumes no change in volumes or margins across all currencies. The parallel scenario is calculated by impacting all interest margins by 100 basis points immediately. The prospective annual differences in net interest income between the base case and the parallel case is set out in the table above. The model is further simplified in the assumption that all currency yield curves rise and fall at the same time and all current management policies are applied consistently. The model does not incorporate the proactive management of the interest rate risk profile undertaken by ALCO and global markets division in order to minimise losses and optimise net income. The projected change in financial assets at FVOCI reserve from a 100 basis points parallel increase in market rates is a decrease of \$52,496 (2018: \$25,946).

The group's foreign exchange exposure comprises trading exposures and structural foreign currency translation exposure. Structural currency risk exists for the group in holding subsidiary company investments whose functional currencies are not the US dollar or Bermuda dollar.

(b) Liquidity and funding risk management

Liquidity and funding risk is the risk that the Bank, at an entity level, does not have sufficient financial resources to meet its obligations as they fall due or will have to do so at excessive cost. Liquidity risk arises from mismatches in the timing of cash flows. Funding risk arises where the liquidity needed to fund illiquid asset positions cannot be obtained at the expected terms and when required.

Liquidity and funding risk is:

- **measured** using a range of different metrics including liquidity coverage ratio and net stable funding ratio;
- **monitored** against the Group's liquidity and funding risk framework; and
- **managed** on a stand-alone basis with no reliance on any HSBC Group entity (unless pre-committed) or central bank or government body unless this represents routine established business as usual market practice.

The objective of the Group's internal liquidity and funding framework ('LFRF') is to allow it to withstand very severe liquidity stresses. It is designed to be adaptable to changing business models, markets and regulations. All operating entities are required to managed liquidity and funding risk in accordance with the LFRF.

On 1 January 2016, the Group implemented a new LFRF. It uses the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR') regulatory framework as a foundation, but adds extra metrics, limits and overlays to address the risks that we consider are not adequately reflected by the regulatory framework.

The LFRF is delivered using the following key aspects:

- Stand-alone management of liquidity and funding by operating entity;
- Operating entity classification by inherent liquidity risk ('ILR') categorisation;
- Minimum LCR requirement dependant on ILR categorisation (European Commission Delegated Regulation 2015/16 basis);
- Minimum NSFR requirement dependant on ILR categorisation (HSBC's interpretation of Basel Committee on Banking Supervision's publication 295 basis);
- Legal entity depositor concentration limit;
- Three month and twelve month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financials and securities issued;
- Annual Individual Liquidity Adequacy Assessment ('ILAA') by operating entity;
- Minimum LCR requirement by material currency;
- Intra-day liquidity; and
- Forward looking funding assessments.

The LCR metric is designed to promote the short-term resilience of a bank's liquidity profile. It aims to ensure that a bank has sufficient unencumbered high-quality liquid assets ('HQLA') to meet its liquidity needs in a 30-calendar day liquidity stress scenario. HQLA consist of cash or assets that can be converted into cash at little or no loss of value in markets.

The NSFR requires institutions to maintain sufficient stable funding relative to required stable funding, and reflects a bank's long-term funding profile (funding with a term of more than a year). It is designed to complement the LCR.

The LCR and NSFR metrics assume a stressed outflow based on a portfolio of depositors within each deposit segment. The validity of these assumptions is challenged if the underlying depositors do not represent a large enough portfolio so that a depositor concentration exists. Operating entities are exposed to term re-financing concentration risk if the current maturity profile results in future maturities being overly concentrated in any defined period. Therefore additional risk tolerance levels have been established for deposit concentration and term funding maturity concentration.

The ILAA process aims to identify risks that are not reflected in the LFRF, and, where required, to assess additional limits required locally, and to validate the risk tolerance at the operating entity level.

The primary responsibility for managing liquidity and funding within the group's framework and risk appetite resides with ALCO. ALCO is responsible for ensuring prudent management of liquidity and funding risk and is also responsible for evaluating and communicating the impact of new liquidity regulatory requirements. These actions ensure the group adheres to HSBC liquidity and funding policies and maintains sufficient liquidity to meet day-to-day needs and local regulatory requirements. As at 31 December 2019, the Group was within the risk tolerance levels applicable under the LFRF.

On 31 December 2014 the group's lead regulator, the Bermuda Monetary Authority, ('the Authority' or 'the BMA') published the 'Basel III for Bermuda Banks – Final Rule' which became effective on 1 January 2015. The Basel III rules issued by the BMA address the areas of Leverage and Liquidity. The Authority has adopted a 5% leverage ratio calculated as the ratio of Tier 1 ('T1') Capital to Total Exposure. The group is currently in excess of this requirement. The Authority adopted a LCR with an implementation timetable consistent with that published by the Basel Committee. The minimum requirement was 60% starting on 1 January 2015 rising in equal annual incremental steps of 10% reaching 100% on 1 January 2019. The LCR is designed to ensure that banks have a sufficient stock of unencumbered high-quality liquid assets ('HQLA') to survive a significant liquidity stress scenario lasting 30 days. The LCR is calculated as HQLA divided by total net cash outflows over the period of the next 30 days. Total net cash outflows are calculated in accordance with rules prescribed by the regulator. The group is compliant with LCR as at 31 December 2019.

On 15 February 2018 the BMA published the 'Basel III for Bermuda Banks – November 2017 Rule Update' which became effective 1 January 2018 and adopted the Net Stable Funding Ratio ('NSFR') with a minimum requirement of 100%. The NSFR is calculated as the available stable funding divided by the required stable funding, with the available stable funding and required stable funding calculated in accordance with rules prescribed by the regulator. The group is compliant with NSFR requirements.

(c) Non-financial risk management

Non-financial risk is the risk of loss resulting from people, inadequate or failed internal processes, data or systems, or external events. Non-financial risk is relevant to every aspect of our business and covers a wide spectrum of issues including in particular legal, compliance, security and fraud. Losses arising from breaches of regulation and law, unauthorised activities, error, omission, inefficiency, fraud, systems failure or external events all fall within the definition of non-financial risk.

Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence. Regulatory compliance risk arises from the risks associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching other regulatory requirements.

Financial crime risk is the risk that we knowingly or unknowingly help parties to commit or to further potentially financial crime activity through HSBC.

Non-financial risk is:

- **measured** using the risk and control assessment ('RCA') process, which assesses the level of risk and effectiveness of controls in place against them;
 - regulatory compliance and financial crime risk are more specifically measured by reference to identified metrics, internal events, regulatory findings and the judgement and assessment of our regulatory and financial crime risk teams;
- **monitored** using key indicators and other internal control activities;
 - regulatory compliance and financial crime risk is monitored against our risk appetite statement and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections;
- **managed** primarily by global business and functional managers that identify and assess risks, implement controls to manage them and monitor the effectiveness of these controls utilising the risk management framework;
 - regulatory compliance and financial crime risk are managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to assure their observance. Proactive risk control and/or remediation work is undertaken where required.

Responsibility for minimising non-financial risk lies with all of the group's staff. All staff are required to manage the non-financial risks of the business and operational activities for which they are responsible. The objective of our non-financial risk management is to manage and control risk in a cost effective manner within targeted levels consistent with our risk appetite.

Non-financial risk is organised as a specific risk discipline within Risk, and a formal governance structure provides oversight over its management. The operational risk function supports the Chief Risk Officer and is responsible for oversight of the risk management framework, monitoring the level of operational losses and the effectiveness of the control environment. It is also responsible for non-financial risk reporting, including the preparation of reports for consideration by the Risk Management Meeting.

The Risk Management Framework is our overarching approach for managing non-financial risk with a purpose to:

- identify and manage our non-financial risks in an effective manner;

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- remain within the Group's non-financial risk appetite, which helps the organisation understand the level of risk it is willing to accept; and
- drive forward-looking risk awareness and assist management focus.

The Risk Management Framework defines our standards and processes, and the governance structure for the management of non-financial risk in our businesses and functions. The Risk Management Framework has been codified in a high-level standards manual, supplemented with detailed policies, which describes our approach to identifying, assessing, monitoring and controlling non-financial risk and gives guidance on mitigating action to be taken when weaknesses are identified.

Business managers throughout the group are responsible for maintaining an acceptable level of internal control commensurate with the scale and nature of operations, and for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The Risk Management Framework helps managers to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

A centralised database is used to record the results of the non-financial risk management process. Non-financial risk and control assessments are input and maintained by business units. Business and Functional management and business risk and control managers monitor the progress of documented action plans to address shortcomings. To ensure that non-financial risk losses are consistently reported and monitored, reporting is required for all individual losses when the net loss is expected to exceed \$10,000, and to aggregate all other non-financial risk losses under \$10,000. Losses are entered into the non-financial risk database and are reported to the Risk Management Meeting on a monthly basis.

RCAs are a key component of the Risk Management Framework which provides senior management with a point in time view of non-financial risk and helps them to determine whether their key non-financial risks are controlled within acceptable levels. RCAs are dynamically updated to remain representative of the risks faced by the group.

RCAs are performed by individual business units and functions. The RCA process is designed to provide business areas and functions with a forward looking view of non-financial risks and an assessment of the effectiveness of controls, and a tracking mechanism for action plans so that they can proactively manage non-financial risks within acceptable levels.

For regulatory reporting, the group has adopted the Standardised approach to determine its operational risk capital which is a method of calculating the operational capital requirement by the application of a BMA defined percentage charge to the gross income of eight specified business lines.

Local management is responsible for implementation of HSBC standards on non-financial risk throughout their operations and where deficiencies are evident these are required to be rectified within a reasonable timeframe.

Regulatory Compliance

The Regulatory Compliance sub-function ('RC') provides independent, objective oversight and challenge and promotes a compliance-orientated culture, supporting the business in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving the group's strategic objectives. Global policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach to RC.

The Conduct agenda remains a priority for HSBC, our customers, our regulators and the financial services industry. The majority of our activities have been inward and focused on:

- Remediating our customer due diligence
- Enhancing our complaint handling processes
- Improving quality of sales documentation and ability to evidence suitability
- Addressing fees and pricing hotspots
- Enhancing our governance and policies.

Financial Crime Compliance

Financial Crime Risk ('FCR') is a global function that brings together all areas of financial crime risk management at HSBC and is dedicated to implementing the most effective global standards to combat financial crime. The function has been set up to enable us to build on our achievements in managing financial crime risk effectively across the bank and to continue to strengthen financial crime detection, anti-money laundering ('AML'), sanctions and anti-bribery and corruption ('AB&C') compliance. The Head of FCR reports to the Chief Executive Officer.

Globally, the FCR function encompasses Assurance, Financial Crime Compliance ('FCC'), Financial Crime Threat Mitigation ('FCTM'), and the Chief Operating Office ('COO'). The structure has been designed around the following key principles:

- FCR sets policy and standards, provides subject matter expertise and guidance, drives execution at country level via regions, and maintains line of business subject matter expertise in support of the global businesses.
- Country-level execution accountability is driven by a common set of global principles with material variations managed by exception.
- Sub-functions within FCR are leveraged across the global function, ensuring consistency and utilising expertise and resourcing.

In Bermuda, with connectivity into the broader global function, the FCR function is evolving into an intelligence-led risk management approach, using data, new technology and working in partnership with regulators and law enforcement, driving us towards the future of financial crime risk management.

(d) Reputational risk management

Reputational risk is the risk of failure to meet stakeholder expectations as a result of any event, behaviour, action or inaction, either by the group itself, our employees or those with whom we are associated, that might cause stakeholders to form a negative view of the group. This may result in financial or non-financial impacts, loss of confidence, or other consequences. Primary reputational risks arise directly from an action or inaction by the group, its employees or associated parties that are not the consequence of another type of risk. Secondary reputational risks are those arising indirectly and are a result of a failure to control any other risks. There were no material changes to our policies and practices for the management of reputational risk in 2019.

Reputational risk is:

- measured by reference to our reputation as indicated by our dealings with all relevant stakeholders, including media, regulators, customers and employees;
- monitored through a reputational risk management framework that is integrated into the group's broader risk management framework; and
- managed by every member of staff and covered by a number of policies and guidelines. There is a clear structure of committees and individuals charged with mitigating reputational risk, including the Reputational Risk Committee.

Reputational risk relates to stakeholders' perceptions, whether fact-based or otherwise. Stakeholders' expectations change constantly and so reputational risk is dynamic and varies between geographical regions, groups and individuals. We have an unwavering commitment to operating at the high standards we have set for ourselves in every jurisdiction. Any lapse in standards of integrity, compliance, customer service or operating efficiency represents a potential reputational risk.

Our policies set out our risk appetite and operational procedures for all areas of reputational risk, including financial crime prevention, regulatory compliance, conduct-related concerns, environmental impacts, human rights matters and employee relations.

(e) Credit risk management

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. Credit risk arises principally from direct lending, trade finance and also from certain other products such as guarantees and derivatives.

Credit risk is:

- **measured** as the amount that could be lost if a customer or counterparty fails to make repayments;
- **monitored** using various internal risk management measures and within limits, approved by individuals within a framework of delegated authorities. These limits represent the peak exposure or loss to which the group could be subjected should the customer or counterparty fail to perform its contractual obligations; and
- **managed** through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.

The group has in place standards, policies and procedures for the control and monitoring of all such risks. There have been no material changes to policies and practices for the management of credit risk during 2019. Additional credit-related information and information to determine maximum exposure to credit risk is presented in Note 7 'Derivatives', Note 8 'Loans and advances to banks', Note 9 'Credit risk', Note 10 'Loans and advances to customers', Note 11 'Financial investments' and Note 16 'Contingent liabilities, contractual commitments and guarantees'.

The role of independent credit control unit is fulfilled by the Risk function. Credit approval authorities are delegated by the Board to the Chief Executive together with the authority to sub-delegate them. The Credit Risk sub-function in Risk is responsible for the key policies and processes for managing credit risk, which includes formulating group credit policies and risk rating frameworks, guiding group's appetite for credit risk exposures, undertaking independent reviews and objective assessment of credit risk, and monitoring performance and management of portfolios.

The principal objectives of our credit risk management are:

- to maintain across the group a strong culture of responsible lending and a robust risk policy and control framework;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

The group's credit risk limits to counterparties in the financial and government sectors are managed centrally to optimise the use of credit availability and to avoid excessive risk concentration. Cross-border risk is controlled through the imposition of country limits, which are determined by taking into account economic and political factors, and local business knowledge, with sub-limits by maturity and type of business. Transactions with counterparties in higher risk countries are considered on a case-by-case basis.

Within the overall framework of the HSBC policy, the group has an established risk management process encompassing credit approvals, the control of exposures (including those to borrowers in financial difficulty), credit policy direction to business units and the monitoring and reporting of exposures both on an individual and a portfolio basis. The group's management is responsible for the quality of its credit portfolios and follows a credit process involving delegated approval authorities and credit procedures, the objective of which is to build and maintain risk assets of high quality. Regular reviews are undertaken to assess and evaluate levels of risk concentration, including those to individual industry sectors and products. Special attention is paid to the management of problematic loans and a specialist unit has been established to provide intensive management and control to maximise recoveries of assets, which show early signs of potential impairment and to assist customers to avoid default wherever possible.

Concentration of exposure

Concentrations of credit risk arise when a number of counterparties or exposures have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimise undue concentration of exposure in our portfolios across industries, countries and global businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

Credit quality of financial instruments

The group is responsible for the formulation of high-level credit policies based on HSBC policies. The group also reviews the application of HSBC's universal credit risk rating system. Our credit risk rating systems and processes differentiate exposures in order to highlight those with greater risk factors and higher potential severity of loss. In the case of individually significant accounts that are predominantly within our wholesale businesses, risk ratings are reviewed regularly and any amendments are implemented promptly. Within our personal lending businesses, risk is assessed and managed using a wide range of risk and pricing models to generate portfolio data.

Our risk rating system includes calculation of PD and Expected Loss ('EL') and is specific to credit risk segments. The Customer Risk Rating ('CRR') 10-grade scale summarises a more granular underlying 23-grade scale of obligor PD. All group customers are rated using

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the 10- or 23-grade scale. Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time. The EL 10-grade scale for personal lending business summarises a more granular underlying EL scale for this customer segment. This combines obligor and facility/product risk factors in a composite measure. For debt securities and certain other financial instruments, external ratings have been aligned to five quality classifications based upon the mapping of related CRR to external credit grade. The five credit quality classifications defined below, each encompass a range of granular internal credit rating grades assigned to wholesale and personal lending businesses and the external ratings attributed by external agencies to debt securities.

Credit quality classification definitions are highlighted below. Performing loans are sub-divided into the first three categories.

Quality classification definitions

'Strong': exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss.

'Good': exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk.

'Satisfactory': exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk.

'Sub-standard': exposures require varying degrees of special attention and default risk is of greater concern.

'Credit Impaired': exposures have been assessed as impaired, as described in Note 2(m). These also include personal accounts that are delinquent by more than 90 days, unless individually they have been assessed as not impaired; and renegotiated loans that have met the requirements to be disclosed as impaired and have not yet met the criteria to be returned to the unimpaired portfolio.

Renegotiated loans and forbearance

Where a loan is modified due to significant concerns about the borrower's ability to meet contractual payments when due, a range of forbearance strategies is employed in order to improve the management of customer relationships, maximise collection opportunities and, if possible, avoid default, foreclosure or repossession. Policies regarding renegotiated loans and forbearance are described in more detail in Note 2(m).

(f) Capital management

Regulatory Capital

The group's lead regulator, the BMA, sets and monitors capital requirements for the group as a whole under the Banks and Deposit Companies Act 1999. The group does not have any banking operations outside of Bermuda.

The Basel III capital framework issued by the BMA, which became effective on 1 January 2015, adopts the Common Equity Tier 1 Capital ('CET1') as the main form of regulatory capital. Minimum Basel III capital ratios will be CET1 at least 4.5% of Risk Weighted Assets ('RWAs'), Tier 1 Capital at least 6.0% of RWAs and Total Capital at least 8.0% of RWAs. Through Pillar 2 capital ratio add-ons, which form part of the Authority's Prudential Supervision, the Authority has prescribed a total minimum capital ratio in excess of the minimum Basel III requirements. The group has at all times maintained a capital ratio in excess of the minimum regulatory requirement and it is well placed to continue to exceed regulatory requirements in the future.

In addition to the minimum capital ratios and Pillar 2 related add-ons prescribed by the Authority the Basel III rules also provide for the following capital requirements:

- Capital Conservation Buffer ('CCB'): Ultimately set at 2.5% of RWAs and is composed of CET1 eligible capital. The CCB was subject to a 5-year phase in period from 1 January 2015 to 1 January 2019. As of 1 January 2019 the CCB was 2.5% (2018: 1.88%).
- Countercyclical Buffer: To be comprised of CET1 eligible capital. The Authority will assess the need for a buffer of up to 2.5% of RWAs during periods of excessive credit or periods exhibiting other macroeconomic pressures.
- Capital Surcharge for Domestic Systemically Important Banks ('D-SIB'): Can range from 0.5% to 3.0% and is related to factors such as size, interconnectedness, substitutability and complexity. The D-SIB buffer has been determined by the Authority in conjunction with the CARP process in 2016.

The group is required to comply with the provisions of the Basel III framework in respect of regulatory capital. Basel III is structured around three 'pillars': Pillar 1, 'minimum capital requirements', Pillar 2, 'supervisory assessment process' and Pillar 3, 'market discipline'. The 'Revised Framework for Regulatory Capital Assessment' and 'Basel III for Bermuda Banks – Final Rule' are the means by which Basel III is implemented in Bermuda.

The group's total banking regulatory capital is analysed into two tiers: (i) Common Equity Tier 1 Capital: Called up share capital, share premium, retained earnings; and (ii) Tier 2 Capital: Allowable Loan Loss Provisions.

Various limits are applied to elements of the capital base. Total Tier 2 capital is limited to 100% of the Tier 1 capital. There are also restrictions on the level of allowance for expected credit losses that may be included in Tier 2 capital.

The group's policy is to maintain a strong capital base and our approach to managing group capital is designed to ensure that we exceed current regulatory requirements and are well placed to meet those expected in the future so as to maintain creditor and market confidence and to sustain future development of the business. We monitor capital adequacy by the use of capital ratios, which measure capital relative to a regulatory assessment of risks taken, and by the leverage ratio, which measures capital relative to exposure. The group has complied with all external imposed capital requirements throughout the period. There have been no material changes in the group's management of capital during the year.

The group's consolidated regulatory capital position under Basel III at 31 December was as follows:

Composition of regulatory capital

	Notes	2019	2018
Tier 1 capital			
Called up share capital	23	30,027	30,027
Share premium		388,652	388,652
Retained earnings		345,321	398,772
Total Tier 1 capital		764,000	817,451
Tier 2 capital			
Stage 1 Allowance for ECL on loans and advances to customers	9	3,098	2,326
Total regulatory capital		767,098	819,777

Pillar 1

Basel III applies three approaches of increasing sophistication to the calculation of Pillar 1 credit risk capital requirements. The most basic level, the standardised approach, requires banks to use external credit ratings to determine the risk weightings applied to rated counterparties. Other counterparties are grouped into broad categories and standardised risk weightings are applied to these categories. The next level, the internal ratings-based ('IRB') foundation approach, allows banks to calculate their credit risk capital requirements on the basis of their internal assessment of counterparty's PD, but subjects their quantified estimates of exposure at default ('EAD') and loss given default ('LGD') to standard supervisory parameters. Finally, the IRB advanced approach allows banks to use their own internal assessment in both determining PD and quantifying EAD and LGD. For credit risk, the group has adopted the standardised approach for consolidated reporting.

Basel III includes capital requirements for operational risk, again utilising three levels of sophistication. The capital required under the basic indicator approach is a simple percentage of gross revenues, whereas under the standardised approach, it is one of three different percentages of gross revenues allocated to each of eight defined business lines. Both these approaches use an average of the last three financial years' revenues. Finally, the advanced measurement approach uses the bank's own statistical analysis and modelling of operational risk data to determine capital requirements. The group has adopted the standardised approach in determining its consolidated operational risk capital requirement.

The group is not required to report under market risk methodologies as its trading book does not exceed the *de minimis* threshold, resulting in an exemption as defined in the BMA Framework.

Pillar 2

The second pillar of Basel III, supervisory assessment process, involves both the group and the Authority to assess and agree the appropriate capital necessary to mitigate the impact of risks not fully captured by the credit risk measures ('Pillar 1'). The annual Supervisory Assessment Process ('SAP'), undertaken by the Authority, aims to assess the group's risk profile and self-assessment as documented in the Capital Assessment and Risk Profile ('CARP'). The completion of the SAP formed the basis for the final agreements on new statutory minimum capital requirements for the group going forward. The group has complied with all minimum capital requirements prescribed by the Authority in 2019 and 2018.

Pillar 3

The third pillar of Basel III, market discipline, complements the minimum capital requirements and the supervisory review process. Its aim is to develop disclosures by banks which allow market participants to assess the scope of application of Basel III, capital, particular risk exposures and risk assessment processes, and hence the capital adequacy of the institution. Under the Pillar 3 framework all material risks must be disclosed, enabling a comprehensive view of the institution's risk profile. Disclosures consist of both quantitative and qualitative information and are provided at the consolidated level. The most recent disclosure of the group, 'Capital and Risk Management Pillar 3 Disclosures', is published on the group's internet website: www.about.hsbc.bm/hsbc-in-bermuda.

Capital allocation

Although maximisation of return on risk-adjusted capital is the principal basis used in determining how capital is allocated within the group to particular operations or activities, it is not the sole basis used for decision-making. Account is also taken of synergies, and the fit of the activity within the group's longer-term strategic objectives.

21 Litigation

In the ordinary course of business, the group is routinely defendant in, or party to, a number of pending and threatened legal actions and proceedings. Apart from the matters described below, the group considers that none of these matters is material, either individually or in the aggregate. While the outcome of these matters is inherently uncertain, management believes that, based on the information available to it, the actions and proceedings and losses, if any, resulting from the final outcome thereof will not be material in the aggregate to the group's financial position or results of operation.

Bernard L. Madoff Investment Securities LLC

Bernard L. Madoff ('Madoff') was arrested in December 2008 and later pleaded guilty to running a Ponzi scheme. His firm, Bernard L. Madoff Investment Securities LLC ('Madoff Securities'), is being liquidated in the US by a trustee (the 'Trustee').

Various non-US HSBC companies provided custodial, administration and similar services to a number of funds incorporated outside the US whose assets were invested with Madoff Securities. Based on information provided by Madoff Securities as at 30 November 2008, the purported aggregate value of these funds was \$8.4bn, including fictitious profits reported by Madoff.

Based on information available to HSBC, the funds' actual transfers to Madoff Securities minus their actual withdrawals from Madoff Securities during the time HSBC serviced the funds are estimated to have totalled approximately \$4bn. Various HSBC companies have been named as defendants in lawsuits arising out of Madoff Securities' fraud.

US litigation: The Trustee has brought lawsuits against various HSBC companies and others in the US Bankruptcy Court for the Southern District of New York (the 'US Bankruptcy Court'), seeking recovery of transfers from Madoff Securities to HSBC in an amount

Notes on the consolidated financial statements

(In US dollar thousands)

not yet pleaded or determined. HSBC and other parties to the actions have moved to dismiss the Trustee's claims. The US Bankruptcy Court granted HSBC's motion to dismiss with respect to certain of the Trustee's claims in November 2016. In February 2019, the US Court of Appeals for the Second Circuit (the 'Second Circuit Court of Appeals') reversed that dismissal and remanded the cases to the US Bankruptcy Court. In August 2019, HSBC and other parties filed a petition for writ of certiorari to the US Supreme Court seeking review of the Second Circuit Court of Appeals decision. Further proceedings in the US Bankruptcy Court have been stayed pending the resolution of that petition.

Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited (together, 'Fairfield') (in liquidation since July 2009) have brought a lawsuit in the US against fund shareholders, including HSBC companies that acted as nominees for clients, seeking restitution of redemption payments. In December 2018, the US Bankruptcy Court issued an opinion, which ruled in favour of the defendants' motion to dismiss in respect of certain claims by the liquidators for Fairfield and granted a motion by the liquidators to file amended complaints. As a result of that opinion, all claims against one of the HSBC companies have been dismissed, and certain claims against the remaining HSBC defendants have also been dismissed. In May 2019, the liquidators appealed certain issues from the US Bankruptcy Court opinion to the US District Court for the Southern District of New York (the 'New York District Court').

UK litigation: The Trustee has filed a claim against various HSBC companies in the High Court of England and Wales, seeking recovery of transfers from Madoff Securities to HSBC in an amount not yet pleaded or determined. The deadline for service of the claim has been extended to September 2020 for UK-based defendants and November 2020 for all other defendants.

Bermuda litigation: In January 2009, Kingate Global Fund Limited and Kingate Euro Fund Limited (together, 'Kingate') brought an action against HSBC Bank Bermuda Limited ('HBBM') for recovery of funds held in Kingate's accounts, fees and dividends. In June 2019, the Trustee, Kingate and HBBM entered into a global settlement agreement (the 'Kingate Settlement') pursuant to which the Trustee and Kingate released HBBM from any and all claims arising out of or relating to Kingate including all pending litigation in the US, UK and Bermuda. Following court approval of the settlement in the US, Bermuda and British Virgin Islands, the Bermuda action was discontinued in October 2019, and the Trustee dismissed certain of its US claims against HBBM in November 2019.

Cayman Islands litigation: In February 2013, Primeo Fund ('Primeo') (in liquidation since April 2009) brought an action against HSBC Securities Services Luxembourg ('HSSL') and Bank of Bermuda (Cayman) Limited (now known as HSBC Cayman Limited), alleging breach of contract and breach of fiduciary duty and claiming damages and equitable compensation. The trial concluded in February 2017 and, in August 2017, the court dismissed all claims against the defendants. In September 2017, Primeo appealed to the Court of Appeal of the Cayman Islands and, in June 2019, the Court of Appeal of the Cayman Islands dismissed Primeo's claims against HSSL and HSBC Cayman Limited. In August 2019, Primeo filed a notice of appeal to the UK Privy Council and, in September 2019, HSSL and HSBC Cayman Limited indicated that they will seek to dismiss the appeal.

Luxembourg litigation: In December 2018, Alpha Prime Fund Limited brought claims before the Luxembourg District Court seeking damages against various HSBC companies. A preliminary hearing is scheduled for June 2020.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact, of the various Madoff-related proceedings described above, including but not limited to the multiple jurisdictions in which the proceedings have been brought. For these reasons, among others, it is not practicable at this time to estimate reliably the aggregate liabilities, or ranges of liabilities, that might arise as a result of all claims in the various Madoff-related proceedings, but they could be significant.

22 Related party transactions

Related parties of the group include subsidiaries, associates, post-employment benefit plans for group employees, Key Management Personnel, close family members of Key Management Personnel and entities which are controlled or jointly controlled by Key Management Personnel or their close family members.

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the group. The group classifies the Directors of the Bank and members of the Executive Management Committee as the Key Management Personnel of the group.

Particulars of transactions, arrangements and agreements entered into by the group with its Key Management Personnel, connected persons and companies controlled by them or the group are as follows:

	Loans and mortgages	Deposits
Balance at 1 Jan 2018	3,299	84,328
Advances and transfers in during the year	—	57,026
Repayments and transfers out during the year	(313)	(60,489)
Balance at 31 Dec 2018	2,986	80,865
Advances and transfers in during the year	—	26,109
Repayments and transfers out during the year	(759)	(37,928)
Balance at 31 Dec 2019	2,227	69,046

The above transactions were made in the ordinary course of business and substantially on the same terms, including interest rates and security, as for comparable transactions with other employees of the group which are at favourable rates. Normal banking risks are associated with these transactions.

Compensation of Key Management Personnel

	2019	2018
Short-term employee benefits	6,278	5,793
Post-employment benefits	170	169
Other long-term employee benefits	33	38
Share-based payments	277	508
	6,758	6,508

Amounts included in balance sheet due from HSBC affiliated companies

	2019	2018
Loans and advances to banks	1,686,433	1,155,777
Financial investments	–	3,435
Derivatives	4,950	8,389
Other assets	283	228

Amounts included in balance sheet due to HSBC affiliated companies

	2019	2018
Deposits by banks	21,877	246,717
Derivatives	28,517	8,112
Customer accounts	13,881	36,975
Other liabilities	2,539	6,033

Amounts in income statement received from HSBC affiliated companies

	2019	2018
Interest income	17,654	19,898
Fee income	2,349	2,647

Amounts in income statement paid to HSBC affiliated companies

	2019	2018
Fee expense	185	5
General and administrative expenses	20,755	17,924

Amounts included in contingent liabilities, contractual commitments and guarantees

	2019	2018
Guarantees in the form of irrevocable letters of credit	9,400	9,000

There are no individually assessed expected credit losses in respect of outstanding balances in 2019 (2018: \$NIL). No expected credit losses were recognised during the year in respect of financial assets with related parties (2018: \$NIL).

23 Equity

(a) Called up share capital and share premium

The total number of authorised ordinary shares at 31 December 2019 was 140,000,000 (2018: 140,000,000) with a par value of \$1 per share (2018: \$1 per share). The total number of shares issued and fully paid at 31 December 2019 was 30,026,671 (2018: 30,026,671). These figures and amounts are exact (not rounded or shown to the nearest thousand). Share premium comprises additional paid in capital in excess of the par value. Share premium is not ordinarily available for distribution. The holders of ordinary shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the Bank.

(b) Dividends

A final dividend of \$37,000,000 (\$1.23 per ordinary share) was declared by the Board on 14 February 2019 in respect to the 2018 financial year.

Interim dividends were declared by the Board of Directors on:

- 23 May 2019 in respect of the period 1 January 2019 to 31 March 2019, for \$32,000,000 (\$1.07 per ordinary share);
- 24 July 2019 in respect of the period 1 April 2019 to 30 June 2019, for \$40,000,000 (\$1.33 per ordinary share); and
- 6 November 2019 in respect of the period 1 July 2019 to 30 September 2019, for \$35,000,000 (\$1.17 per ordinary share) and a further additional dividend of \$50,000,000 (\$1.67 per ordinary share).

The directors declared after the end of the year, a fourth interim dividend in respect to the financial year ended 31 December 2019 for \$29,000,000 (\$0.97 per ordinary share). The fourth dividend will be payable on or before 31 March 2020 to the holders of ordinary shares of record on 24 February 2020. No liability was recorded in the financial statements in respect of the fourth interim dividend for 2019.

These figures and amounts are exact (not rounded or shown to the nearest thousand).



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