

# Notes to the Financial Statements

## 1. Principal activities

The Company is an investment holding company and its subsidiaries are principally engaged in the provision of banking and related financial services.

The Company is a limited liability company incorporated and listed in Hong Kong. The address of its registered office is 53/F, Bank of China Tower, 1 Garden Road, Hong Kong.

## 2. Significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below.

These policies have been consistently applied to all the years presented, unless otherwise stated.

### 2.1 Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with Hong Kong Financial Reporting Standards (“HKFRSs”) (HKFRSs is a collective term which includes all applicable individual Hong Kong Financial Reporting Standards, HKASs and Interpretations) issued by the HKICPA and the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of financial assets at fair value through other comprehensive income, financial assets and financial liabilities (including derivative financial instruments) at fair value through profit or loss, precious metals at fair value, investment properties which are carried at fair value and premises which are carried at fair value or revalued amount less accumulated depreciation and accumulated impairment losses. Disposal group and repossessed assets held for sale are stated at the lower of their carrying amounts and fair values less costs to sell as further explained in Notes 2.2 and 2.26 respectively.

The preparation of financial statements in conformity with HKFRSs requires the use of certain critical accounting estimates. It also requires the Management to exercise judgement in the process of applying the Group’s accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 3.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.1 Basis of preparation (continued)

##### (a) Amendments that are initially adopted for the financial year beginning on 1 January 2021

Amendments	Content	Applicable for financial years beginning on/after	Currently relevant to the Group
HKAS 39, HKFRS 4, HKFRS 7, HKFRS 9 and HKFRS 16 (Amendments)	Interest Rate Benchmark Reform – Phase 2	1 January 2021	Yes
HKFRS 16 (Amendments)	COVID-19-Related Rent Concessions beyond 30 June 2021	1 April 2021	Yes

- HKAS 39, HKFRS 4, HKFRS 7, HKFRS 9 and HKFRS 16 (Amendments), “Interest Rate Benchmark Reform – Phase 2”. The amendments address the issues that arise during the reform of an interest rate benchmark rate (“IBOR reform”), including the replacement of one benchmark with an alternative one. The amendments complement those issued in 2019 and relate to:
  - changes to contractual cash flows – a company does not have to derecognise or adjust the carrying amount of financial instruments for changes that are direct consequence of the reform and occur on an economically equivalent basis, but will instead update the effective interest rate to reflect the change to the alternative benchmark rates;
  - hedge accounting – a company does not have to discontinue its hedge accounting solely because it makes changes required by the reform, if the hedge meets other hedge accounting criteria; furthermore, if a company reasonably expects that alternative benchmark rates will be separately identifiable within a period of 24 months, it can designate the alternative benchmark rates as a non-contractually specified risk component even if it is not separately identifiable at the designation date; and
  - disclosures – a company is required to disclose information about the nature and extent of risks arising from IBOR reform to which the company is exposed, how the company manages those risks, and the company’s progress in completing the transition to alternative benchmark rates and how it is managing that transition.

The amendments have been applied retrospectively. Further information is included in Note 52.

## 2. Significant accounting policies (continued)

### 2.1 Basis of preparation (continued)

#### (a) Amendments that are initially adopted for the financial year beginning on 1 January 2021 (continued)

- HKFRS 16 (Amendments), “COVID-19-Related Rent Concessions beyond 30 June 2021”. The amendments provide an optional practical expedient allowing lessees to elect not to evaluate whether qualifying rent concessions are lease modifications and, instead, account for those rent concessions as if they were not lease modifications. The practical expedient only applies to rent concessions occurring as a direct consequence of the COVID-19 pandemic.

The amendments were effective on 1 June 2020 and applicable to COVID-19-related rent concessions that reduce lease payments from 1 January 2020 to 30 June 2021. In April 2021, further amendment to HKFRS 16 was announced to extend the availability of the practical expedient so that it applies to rent concessions for which any reduction in lease payments affects only payments originally due on or before 30 June 2022, provided the other conditions for applying the practical expedient are met. The Group has early adopted the amendments and applied the practical expedient to all qualifying COVID-19-related rent concessions granted to the Group during the reporting period. The application of the amendments does not have a material impact on the Group’s financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.1 Basis of preparation (continued)

**(b) Standards, amendments and interpretations issued that are not yet mandatorily effective and have not been early adopted by the Group in 2021**

Standards/ Amendments/ Interpretations	Content	Applicable for financial years beginning on/after	Currently relevant to the Group
Accounting Guideline 5 (Revised)	Revised Accounting Guideline 5 Merger Accounting for Common Control Combinations	1 January 2022	Yes
Amendments to HKFRSs	Annual Improvements to HKFRS Standards 2018–2020	1 January 2022	Yes
HKAS 1 (Amendments)	Classification of Current or Non-current Liabilities	1 January 2023	No
HKAS 1 and HKFRS Practice Statement 2 (Amendments)	Disclosure of Accounting Policies	1 January 2023	Yes
HKAS 8 (Amendments)	Definition of Accounting Estimates	1 January 2023	Yes
HKAS 12 (Amendments)	Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 January 2023	Yes
HKAS 16 (Amendments)	Property, Plant and Equipment: Proceeds before Intended Use	1 January 2022	Yes
HKAS 28 (2011) and HKFRS 10 (Amendments)	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	To be determined	Yes
HKAS 37 (Amendments)	Onerous Contracts – Cost of Fulfilling a Contract	1 January 2022	Yes
HKFRS 3 (Amendments)	Reference to the Conceptual Framework	1 January 2022	Yes
HKFRS 17	Insurance Contracts	1 January 2023	Yes
HK Int 5 (2020)	Presentation of Financial Statements – Classification by the Borrower of a Term Loan that Contains a Repayment on Demand Clause	1 January 2023	No

## 2. Significant accounting policies (continued)

### 2.1 Basis of preparation (continued)

**(b) Standards, amendments and interpretations issued that are not yet mandatorily effective and have not been early adopted by the Group in 2021 (continued)**

Further information about those HKFRSs that are expected to be applicable to the Group is as follows:

- Accounting Guideline 5 (Revised), “Revised Accounting Guideline 5 Merger Accounting for Common Control Combinations” (“AG 5”). The amendments revise to reflect a clearer rationale for why the transaction described in paragraph 5 of AG 5 is not a business combination and why, in practice, a principle similar to that for a reverse acquisition is applied to those transactions is provided. New disclosure requirements for common control combinations are added to paragraph 19 of AG 5. The accounting for change in non-controlling interests as a result of common control combination is clarified in the example in AG 5. The terminologies and references in AG 5 are updated to align with existing HKFRSs. The application of the amendments will not have a material impact on the Group’s financial statements.
- HKAS 1 (Amendments), “Disclosure of Accounting Policies”. The amendment aims to require entities to disclose their material rather than their significant accounting policies. The amendments define what is ‘material accounting policy information’ and explain how to identify when accounting policy information is material. They further clarify that immaterial accounting policy information does not need to be disclosed. If it is disclosed, it should not obscure material accounting information.

To support this amendment, the HKICPA also amended HKFRS Practice Statement 2 “Making Materiality Judgements” to provide guidance on how to apply the concept of materiality to accounting policy disclosures. The application of the amendments will not have a material impact on the Group’s financial statements.

- HKAS 8 (Amendments), “Definition of Accounting Estimates”. The amendment clarifies how companies should distinguish changes in accounting policies from changes in accounting estimates. The distinction is important, because changes in accounting estimates are applied prospectively to future transactions and other future events, but changes in accounting policies are generally applied retrospectively to past transactions and other past events as well as the current period. The application of the amendments will not have a material impact on the Group’s financial statements.
- HKAS 12 (Amendments), “Deferred Tax related to Assets and Liabilities arising from a Single Transaction”. The amendments require companies to recognise deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences. They will typically apply to transactions such as leases of lessees and decommissioning obligations and will require the recognition of additional deferred tax assets and liabilities. The application of the amendments will not have a material impact on the Group’s financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.1 Basis of preparation (continued)

**(b) Standards, amendments and interpretations issued that are not yet mandatorily effective and have not been early adopted by the Group in 2021 (continued)**

- HKAS 16 (Amendments), “Property, Plant and Equipment: Proceeds before Intended Use”. The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds received from selling items produced while the entity is preparing the asset for its intended use. It also clarifies that an entity is ‘testing whether the asset is functioning properly’ when it assesses the technical and physical performance of the asset. The financial performance of the asset is not relevant to this assessment. Entities must disclose separately the amounts of proceeds and costs relating to items produced that are not an output of the entity’s ordinary activities. The related sales proceeds together with the costs of providing these items as determined by HKAS 2, should be included in profit or loss. The amendments are applied retrospectively, but only to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented in the financial statements in which the entity first applies the amendments. The application of the amendments will not have a material impact on the Group’s financial statements.
- HKAS 28 (2011) and HKFRS 10 (Amendments), “Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”. The amendments address an acknowledged inconsistency between the requirements in HKAS 28 (2011) and those in HKFRS 10, in dealing with the sale or contribution of assets between an investor and its associate or joint venture. The main consequence of the amendments is that a full gain or loss is recognised when a transaction involves a business (whether it is housed in a subsidiary or not). If the assets do not meet the definition of a business, the gain or loss is recognised by the investor only to the extent of the other investor’s interests in the associate or joint venture. The amendments are to be applied prospectively and early application is permitted. The application of the amendments will not have a material impact on the Group’s financial statements.
- HKAS 37 (Amendments), “Onerous Contracts – Cost of Fulfilling a Contract”. The amendments clarify that for the purpose of assessing whether a contract is onerous, the cost of fulfilling the contract includes both the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts. Before recognising a separate provision for an onerous contract, the entity recognises any impairment loss that has occurred on assets used in fulfilling the contract. The amendments are applied to contracts for which exist at the date when the amendments are first applied, with the cumulative effect of applying the amendments to be recognised as an opening balance adjustment to retained earnings or other component of equity, as appropriate. The comparatives are not restated. The application of the amendments will not have a material impact on the Group’s financial statements.

## 2. Significant accounting policies (continued)

### 2.1 Basis of preparation (continued)

#### (b) Standards, amendments and interpretations issued that are not yet mandatorily effective and have not been early adopted by the Group in 2021 (continued)

- HKFRS 3 (Amendments), "Reference to the Conceptual Framework". The amendments update a reference in HKFRS 3 to the Conceptual Framework for Financial Reporting issued in 2018. The amendments also add to HKFRS 3 an exception to its requirement for an entity to refer to the Conceptual Framework to determine what constitutes an asset or a liability, that for some types of liabilities and contingent liabilities, an entity applying HKFRS 3 should instead refer to HKAS 37. The exception has been added to avoid an unintended consequence of updating the reference to the Conceptual Framework. The amendments also confirm that contingent assets should not be recognised at the acquisition date. The amendments are applied prospectively. Earlier application is permitted if at the same time or earlier an entity also applies all the amendments made by Amendments to References to the Conceptual Framework in HKFRS Standards, issued in June 2018. The application of the amendments will not have a material impact on the Group's financial statements.
- HKFRS 17, "Insurance Contracts". HKFRS 17 and the Amendments issued in October 2020, aims at replacing the current insurance contracts standard HKFRS 4, an interim standard that leads to highly divergent accounting practices that exist in the insurers' local jurisdictions. The new standard establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts, with an objective to ensure that an entity provides relevant information that faithfully represents insurance contracts. Early application of the standard is permitted but only if the entity also applies HKFRS 9. The Group is considering the financial impact of the adoption of the standard.

#### (c) Improvements to HKFRSs

"Improvements to HKFRSs" contains a number of amendments to HKFRSs which the HKICPA considers not urgent but necessary. It comprises amendments that result in accounting changes for presentation, recognition or measurement purpose as well as terminology or editorial amendments related to a variety of individual HKFRSs. These improvements will not have a material impact on the Group's financial statements.

#### (d) Comparative figures

Certain comparative figures in the notes have been adjusted to conform with presentation in the current year, including the classification in Note 23 financial assets at fair value through profit or loss and Note 26 investment in securities.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.2 Consolidation

The consolidated financial statements include the financial statements of the Company and all of its subsidiaries for the year ended 31 December 2021.

##### (1) Subsidiaries

Subsidiaries are entities (including structured entities), directly or indirectly, controlled by the Group. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e. existing rights that give the Group the current ability to direct the relevant activities of the investee). When the Group has, directly or indirectly, less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including: (a) the contractual arrangement with the other vote holders of the investee; (b) rights arising from other contractual or non-contractual arrangements; and (c) the Group's voting rights and potential voting rights. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that control ceases.

If the Group loses control over a subsidiary, it derecognises (i) the assets (including goodwill) and liabilities of the subsidiary, (ii) the carrying amount of any non-controlling interests; and recognises (i) the fair value of the consideration received, (ii) the fair value of any investment in that former subsidiary retained; reclassifies the amounts previously recognised in other comprehensive income to the income statement or retained earnings, as appropriate, on the same basis as directly disposed of the related assets or liabilities; recognises any resulting differences as gain or loss in the income statement.

If the Group is committed by the Board to a sale plan involving loss of control of a subsidiary (a disposal group) that is unlikely to be withdrawn or changed significantly, the Group shall classify all the assets and liabilities of that subsidiary as held for sale only when the following criteria are met on or before the end of the reporting period: (i) the carrying amount will be recovered principally through a sale transaction rather than through continuing use; (ii) the subsidiary is available for immediate sale in its present condition subject only to terms that are usual and customary for the sale of its kind and its sale must be highly probable, including a high probability of shareholders' approval, if needed; (iii) an active programme to locate a buyer at a reasonable price has been initiated and to complete the sale within one year, regardless of whether the Group will or will not retain a non-controlling interest after the sale. Disposal group (other than investment properties and financial instruments) is initially recognised and subsequently remeasured at the lower of its carrying amount and fair value less costs to sell. Properties, plant and equipment classified as held for sale are not depreciated.



## 2. Significant accounting policies (continued)

### 2.2 Consolidation (continued)

#### (1) Subsidiaries (continued)

##### (i) Business combinations not under common control

Acquisitions of businesses not under common control are accounted for using the acquisition method. The consideration transferred in a business combination is the fair values at the acquisition date of the assets transferred, the liabilities incurred (including contingent consideration arrangement) and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are expensed in the income statement as incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the Group's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If after assessment, the fair value of the acquiree's identifiable net assets exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the Group's previously held interest in the acquiree (if any), the excess is recognised immediately in the income statement as a gain on bargain. Subsequently, goodwill is subject to impairment testing at least annually.

Where the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at fair value at the acquisition date and considered as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with the corresponding adjustments being made against goodwill or gain on bargain purchase. Measurement period adjustments are adjustments that arise from additional information obtained during the measurement period about facts and circumstances that existed as of the acquisition date. The measurement period does not exceed one year from the acquisition date.

On an acquisition-by-acquisition basis, the Group recognises any non-controlling interests in the acquiree either at fair value or at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.2 Consolidation (continued)

##### (1) Subsidiaries (continued)

##### (ii) Business combinations under common control

For a combination with a company under common control, the merger accounting method will be applied. The principle of merger accounting is a way to combine companies under common control as though the business of the acquiree had always been carried out by the acquirer. The Group's consolidated financial statements represent the consolidated results, consolidated cash flows and consolidated financial position of the Group as if any such combination had occurred from the date when the Company and the acquiree first came under common control (i.e. no fair value adjustment on the date of combination is required). The difference between the consideration and carrying amount at the time of combination is recognised in equity. The effects of all transactions between the Group and the acquiree, whether occurring before or after the combination, are eliminated in preparing the consolidated financial statements of the Group. Comparative amounts are presented as if the acquiree had been combined at the beginning of the previous reporting period. The transaction costs for the combination will be expensed in the income statement.

Inter-company transactions, balances and unrealised gains on transactions between group companies are eliminated; unrealised losses are also eliminated unless the transaction provides evidence of impairment of the assets transferred. Where necessary, accounting policies of subsidiaries have been changed to ensure consistency with the policies adopted by the Group.

In the Company's balance sheet, the investments in subsidiaries are stated at cost less allowance for impairment losses. The results of subsidiaries are accounted for by the Company on the basis of dividends received and receivable. Dividend income from subsidiaries is recognised in the income statement when the right to receive payment is established.

##### (2) Changes in ownership interests

The Group treats transactions with non-controlling interests without change of control as transactions with equity owners of the Group. For purchases from non-controlling interests of equity interest, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recognised in equity. Gains or losses on disposals to non-controlling interests are also recognised in equity.

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognised in the income statement. The fair value is the initial carrying amount for the purposes of subsequent accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. Amounts previously recognised in other comprehensive income are reclassified to the income statement or retained earnings, as appropriate.

## 2. Significant accounting policies (continued)

### 2.2 Consolidation (continued)

#### (3) Associates and joint ventures

An associate is the entity over which the Group has significant influence but not control or joint control, generally accompanying a shareholding of between 20% and 50% of the voting rights.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Investments in associates and joint ventures are accounted for using the equity method of accounting and are initially recognised at cost, unless it is classified as held for sale (or included in a disposal group that is classified as held for sale). The Group's investments in associates and joint ventures include goodwill, net of accumulated impairment loss and any related accumulated foreign currency translation difference.

The Group's share of the post-acquisition profits or losses of associates or joint ventures is recognised in the income statement, and its share of post-acquisition movements in reserves is recognised in reserves. The accumulated post-acquisition movements are adjusted against the cost of the investment. When the Group's share of losses in an associate or a joint venture equals or exceeds its interest in the associate or joint venture, the Group does not recognise further losses unless the Group has incurred obligations or made payments on behalf of the associates or joint ventures.

Dividends received or receivable from associates and joint ventures are recognised as a reduction in the carrying amount of the investment.

Unrealised gains on transactions between the Group and its associates or joint ventures are eliminated to the extent of the Group's interest in the associates or joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of impairment of the asset transferred.

If the ownership interest in an associate or a joint venture is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to the income statement or retained earnings, where appropriate.

### 2.3 Segmental reporting

The operating result of segments are reported in a manner consistent with the internal reporting provided to the Management Committee, which is the chief operating decision maker of the Group, that allocates resources and assesses the performance of operating segments. Income and expenses directly associated with each segment are included in determining operating segment performance.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.4 Foreign currency translation

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in Hong Kong dollars, which is the Company's functional and presentation currency.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or exchange rates at the end of the reporting period for items that are re-measured. Foreign exchange gains and losses resulting from the settlement of foreign currency transactions using the exchange rates prevailing at the dates of the transactions and monetary assets and liabilities denominated in foreign currencies translated at the exchange rate at the end of the reporting period are recognised directly in the income statement, except when deferred in other comprehensive income as qualifying cash flow hedges or qualifying net investment hedges.

Translation differences on monetary securities held at fair value through profit or loss are reported as part of the fair value gain or loss. Changes in the fair value of monetary securities denominated in foreign currency classified as fair value through other comprehensive income are analysed between translation differences resulting from changes in the amortised cost of the securities and other changes in the carrying amount of the securities. Translation differences related to changes in the amortised cost are recognised in the income statement, and other changes in the carrying amount are recognised in other comprehensive income.

Translation differences on non-monetary items, such as equities held at fair value through profit or loss, are reported as part of the fair value gain or loss. Translation differences on non-monetary financial assets such as equities classified as fair value through other comprehensive income are included in other comprehensive income.

The results and financial position of all the group entities that have a functional currency different from Hong Kong dollars are translated into Hong Kong dollars as follows:

- assets and liabilities are translated at the closing rate at the end of the reporting period;
- income and expenses are translated at average exchange rates; and
- all resulting exchange differences are recognised in the currency translation reserve in equity.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities, borrowings and other currency instruments designated as hedges of such investments are taken to other comprehensive income and are accumulated separately in the translation reserve. When a foreign entity is disposed, such exchange differences are reclassified from equity to the income statement, as part of the gain or loss on sale.

## 2. Significant accounting policies (continued)

### 2.5 Derivative financial instruments and hedge accounting

Derivatives are initially recognised at fair value on the date the derivative contract is entered into and are subsequently re-measured at fair value. Fair values are obtained from quoted market prices in active markets, including recent market transactions, and through the use of valuation techniques, including discounted cash flow models and option pricing models, as appropriate. All derivatives are carried as assets when fair value is positive and as liabilities when fair value is negative.

Certain derivatives embedded in financial liabilities are treated as separate derivatives when their economic characteristics and risks are not closely related to those of the host contract and the host contract is not carried at fair value through profit or loss. These embedded derivatives are measured at fair value with changes in fair value recognised in the income statement.

Derivatives are categorised as held for trading and changes in their fair value are recognised immediately in the income statement unless they are designated as hedges and are effective hedging instruments, then they are subject to measurement under the hedge accounting requirements.

For derivative instruments being designated as hedging instrument in an effective hedge, the method of recognising the resulting fair value gain or loss depends on the nature of the item being hedged. The Group designates certain derivatives as either:

- (a) hedges of the fair value of recognised assets or liabilities or firm commitments (fair value hedge); or
- (b) hedges of a particular risk associated with a highly probable future cash flow attributable to a recognised asset or liability, or a highly probable forecast transaction (cash flow hedge); or
- (c) hedges of a net investment in a foreign operation (net investment hedges).

The Group documents at inception the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at the hedge inception and on an ongoing basis, of the economic relationship, credit risks, the hedge ratio and an evaluation of the effectiveness of the hedging instruments in offsetting changes in fair values or cash flows of hedged items. These criteria should be met before a hedge can be qualified to be accounted for under hedge accounting. Hedge accounting may become ineffective if the hedging instrument and the hedged item lose economic relationship, or a significant change of the counterparties' credit risks that dominates the fair value change of the hedging instruments or the hedged items.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.5 Derivative financial instruments and hedge accounting (continued)

##### (a) Fair value hedge

Changes in the fair value of derivatives that are designated and qualified as effective fair value hedges are recognised in the income statement, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

When fair value hedge accounting is applied to financial instruments carried at amortised costs, the carrying values of the hedged items are adjusted for changes in fair value that are attributable to the risk being hedged with the derivative instruments rather than carried at amortised cost, such carrying value adjustment is recognised in the income statement together with the changes in fair value of the hedging derivatives.

If the hedge relationship no longer meets the criteria for hedge accounting or is terminated for reasons other than derecognition, e.g. due to repayment of the hedged item, the unamortised carrying value adjustment (the difference between the carrying value of the hedged item at the time of termination and the value at which it would have been carried had the hedge never existed) to the hedged item is amortised to the income statement over the remaining life of the hedged item by the effective interest method. If the hedged item is derecognised, the unamortised carrying value adjustment is recognised immediately in the income statement.

For fair value hedge relationships where the hedged items are debt instruments carried at FVOCI, changes in fair value are recorded in the income statement whilst hedge accounting is in place. When the hedge relationship no longer meets the criteria for hedge accounting or is terminated for reasons other than derecognition, the cumulative effective hedged portion of fair value change recognised in the income statements are amortised by the effective interest method back to the equity. If the hedged item is derecognised, the unamortised cumulative effective hedged portion of fair value change recognised in the income statement are reclassified to equity immediately.

##### (b) Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges are recognised in other comprehensive income and accumulated in equity. The gain or loss relating to the ineffective portion is recognised immediately in the income statement. Amounts accumulated in equity are reclassified to the income statement in the periods when the hedged item affects profit or loss.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any accumulated gain or loss existing in equity at that time remains in equity and is recognised in the income statement when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur, the accumulated gain or loss that was reported in equity is immediately reclassified to the income statement.

## 2. Significant accounting policies (continued)

### 2.5 Derivative financial instruments and hedge accounting (continued)

#### (c) Net investment hedge

Hedges of net investments in foreign operations are accounted for in a similar way to cash flow hedges. A gain or loss on the effective portion of the hedging instrument is recognised in other comprehensive income and accumulated in equity; a gain or loss on the ineffective portion is recognised immediately in the income statement. Accumulated gains and losses previously recognised in other comprehensive income are reclassified to the income statement upon disposal of the foreign operation as part of the gain or loss on disposal.

### 2.6 Offsetting financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the 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.

### 2.7 Income and expense

#### (1) Interest income and expense

Interest income and expense are recognised in the income statement for all financial assets carried at amortised cost and fair value through other comprehensive income, and financial liabilities using the effective interest method. Similar interest income and expense arising from non-derivative financial assets and liabilities carried at fair value through profit or loss are determined using similar method, but excluding their transaction costs.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability 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 instrument or, when 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 future cash flows considering all contractual terms of the financial instrument (e.g. prepayment options or incentives relating to residential mortgage loans) but does not consider future credit losses. The calculation includes fees, premiums or discounts and basis points paid or received between parties to the contract, and directly attributable origination fees and costs which represent an integral part of the effective yield.

For all hedge transactions where interest rate is the hedged risk, interest income or interest expense from hedged instruments such as fixed rate debt securities or fixed rate subordinated notes are disclosed on a net basis together with net interest income/expense arising from the hedging instrument such as interest rate swap.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.7 Income and expense (continued)

##### (2) Non-interest income and expense

Income from service is recognised when the Group fulfils its performance obligation, either over time or at a point in time on a basis when a customer obtains control of the service.

Fee income from services are recognised over time at a fixed or variable price on a systematic basis over the life of the agreement when the contract requires services to be provided over time such as account service and credit card fees, or recognised at a point in time under transaction-based arrangements when service has been fully provided to the customer such as broking services and loan syndication arrangement.

Dividend income from financial asset is recognised when the right to receive payment is established.

Non-interest expenses are charged to profit or loss during the reporting period in which they are incurred.

The accounting policies for insurance premium income are disclosed in Note 2.20.

#### 2.8 Financial assets

The Group classifies its financial assets into one of the following measurement categories at initial recognition as subsequently measured at: fair value through profit or loss ("FVPL"), amortised cost and fair value through other comprehensive income ("FVOCI"). The classification depends on the entity's business model for managing its financial instruments and the contractual cash flow characteristics of the instruments, or the election of fair value option. All financial assets are recognised initially at fair value. Except for financial assets carried at FVPL, all transaction costs of financial assets are included in their initial carrying amounts.

##### (1) Financial assets at fair value through profit or loss

This category has two sub-categories: financial assets designated at fair value through profit or loss at inception, or financial assets mandatorily required to be measured at fair value through profit or loss, including those held for trading.

A financial asset which has been acquired or incurred principally for the purpose of selling in the short term or is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking is classified as held for trading. Derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

A financial asset, other than those held for trading or mandatorily measured at fair value, will be designated as a financial asset at FVPL, if it eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as "an accounting mismatch") that would otherwise arise from measuring the financial assets or recognising the gains and losses on them on different bases, and is so designated by the Management.



## 2. Significant accounting policies (continued)

### 2.8 Financial assets (continued)

#### (1) Financial assets at fair value through profit or loss (continued)

These assets are recognised initially at fair value, with transaction costs taken directly to the income statement, and are subsequently re-measured at fair value.

Gains and losses from changes in the fair value of such assets (excluding the interest component) are reported in net trading gain/loss or net gain/loss on other financial instruments designated at FVPL. The interest component is reported as part of the interest income. Dividends on equity instruments of this category are also recognised in net trading gain/loss or net gain/loss on financial instruments at FVPL when the Group's right to receive payment is established.

#### (2) Financial assets at amortised cost

Financial assets are classified as subsequently measured at amortised cost if both of the following conditions are met: (i) the financial assets are held within a business model with the objective to hold financial assets in order to collect contractual cash flows ("hold-to-collect" business model), and (ii) the contractual terms of the financial asset give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding on specified dates. They are initially recognised at fair value plus any directly attributable transaction costs and are subsequently measured at amortised cost using the effective interest method less allowances for impairment losses. Interest income which includes the amortisation of premium or discount is calculated using the effective interest method and is recognised in the income statement. Any gains or losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

#### (3) Financial assets at fair value through other comprehensive income

Debt instruments are classified as subsequently measured at FVOCI if both of the following conditions are met: (i) the financial assets are held within a business model with the objective of both holding to collect contractual cash flows and selling, and (ii) the contractual terms of the financial assets give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding on specified dates.

Financial assets at FVOCI are initially recognised at fair value plus any directly attributable transaction costs, and are subsequently measured at fair value. Unrealised gains or losses arising from changes in the fair value of the financial assets are recognised directly in other comprehensive income, until the financial asset is derecognised or impaired at which time the accumulated gain or loss previously recognised in equity should be transferred to the income statement. However, interest income which includes the amortisation of premium or discount is calculated using the effective interest method and is recognised in the income statement.

For equity investments, an irrevocable election can be made at initial recognition to recognise unrealised and realised fair value gains or losses in other comprehensive income without subsequent reclassification of fair value gains or losses to the income statement even upon disposal. Dividends on equity instruments classified as FVOCI are recognised in other operating income when the Group's right to receive payment is established. Equity instruments designated at FVOCI are not subject to impairment assessment.

The treatment of translation differences on FVOCI securities is dealt with in Note 2.4.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.9 Financial liabilities

The Group classifies its financial liabilities under the following classes: trading liabilities, financial liabilities designated at fair value through profit or loss, deposits, debt securities and certificates of deposit in issue and other liabilities. All financial liabilities are classified at inception and recognised initially at fair value, and in the case of financial liability not at fair value through profit or loss, plus or minus transaction costs.

##### (1) Trading liabilities

A financial liability is classified as held for trading if it is incurred principally for the purpose of repurchasing in the short term. It is measured at fair value and any gains and losses from changes in fair value are recognised in the income statement, with interest component being reported as part of the interest expenses.

##### (2) Financial liabilities designated at fair value through profit or loss

A financial liability can be designated at fair value through profit or loss if it is so designated at inception. A financial liability is so designated if it meets one of the following criteria:

- eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as “an accounting mismatch”) that would otherwise arise from measuring the financial liabilities or recognising the gains and losses on them on different bases; or
- applies to a group of financial assets, financial liabilities or both that is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the Group is provided internally on that basis to the key management; or
- relates to financial liabilities containing one or more embedded derivatives that significantly modify the cash flows resulting from those financial liabilities.

Financial liabilities designated at fair value through profit or loss are measured at fair value and any gains and losses from changes in fair value are recognised in the income statement, except for fair value changes arising from own credit risks are recognised as other comprehensive income and subsequently reclassified to the retained earnings upon derecognition, unless such would create or enlarge an accounting mismatch in profit or loss, then all gains and losses from changes in fair value are recognised in the income statement.

##### (3) Deposits, debt securities and certificates of deposit in issue and other liabilities

Deposits, debt securities and certificates of deposit in issue and other liabilities, other than those classified as trading liabilities or designated at fair value through profit or loss are carried at amortised cost. Any difference (if available) between proceeds net of transaction costs and the redemption value is recognised in the income statement over the period using the effective interest method.

## 2. Significant accounting policies (continued)

### 2.10 Financial guarantee contracts and undrawn loan commitments

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due, in accordance with the terms of a contract between the holder and the debtor.

Financial guarantee contracts are initially recognised as financial liabilities at fair value on the date the guarantees were given. Subsequent to initial recognition, the Group's liabilities under such guarantees are measured at the higher of (i) an ECL provision as set out in Note 2.14 and (ii) the amount initially recognised less, where appropriate, accumulated amortisation recognised over the life of the guarantee on a straight-line basis. Any changes in the liability relating to financial guarantee contracts are taken to the income statement.

Undrawn loan commitments are commitments under which, over the duration of the commitment, the Group is required to provide a loan with pre-specified terms to the customer. These contracts are in the scope of the ECL requirements as set out in Note 2.14.

The ECL provision for financial guarantees and loan commitments are reported under "Other accounts and provisions" in the financial statements.

### 2.11 Recognition, derecognition and modification of financial instruments

Purchases and sales of financial assets subsequently measured at FVPL, securities measured at FVOCI and amortised costs are recognised on the trade date, the date on which the Group purchases or sells the assets. Loans and advances and other financial assets are recognised when cash is advanced to the counterparties. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or where the Group has transferred substantially all risks and rewards of ownership. When the Group neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset, the Group either continues to recognise the transferred financial asset to the extent of its continuing involvement if control remains or derecognise it if there is no retained control. If the financial instrument measured at amortised cost or FVOCI is renegotiated or modified with substantially different terms, the original financial instrument should be derecognised and then a new financial instrument should be recognised at fair value. Otherwise, the difference is adjusted to the original carrying value and accounted for in the profit or loss.

Trading liabilities, financial liabilities designated at FVPL and debt securities and certificates of deposit in issue are recognised on the trade date. Deposits that are not designated at FVPL are recognised when money is received from customers, other liabilities are recognised when such obligations arise. Financial liabilities are derecognised from the balance sheet when and only when the obligation specified in the contract is discharged, cancelled or expires. If the Group purchases its own debt, it is removed from the balance sheet, and the difference between the carrying amount of a liability and the consideration paid is included in profit or loss, except the own credit risk component for those designated at FVPL.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.11 Recognition, derecognition and modification of financial instruments (continued)

Securities and bills sold to a counterparty with an obligation to repurchase at a pre-determined price on a specified future date under a repurchase agreement are referred to as repos. Securities and bills purchased from a counterparty with an obligation to re-sell to the counterparty at a pre-determined price on a specified future date under a resale agreement are referred to as reverse repos.

Repos or securities lending are initially recognised as due to banks, placements from banks and other financial institutions, as appropriate, at the actual amount of cash received from the counterparty. Financial assets given as collateral for repurchase agreements are not derecognised and are recorded as investment in securities or financial assets at FVPL. Reverse repos or securities borrowings with a “hold-to-collect” business model and contractual cash flow of solely payments of principal and interest on the principal outstanding are initially recognised in the balance sheet as cash and due from banks or placements with banks and other financial institutions, as appropriate, at the actual amount of cash paid to the counterparty. Financial assets received as collateral under reverse repurchase agreements are not recognised on the balance sheet. The difference between the sale and the repurchase price is recognised as interest income or interest expense over the life of the agreements using the effective interest method.

#### 2.12 Fair value measurement

The Group measures its premises and investment properties, precious metals and certain financial instruments at fair value at the end of each reporting period. 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 in its principal market or the most advantageous market accessible by the Group at the measurement date.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their best economic interest.

The Group uses the price within the bid-offer spread that is most representative of the fair value of financial instruments, where appropriate, includes using on the residual of the net offsetting risk position of portfolios of financial assets and financial liabilities in cases the Group manages such groups of financial assets and liabilities according to their net market risk exposures. Despite the Group measures the fair value of these groups of financial instruments on a net basis, the underlying financial assets and financial liabilities are separately presented in the financial statements unless the offsetting criteria stated in Note 2.6 are fulfilled.

A fair value measurement of a non-financial asset takes into account a market participant’s ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

If the market for assets or liabilities is not active, the Group uses valuation techniques, including the use of recent arm’s length transactions, discounted cash flow analysis, option pricing models and other valuation techniques commonly used by market participants, that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

## 2. Significant accounting policies (continued)

### 2.13 Precious metals

Precious metals comprise gold, silver and other precious metals. Precious metals are initially recognised and subsequently re-measured at fair value. Mark-to-market gains or losses on precious metals are included in net trading gain/loss.

### 2.14 Impairment of financial assets

The Group recognises a loss allowance for expected credit losses (“ECLs”) on the following items:

- financial assets measured at amortised cost;
- debt securities measured at FVOCI; and
- loan commitments and financial guarantees issued, which are not measured at FVPL.

Financial assets measured at fair value, including units in bond funds, equity securities measured at FVPL, equity securities designated at FVOCI (non-recycling) and derivative financial assets, are not subject to the ECL assessment.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all expected cash shortfalls (i.e. the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive).

For undrawn loan commitments and financial guarantees outstanding, expected cash shortfalls are measured as the difference between (i) the contractual cash flows that would be due to the Group if the holder/beneficiary of the loan commitment/financial guarantee draws down/claims on the loan/financial guarantee and (ii) the cash flows that the Group expects to receive if the loan is drawn down/financial guarantee is claimed.

The expected cash shortfalls are discounted where the effect of discounting is material. The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk. Where the financial instrument such as revolving credit facilities includes both a drawn and undrawn commitment, ECL is measured over the period that the Group remains exposed to credit risk that is not mitigated by management actions in respect of credit risk.

In measuring ECLs, the Group takes into account reasonable and supportable information that is available. This includes information about past events, current conditions and forecasts of future economic conditions.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.14 Impairment of financial assets (continued)

ECLs are measured on either of the following bases:

- 12-month ECLs: these are losses that are expected to result from possible default events within 12 months after the reporting date; or
- lifetime ECLs: these are losses that are expected to result from all possible default events over the expected lives of the items to which the ECL model applies.

The Group will account for expected credit losses within the next 12 months as Stage 1 when those financial instruments are initially recognised; and to recognise lifetime expected credit losses as Stage 2 when there has been significant increases in credit risk since initial recognition. Lifetime expected credit losses will be recognised for credit-impaired financial instruments as Stage 3 if the future cash flows of that financial instruments are adversely affected by one or more events and interest income will then be accrued net of the impairment amount of the respective Stage 3 financial assets.

In assessing whether the credit risk of a financial instrument has increased significantly since initial recognition, the Group compares the risk of default occurring on the financial instrument assessed at the reporting date with that assessed at the date of initial recognition.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- failure to make payments of principal or interest 30 days after their contractually due dates;
- an actual or expected significant deterioration in a financial instrument's external or internal credit rating (if available);
- an actual or expected significant deterioration in the operating results of the debtor; and
- existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet its obligation to the Group.

For loan commitments and financial guarantees, the date of initial recognition for the purpose of assessing ECLs is considered to be the date that the Group becomes a party to the irrevocable commitment. In assessing whether there has been a significant increase in credit risk since initial recognition of a loan commitment or a financial guarantee, the Group considers changes in the risk of default occurring on the loan and advances to which the loan commitment/financial guarantee relates.

## 2. Significant accounting policies (continued)

### 2.14 Impairment of financial assets (continued)

Depending on the nature of the financial instruments, the assessment of a significant increase in credit risk is performed on either an individual basis or a collective basis. When the assessment is performed on a collective basis, the financial instruments are grouped based on shared credit risk characteristics, such as past due status and credit risk ratings.

The Group considers that a financial instrument is credit-impaired when there is observable data about:

- significant financial difficulty incurred by the debtor;
- a breach of contract, such as a default or delinquency in principal or interest payment;
- for economic or legal reasons related to the debtor’s financial difficulty, the Group has granted to the debtor a concession that it would not otherwise consider;
- probable that the debtor will become bankrupt or undergo other financial reorganisation;
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses; or
- other observable data indicating that there is a measurable decrease in the estimated future cash flows from such advances.

The Group considers on an individual basis both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

ECLs are remeasured at each reporting date to reflect changes in the financial instrument’s credit risk since initial recognition. Any change in the ECL amount is recognised as an impairment gain or loss in profit or loss. The Group recognises an impairment gain or loss for all relevant financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt securities that are measured at FVOCI, for which the loss allowance is recorded in the fair value reserve.

Interest income recognised in accordance with Note 2.7 is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit-impaired (Stage 3), in which case interest income is calculated based on the amortised cost (i.e. the gross carrying amount less loss allowance) of the financial asset. The determination of credit-impaired financial asset is further explained in Note 4.1.

When a financial asset is uncollectible, it is written off against the gross carry amount of the financial asset and the related allowance for impairment losses. Such assets are written off after all the necessary procedures have been completed and the amount of the loss has been determined. The assets written off are still subject to enforcement activity. Subsequent recoveries of amounts previously written off decrease the amount of impairment losses in the income statement.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.15 Impairment of investments in subsidiaries, associates, joint ventures and non-financial assets

Assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Potential indications of impairment may include significant adverse changes in the technological, market, economic or legal environment in which the assets operate or whether there has been a significant or prolonged decline in value below their cost. "Significant" is evaluated against the original cost of the investment and "prolonged" against the period in which the fair value has been below its original cost. Impairment of intangible assets with indefinite useful life are tested for impairment annually.

An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Impaired assets are reviewed for possible reversal of the impairment at each reporting date.

In the Company's balance sheet, impairment testing of the investment in a subsidiary, associate or joint venture is also required upon receiving dividend from that entity if the dividend exceeds the total comprehensive income of that entity concerned in the period the dividend is declared or if the carrying amount of that entity in the Company's balance sheet exceeds the carrying amount of that entity's net assets including goodwill in its consolidated balance sheet.

#### 2.16 Investment properties

Properties (including right-of-use assets arising from leases over leasehold land on which properties are situated), that are held for long-term rental yields or for capital appreciation or both, and that are not occupied by the companies in the Group, are classified as investment properties. Properties leased out within group companies are classified as investment properties in individual companies' financial statements and as premises in consolidated financial statements.

Investment properties are recognised initially at cost, including related transaction costs. After initial recognition, investment properties are measured at fair value.

Subsequent expenditure is charged to the asset's carrying amount only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The work in progress item is stated at fair value. All other repairs and maintenance costs are expensed in the income statement during the financial period in which they are incurred.

Any changes in fair value are recognised directly in the income statement.

If an investment property becomes owner-occupied, it is reclassified as premises, and its fair value at the date of reclassification becomes its cost for accounting purposes. If an item of premises becomes an investment property because its use has changed, any difference resulting between the carrying amount and the fair value of this item at the date of transfer is recognised in other comprehensive income or profit or loss in the same way as a revaluation of premises under HKAS 16 "Property, Plant and Equipment" as set out in Note 2.17.



## 2. Significant accounting policies (continued)

### 2.17 Properties, plant and equipment

Properties (including right-of-use assets arising from leases over leasehold land on which properties are situated) are mainly branches and office premises. Premises are stated at fair value based on periodic, at least annually, valuations by external independent valuers less any subsequent accumulated depreciation and impairment losses. Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset and the net amount is restated to the revalued amount of the asset. In the intervening periods, the directors review the carrying amount of premises, by reference to the open market value of similar properties, and adjustments are made when there has been a material change.

Increases in the carrying amount arising on revaluation of premises are credited to the premises revaluation reserve through other comprehensive income. Decreases that offset previous increases of the same individual asset are charged against premises revaluation reserve through other comprehensive income; all other decreases are expensed in the income statement. Any subsequent increases are credited to the income statement up to the amount previously debited, and then to the premises revaluation reserve. Upon disposal of premises, the relevant portion of the premises revaluation reserve realised in respect of previous valuations is released and transferred from the premises revaluation reserve to retained earnings.

All plant and equipment and right-of-use assets other than leasehold land (see Note 2.19) are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditures that are directly attributable to the acquisition and installation of the items.

Subsequent costs are included in an asset's carrying amount or are recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The item is stated at cost less impairment until it begins to generate economic benefits, then the item is subsequently measured according to the measurement basis of its respective assets class. All other repairs and maintenance costs are charged to the income statement during the financial period in which they are incurred or provided for.

Depreciation is calculated on the straight-line method to write down the cost or revalued amount of such assets over their estimated useful lives as follows:

- Properties Over the life of government land leases
- Plant and equipment 2 to 15 years
- Right-of-use asset Shorter of useful lives and lease terms

The useful lives of assets are reviewed, and adjusted if appropriate, as at the end of each reporting period.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.17 Properties, plant and equipment (continued)

At the end of each reporting period, both internal and external sources of information are considered to determine whether there is any indication that properties, plant and equipment are impaired. If any such indication exists, the recoverable amount of the asset is estimated and where relevant, an impairment loss is recognised to reduce the asset to its recoverable amount. Such an impairment loss is recognised in the income statement except where the asset is carried at valuation and the impairment loss does not exceed the revaluation surplus for that same asset, in which case it is treated as a revaluation decrease. The recoverable amount is the higher of the asset's fair value less costs to sell and value in use. Impairment loss is reversed through the premises revaluation reserve or the income statement as appropriate.

Gains or losses on disposals are determined as the difference between the net disposal proceeds and the carrying amount, relevant taxes and expenses. These are recognised in the income statement on the date of disposal. Any related revaluation surplus is transferred from the revaluation reserve to retained earnings and is not reclassified to the income statement.

#### 2.18 Intangible assets

Intangible assets are identifiable non-monetary assets without physical substance owned and controlled by the Group, mainly computer application software. Intangible assets are stated at acquisition cost less accumulated amortisation and impairment.

Amortisation of intangible assets with finite useful lives is charged to profit or loss on a straight-line basis over the assets' estimated useful lives. The following intangible assets with finite useful lives are amortised from the date they are available for use and their estimated useful lives are as follows:

- Capitalised computer application software: 3 to 5 years

Both the period and method of amortisation are reviewed annually.

Gains or losses on disposals are determined as the difference between the net disposal proceeds and the carrying amount, relevant taxes and expenses. These are recognised in the income statement on the date of disposal.

## 2. Significant accounting policies (continued)

### 2.19 Leases

At inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Control is conveyed where the customer has both the right to direct the use of the identified asset and to obtain substantially all of the economic benefits from that use over the contract period.

#### (1) As a lessee

On the lease commencement date, the Group recognises a right-of-use asset and a lease liability, except for short-term leases that have a lease term of 12 months or less and leases of low-value assets. When the Group enters into a lease in respect of a low-value asset, the Group decides whether to recognise the lease as a right-of-use asset and a lease liability on a lease-by-lease basis. The lease payments associated with those leases which are not recognised as right-of-use assets and lease liabilities are recognised as an expense on a systematic basis over the lease term.

The lease liability is initially recognised at the present value of the lease payments payable over the lease term, after taking into account payments to be made in the optional period if the extension option is reasonably certain to be exercised, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, using a relevant incremental borrowing rate. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for termination of a lease, if the lease term reflects the Group exercising the option to terminate.

After initial recognition, interest expense is calculated using a constant periodic rate of interest. Variable lease payments that do not depend on an index or a rate are not included in the measurement of the lease liability and hence are charged to income statement in the accounting period in which they are incurred.

The right-of-use asset recognised is initially measured at cost, which comprises the initial amount of the lease liability plus any lease payments made at or before the commencement date, and any initial direct costs incurred. Where applicable, the cost of the right-of-use assets also includes an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, then discounted to its present value, and less any lease incentives received.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.19 Leases (continued)

##### (1) As a lessee (continued)

Payments associated with short-term leases of equipment and all leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss.

The right-of-use asset is subsequently stated at cost less accumulated depreciation and impairment losses (see Note 2.17), and adjusted when the lease liabilities are remeasured, except for the following types of right-of-use asset:

- right-of-use assets that meet the definition of investment property are carried at fair value in accordance with Note 2.16; and
- right-of-use assets related to leasehold land and buildings that do not meet the definition of investment property and where the Group is the registered owner of the leasehold interest are carried at revalued amount in accordance with Note 2.17.

The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or a rate, or there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, or there is a change of lease terms, or there is a change arising from the reassessment of whether the Group will be reasonably certain to exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in income statement if the carrying amount of the right-of-use asset has been reduced to zero.

The Group presents right-of-use assets that do not meet the definition of investment property in "Properties, plant and equipment" and presents lease liabilities in "Other accounts and provisions".

##### (2) As a lessor

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to the ownership of an underlying asset to the lessee. If this is not the case, the lease is classified as an operating lease.

When a contract contains lease and non-lease components, the Group allocates the consideration in the contract to each component on a relative stand-alone selling price basis. The rental income from operating leases is recognised on a straight-line basis over the lease term.

## 2. Significant accounting policies (continued)

### 2.20 Insurance and investment contracts

#### (1) Insurance and investment contract classification, recognition and measurement

The Group follows the local regulatory requirements to measure the liabilities of its insurance contracts and investment contracts with the discretionary participation feature ("DPF").

The Group issues insurance contracts, which are contracts that transfer significant insurance risk and may also transfer financial risk. As a general guideline, the Group defines significant insurance risk as the possibility of having to pay benefits on the occurrence of an insured event that are at least 10% more than the benefit payable if the insured event did not occur. The Group issues long term business insurance contracts, which insure events covered by life policies (for example death, survival, or total permanent disability) over a long duration. A liability for contractual benefits that are expected to be incurred in the future is recorded when premiums are recognised. In addition, the Group issues investment contracts. Investment contracts transfer financial risk with no significant insurance risk. They contain a DPF which entitles the holders to receive additional benefits (supplement to guaranteed benefits) that are likely to be significant based on the performance and return of a specified pool or type of contracts.

Linked long term insurance contracts with embedded derivatives (which are closely related to the host insurance contracts) linking payments on the contract to units of the investment funds which the Group has invested with the consideration received from the contract holders, the liability is adjusted for all changes in the fair value of the underlying assets, and includes a liability for contractual benefits that are expected to be incurred in the future which is recorded when the premiums are recognised.

Retirement scheme management category I contracts are classified as investment contracts. They also include an investment guarantee element in the determination of the credit rate to policyholders' accounts. The liability for these contracts is determined using a retrospective calculation method which represents an account balance based on the premiums received to date plus interest or bonus credited to the policyholders less policy charges.

Retirement scheme management category III insurance contracts, as defined in the Insurance Ordinance, insure events associated with the cessation of employment due to death. A liability for contractual benefits that are expected to be incurred in the future is recorded when premiums are recognised. The portion of the premium received on in-force contracts that relates to unexpired risks at the end of the reporting period is reported as the unearned premium liability, which is included in insurance liabilities.

Premiums are recognised as revenue when they become payable by the contract holders before the deduction of commissions and are gross of any taxes or duties levied on the premium. Benefits and claims are recorded as an expense when they are incurred.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.20 Insurance and investment contracts (continued)

##### (1) Insurance and investment contract classification, recognition and measurement (continued)

The Group does not separately measure embedded derivatives that meet the definition of an insurance contract or options to surrender insurance contracts for a fixed amount (or an amount based on a fixed amount and an interest rate).

Contracts entered into by the Group with reinsurers under which the Group is compensated for losses on one or more contracts issued by the Group and that meet the classification requirement for insurance contracts as noted above are classified as reinsurance contracts held.

The benefits to which the Group is entitled under its reinsurance contracts held are recognised as reinsurance assets. These reinsurance assets consist of short-term amounts due from reinsurers as well as longer term receivables that are dependent on the expected claims and benefits arising from the related reinsured insurance contracts. Amounts recoverable from or due to reinsurers are measured consistently with the amounts associated with the underlying insurance contracts and in accordance with the terms of each reinsurance contract. Reinsurance liabilities are primarily premiums payable for reinsurance contracts and are recognised as an expense when due.

##### (2) Liability adequacy tests

At the end of each reporting period, liability adequacy tests are performed to ensure the adequacy of the insurance contract liabilities. In performing these tests, current best estimates of future contractual cash flows and claims handling and administrative expenses, as well as investment income from the assets backing such liabilities, are used. Any deficiency is immediately charged to the consolidated income statement, with a provision established for losses arising from the liability adequacy tests.

#### 2.21 Cash and cash equivalents

For the purposes of the consolidated cash flow statement, cash and cash equivalents comprise balances with original maturity less than three months from the date of acquisition, including cash, balances with banks and other financial institutions, short-term bills and notes classified as investment securities and certificates of deposit.

#### 2.22 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

## 2. Significant accounting policies (continued)

### 2.23 Employee benefits

#### (1) Retirement benefit costs

The Group contributes to defined contribution retirement schemes under either recognised ORSO schemes or MPF schemes that are available to the Group's employees. Contributions to the schemes by the Group and employees are calculated as a percentage of employees' basic salaries for the ORSO schemes and in accordance with the MPF rules for MPF schemes. The retirement benefit scheme costs are charged to the income statement as incurred and represent contributions payable by the Group to the schemes. Contributions made by the Group that are forfeited by those employees who leave the ORSO scheme prior to the full vesting of their entitlement to the contributions are used by the Group to reduce the existing level of contributions or to meet its expenses under the trust deed of the ORSO schemes.

The assets of the schemes are held in independently-administered funds separate from those of the Group.

#### (2) Leave entitlements

Employee entitlements to annual leave and sick leave are recognised when they accrue to employees. A provision is made for the estimated liability for unused annual leave and the amount of sick leave expected to be paid as a result of services rendered by employees up to the end of the reporting period.

Compensated absences other than sick leave and special approved annual leave are non-accumulating; they lapse if the current period's entitlement is not used in full. Except for unexpired annual leave, they do not entitle employees to a cash payment for unused entitlement on leaving the Group.

#### (3) Bonus plans

The expected cost of bonus payments is recognised as a liability when the Group has a present legal or constructive obligation as a result of services rendered by employees and a reliable estimate of the obligation can be made. Liabilities for bonus plans that are expected to be settled longer than twelve months will be discounted if the amounts are significant.

### 2.24 Current and deferred income taxes

Tax expenses for the period comprise current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised directly in other comprehensive income. In this case, the tax is also recognised in other comprehensive income.

Income tax payable on profits, based on the applicable tax law enacted or substantially enacted at the end of the reporting period in each jurisdiction where the Company and its subsidiaries, associates and joint ventures operate and generate taxable income, is recognised as a current income tax expense in the period in which profits arise.

## NOTES TO THE FINANCIAL STATEMENTS

### 2. Significant accounting policies (continued)

#### 2.24 Current and deferred income taxes (continued)

Deferred income tax is provided in full, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred income tax is determined using tax rates and laws that have been enacted or substantially enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

The principal temporary differences arise from asset impairment provisions, depreciation of premises and equipment, and revaluation of certain assets including securities at FVOCI and premises. However, the deferred income tax is not recognised if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred income tax liabilities are provided in full on all taxable temporary differences. Deferred income tax assets are recognised on deductible temporary differences, the carry forward of any unused tax credits and unused tax losses to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences, the carry forward of unused tax credits and unused tax losses can be utilised.

Deferred income tax is charged or credited in the income statement except for deferred income tax relating to fair value re-measurement of securities at FVOCI and revaluation of premises which are charged or credited to other comprehensive income, in which case the deferred income tax is also credited or charged to other comprehensive income and is subsequently recognised in the income statement together with the realisation of the deferred gain and loss.

Deferred tax liability or deferred tax asset arising from an investment property is determined based on the presumption that the revaluation amount of such investment property will be recovered through sale with the relevant tax rate applied.

#### 2.25 Government grants

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants are recognised in the profit or loss over the period necessary to match them with the related costs that they are intended to compensate.

#### 2.26 Repossessed assets

Repossessed assets are initially recognised at the lower of their fair value less costs to sell and the amortised cost of the related outstanding loans on the date of repossession, and the related loans and advances together with the related impairment allowances are derecognised from the balance sheet. Subsequently, repossessed assets are measured at the lower of their cost and fair values less costs to sell and are reported as "non-current assets held for sale" included in "Other assets".



### 2. Significant accounting policies (continued)

#### 2.27 Fiduciary activities

The Group commonly acts as a trustee, or in other fiduciary capacities, that result in its holding or managing assets on behalf of individuals, trusts and other institutions. These assets and any gains or losses arising thereon are excluded from these financial statements, as they are not assets of the Group.

#### 2.28 Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that an outflow of economic resources will be required or the amount of obligation cannot be measured reliably.

A contingent liability is not recognised as a provision but is disclosed in the notes to the financial statements. When a change in the probability of an outflow occurs so that outflow is probable, it will then be recognised as a provision.

A contingent asset is a possible asset that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group.

Contingent assets are not recognised but are disclosed in the notes to the financial statements when an inflow of economic benefits is probable. When the inflow is virtually certain, it will be recognised as an asset.

#### 2.29 Related parties

For the purposes of these financial statements, a party is considered to be related to the Group if that party (i) controls, jointly controls or has significant influence over the Group; (ii) is a member of the same financial reporting group, such as parents, subsidiaries and fellow subsidiaries; (iii) is an associate or a joint venture of the Group or parent reporting group; (iv) is a key management personnel of the Group or parents; (v) is subject to common control with the Group; (vi) is an entity in which a person identified in (iv) controls; and (vii) provides key management personnel services to the Group or its parent. Related parties may be individuals or entities.

## NOTES TO THE FINANCIAL STATEMENTS

### 3. Critical accounting estimates and judgements in applying accounting policies

The Group makes estimates and assumptions that affect the carrying amounts of assets and liabilities within the next reporting period. Estimates and judgements are continually evaluated and based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Areas susceptible to changes in essential estimates and judgements, which affect the carrying amount of assets and liabilities, are set out below. The effects of changes to either the key assumptions or other estimation uncertainties are presented below if it is practicable to determine. It is possible that actual results may require material adjustments to the estimates referred to below.

#### 3.1 Impairment losses on advances to customers

The Group reviews its credit portfolios to assess impairment at least on a quarterly basis. Under HKFRS 9, the measurement of impairment losses across all categories of financial asset requires judgement, in particular, the estimation of the amount and timing of future cash flows and collateral values when determining impairment losses and the assessment of a significant increase in credit risk. These estimates are driven by a number of factors, changes of which can result in different levels of allowances.

The Group's ECL calculations are outputs of complex models. The choice of variable inputs and their interdependencies involves a series of assumptions. ECL models for stage 1 and stage 2 exposures are developed by leveraging on the parameters implemented under Note 4.1, where feasible and available. Elements of the ECL models that are considered accounting judgements and estimates include:

- The Group's internal credit rating models, which assign Probability of Defaults to the individual ratings;
- The Group's significant credit deterioration criteria (including internal credit rating downgrade, days past due, drop in Mark-to-Market and qualitative assessment) for assessing whether the financial assets' impairment allowances should be measured on a lifetime ECL basis;
- The segmentation of financial assets according to credit risk characteristics (portfolios including Sovereign, Bank, Corporates, Retail Small Medium-sized Enterprise, Residential Mortgage Loan and Credit Card) when their ECLs are assessed on a collective basis;
- Development of ECL models, including the determination of macroeconomic factor forecasts (including Gross Domestic Product growth, Consumer Price Index, Property Price Index and Unemployment Rate) and the effect on Probability of Defaults, Loss Given Defaults and Exposure at Defaults; and
- Selection of forward-looking macroeconomic scenarios (including three independent scenarios i.e. good, baseline and bad) and their probability weightings.

### 3. Critical accounting estimates and judgements in applying accounting policies (continued)

#### 3.1 Impairment losses on advances to customers (continued)

In respect of credit-impaired exposures, expected credit losses are measured on an individual basis by estimating the future recoverable cash flows. Factors affecting this estimate include, among other things, the granularity of financial information related to specific borrowers and their guarantors, the availability of meaningful information of competitors and the relevance of sector trends to the future performance of specific borrowers and cash flows from the sale of collateral.

It has been the Group's policy to regularly review its models in the context of actual loss experience and adjust when necessary.

Carrying amounts of advances to customers as at 31 December 2021 are shown in Note 25.

#### 3.2 Fair values of financial instruments

The fair values of financial instruments that are not quoted in active markets are determined by using valuation techniques. Valuation techniques used include the use of recent arm's length transactions, discounted cash flows analysis and models with built-in functions available in externally acquired financial analysis or risk management systems widely used by the industry such as option pricing models, and other commonly used market pricing models. To the extent practical, the models use observable data. In addition, valuation adjustments may be adopted if factors such as credit risk are not considered in the valuation models. Management judgement and estimates are required for the selection of appropriate valuation parameters, assumptions and modelling techniques.

The Group assesses assumptions and estimates used in valuation techniques including review of valuation model assumptions and characteristics, changes to model assumptions, the quality of market data, whether markets are active or inactive, other fair value adjustments not specifically captured by models and consistency of application of techniques between reporting periods as part of its normal review and approval processes. Valuation techniques are validated and periodically reviewed and, where appropriate, have been updated to reflect market conditions at the financial reporting date. Further details will be discussed in Note 5.

## NOTES TO THE FINANCIAL STATEMENTS

### 3. Critical accounting estimates and judgements in applying accounting policies (continued)

#### 3.3 Estimate of future benefit payments and premiums arising from long term insurance contracts

In determining the Group's long-term business fund liabilities (a component of insurance contract liabilities), the Group follows the Insurance (Determination of Long-Term Liabilities) Rules and makes prudent assumptions which include appropriate margins for adverse deviation of the relevant factors. Estimates are made as to the expected number of deaths for each of the years in which the Group is exposed to risk. The Group bases these estimates on population statistics or reinsurance information, adjusted where appropriate to reflect the Group's own experience and relevant reinsurance arrangements. For contracts that insure the risk of longevity, appropriate prudent allowances are made for expected mortality improvements. The estimated number of deaths determines the value of the benefit payments and the value of the valuation premiums. The main source of uncertainty is that epidemics such as AIDS, SARS, avian flu and wide-ranging lifestyle changes, such as in eating, smoking and exercise habits, could result in future mortality being significantly worse than in the past for the age groups in which the Group has significant exposure to mortality risk. However, continuing improvements in medical care and social conditions could result in improvements in longevity in excess of those allowed for in the estimates used to determine the liability for contracts where the Group is exposed to longevity risk.

Were the number of deaths and morbidity in future years to differ by 10% (2020: 10%) from the Management's estimate, the long-term business fund liability would increase by approximately HK\$267 million (2020: approximately HK\$264 million), which accounts for 0.27% (2020: 0.29%) of the liability. In this case, it is assumed there is no relief arising from reinsurance contracts held.

For linked long term insurance contracts with a life cover component, it is assumed that the Group will be able to increase mortality risk charges in future years in line with emerging mortality experience.

Estimates are also made as to future investment income arising from the assets backing long term insurance contracts. These estimates are based on current market returns as well as expectations about future economic and financial developments. Were the average future investment returns to decrease by 50 basis points (2020: 50 basis points) from the Management's estimates, the long-term business fund liability would increase by approximately HK\$866 million (2020: approximately HK\$1,316 million). In this case, it is assumed there is no relief arising from reinsurance contracts held.

The Group has also assessed whether a provision for expense is necessary in accordance with the Insurance Ordinance. A provision for expense is the amount required to meet the total net cost that would likely be incurred in fulfilling contracts if the Group were to cease to transact new business 12 months after the valuation date. As at 31 December 2021, no provision for maintenance expenses was provided (2020: Nil).

A resilience reserve was set up and included in long term business fund liabilities in accordance with the Insurance (Determination of Long-Term Liabilities) Rules to provide a prudent provision against the effects of possible future changes to the value of the assets to meet the liabilities. The resilience reserve was set up based on the appointed actuary's advice of a 19 basis points (2020: 12 basis points) change in market yield of the underlying assets and valuation interest rates. The amount of resilience reserve set up depends on the degree of change in interest rate assumed.

### **3. Critical accounting estimates and judgements in applying accounting policies (continued)**

#### **3.4 Deferred tax assets**

Deferred tax assets on unused tax losses and unused tax credits are recognised and the determination of the amount to be recognised requires significant management judgement. Deferred tax asset on unused tax losses are recognised to the extent that it is probable that taxable profit will be available against which the losses can be utilised. Judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of future taxable profits. For deferred tax assets on unused tax credits, judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the estimation of available tax credits and the possibility to recover such deferred tax assets recognised.

#### **3.5 Determination of lease terms of leases**

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group has the option, under some of its leases, to renew the leases for additional terms of three to nine years. The Group applies judgement in evaluating whether it is reasonably certain to exercise the option on the lease commencement date. During the evaluation, the Group considers all relevant factors that create an economic incentive for it to exercise the renewal option. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew (e.g. a change in business strategy).

Carrying amounts of right-of-use assets as at 31 December 2021 are shown in Note 29.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management

The Group is exposed to financial risks as a result of engaging in a variety of business activities. The principal financial risks are credit risk, market risk (including currency risk and interest rate risk) and liquidity risk. This note summarises the Group's exposures to these risks, as well as its objectives, risk management governance structure, policies and processes for managing and the methods used to measure these risks.

#### Financial risk management framework

The Group's risk management governance structure is designed to cover all business processes and to ensure various risks are properly managed and controlled in the course of conducting business. The Group has a robust risk management organisational structure with a comprehensive set of policies and procedures to identify, measure, monitor and control various risks that may arise. These risk management policies and procedures are regularly reviewed and updated to reflect changes in markets and business strategies. Various groups of risk takers assume their respective responsibilities for risk management.

The Board of Directors, representing the interests of shareholders, is the highest decision-making authority of the Group and has the ultimate responsibility for risk management. The Board, with the assistance of its committees, has the primary responsibility for the formulation of risk management strategies, risk appetite and risk culture and ensuring that the Group has an effective risk management system to implement these strategies.

The RMC, a standing committee established by the Board of Directors, is responsible for overseeing the Group's various types of risks, approving Level I risk management policies and monitoring their implementation, and approving significant or high risk exposures or transactions. The Audit Committee assists the Board in fulfilling its role in overseeing the internal control system.

The Chief Executive ("CE") is responsible for managing the Group's various types of risks, and approving material risk exposures or transactions within his authority delegated by the Board of Directors. The Deputy Chief Executives ("DCEs") assist the CE in fulfilling his responsibilities on the day-to-day management of various types of risk, and are responsible for approving material risk exposures or transactions within their authorities delegated by the CE. The Chief Risk Officer ("CRO") together with the Deputy Chief Executive in charge of legal, compliance, operational risk and anti-money laundering assist the CE in fulfilling his responsibilities on day-to-day management of various types of risks and internal control; responsible for initiating new risk management strategies, projects and measures in response to regulatory changes that will enable the Group to better monitor and manage any risks that may arise from time to time from new businesses, products and changes in the operating environment and responsible for reviewing material risk exposures or transactions within the delegated authority. In accordance with the principle of setting the hierarchy of risk management policies approved by the Board, senior management is also responsible for approving the detailed risk management policies of their areas.

Various units of the Group have their respective risk management responsibilities. Business units act as the first line of defence while risk management units, which are independent from the business units, are responsible for the day-to-day management of different kinds of risks. Risk management units have the primary responsibility for drafting, reviewing and updating various risk management policies and procedures.

The Group's principal banking subsidiaries are subjected to risk management policies that are consistent with those of the Group. Moreover, the Group's non-banking subsidiaries, such as BOC Life, are subject to the Group's risk management requirements. These subsidiaries are required to formulate their respective risk management policies based on the characteristics of their own industries, perform daily risk management responsibilities and report to BOCHK on a regular basis. Risk management units of BOCHK monitor the risk management status of these subsidiaries.

### 4. Financial risk management (continued)

#### Financial risk management framework (continued)

The Group has put in place appropriate internal control systems, including the establishment of an organisation structure that sets clear lines of authority and responsibility for monitoring compliance with policies, procedures and limits. Proper reporting lines also provide sufficient independence of the control functions from the business areas, as well as adequate segregation of duties throughout the organisation which helps to promote an appropriate internal control environment.

#### Product development and risk monitoring

To ensure the effectiveness of risk assessment and monitoring, the Group has a comprehensive product development and risk monitoring system where roles and responsibilities of all related units are clearly defined and proper due diligence processes on product development are in place.

In accordance with the strategic objectives set by the Board and the Management, respective product management units are responsible for formulating business and product development plans, and proceeding to specific product development activities. The department of strategic development shall ensure the plans are aligned with the Group's overall strategies. Departments that are responsible for risk management, legal, compliance and finance, etc. are accountable for review of the risk assessment results.

Apart from product development, respective product management units shall work closely with relevant risk evaluating departments to identify and assess the risks of new products. Risk evaluating departments shall conduct independent review on the risk assessment results and the corresponding risk management measures. Products can only be launched upon completion of the product due diligence process to the satisfaction of all risk evaluating departments.

A prudent approach is adopted in offering treasury products to our clients. All new treasury products require approval from a special committee before launching.

#### 4.1 Credit risk

Credit risk is the risk of loss that a customer or counterparty is unable to or unwilling to meet its contractual obligations. Credit risk exists in the trading book and banking book, as well as from on- and off-balance sheet transactions of the Group. It arises principally from lending, trade finance and treasury businesses.

##### **Credit risk management framework**

The Group has formulated a comprehensive set of credit risk management policies and procedures, and appropriate credit risk limits to manage and control credit risk that may arise. These policies, procedures and credit risk limits are regularly reviewed and updated to cope with changes in market conditions and business strategies.

The Group's organisation structure establishes a clear set of authority and responsibility for monitoring compliance with policies, procedures and limits.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### **Credit risk management framework (continued)**

The Chief Credit Officer, who reports directly to the CRO, takes charge of credit risk management and is also responsible for the control of credit risk exposures of subsidiaries in line with the credit risk management principles and requirements set by the Group. Various units of the Group have their respective credit risk management responsibilities. Business units act as the first line of defence in risk management. The Risk Management Department ("RMD"), which is independent from the business units, is responsible for the day-to-day management of credit risks and provides an independent due diligence through identifying, measuring, monitoring and controlling credit risk to ensure an effective checks and balances, as well as drafting, reviewing and updating credit risk management policies and procedures. It is also responsible for the design, development and maintenance of the Group's internal rating system and ensures the system complies with the relevant regulatory requirements. Back offices are responsible for credit administration, providing operations support and supervision on the implementation of prerequisite terms and conditions of credit facilities.

In accordance with the Group's operating principle, the Group's principal subsidiaries have to formulate their own credit risk policies that are consistent with those of the Group's core principle. These subsidiaries are required to submit their risk management reports to the Group's Management on a regular basis.

The Board of Directors delegates credit approval authority to the CE. The CE can further delegate to the subordinates within his limit authorised by the Board of Directors. The Group sets the limits of credit approval authority according to the credit business nature, rating, the level of transaction risk, and the extent of the credit exposure.

##### **Credit risk measurement and control**

In view of the rapidly changing market conditions, the Group has been continuously revisiting its credit strategies and conducting rigorous reviews on the concerned portfolios.

##### **Advances**

Different credit approval and control procedures are adopted according to the level of risk associated with the customer, counterparty or transaction. The Credit Risk Assessment Committee, comprising experts from credit and other functions, is responsible for making an independent assessment of material credit applications which require the approval of DCEs or above. Credit applications for non-retail exposures are independently reviewed and objectively assessed by risk management units. Obligor ratings (in terms of probability of default) and facility ratings (in terms of loss given default) are assigned to these portfolios to support credit approval. Retail internal rating systems are deployed in the risk assessment of retail credit transactions, including small business loans under retail exposures, residential mortgage loans, personal loans and credit cards, etc. Loan grades, obligor and facility ratings as well as loss estimates (if applicable) are used to support credit approval.

The Group also uses loan grades, obligor ratings and loss estimates (if applicable) to support credit monitoring, reporting and analysis of credit risk information. For non-retail exposures, more frequent rating review and closer monitoring are required for higher-risk customers. For retail exposures, monthly updated internal ratings and loss estimates are used for credit monitoring on a portfolio basis. More comprehensive review is required for obligors being identified under high-risk pools.



## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### Credit risk measurement and control (continued)

##### Advances (continued)

The Group employs an internal master rating scale that can be mapped to Standard & Poor's external credit ratings. The structure of internal master rating scale is in compliance with the requirement of the Banking (Capital) Rules under the Hong Kong Banking Ordinance.

RMD provides regular credit management information reports and ad hoc reports to the Management Committee ("MC"), RMC and Board of Directors to facilitate their continuous monitoring of credit risk.

In addition, the Group identifies credit concentration risk by industry, geography, customer or counterparty. The Group monitors changes to every counterparties credit risk, quality of the credit portfolio and credit risk concentrations, and reports regularly to the Group's Management.

The Group adopts loan grading criteria which divide credit assets into five categories with reference to the HKMA's guidelines, as below:

"Pass" represents loans where the borrower is current in meeting its repayment obligations and full repayment of interest and principal is not in doubt.

"Special Mention" represents loans where the borrower is experiencing difficulties which may threaten the Group's recoverability of the loan principal and interest. Ultimate loss is not expected at this stage but could occur if adverse conditions persist.

"Substandard" represents loans where the borrower displays a definable weakness that is likely to jeopardise repayment.

"Doubtful" represents loans where collection in full is improbable and the Group expects to sustain a loss of principal and/or interest, taking into account the net realisable value of the collateral.

"Loss" represents loans which are considered uncollectible after all collection options (such as the realisation of collateral or the institution of legal proceedings) have been exhausted.

#### Debt securities and derivatives

For investments in debt securities, the obligor ratings or external credit ratings and credit limits setting on customer/security issuer basis are used for managing credit risk associated with the investment. For derivatives, the Group sets customer limits to manage the credit risk involved and follows the same approval and control processes as applied for advances. On-going monitoring and stop-loss procedures are established.

Settlement risk arises mainly from foreign exchange transactions with counterparties and also from derivative transactions in any situation where a payment in cash, securities or equities is made in the expectation of a corresponding receipt in cash, securities or equities. Daily settlement limits are established for each counterparty or customer to cover all settlement risks arising from the Group's market transactions on any single day.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### **Credit risk measurement and control (continued)**

Financial instruments are default when one or more events that have a detrimental impact on the estimated future cash flows have occurred such as past due for more than 90 days or the borrower is unlikely to pay in full for the credit obligations to the Group.

Credit-impaired financial instruments are classified as Stage 3 and lifetime expected credit losses will be recognised. Evidence that a financial instrument is credit-impaired include observable data about the following events:

- Significant financial difficulty incurred by the borrower;
- A breach of contract, such as a default or delinquency in principal or interest payment;
- For economic or contractual reasons related to the borrower's financial difficulty, the Group has granted to the borrower a concession that it would not otherwise consider;
- Probable that the borrower will become bankrupt or undergo other financial reorganisation; or
- Other observable data indicating that there is a measurable decrease in the estimated future cash flows from such financial instruments.

##### **Expected Credit Loss ("ECL") Methodology**

For impairment assessment, an impairment model is introduced in compliance with HKFRS 9, it requires the recognition of ECL for financial instrument held at amortised cost and fair value through other comprehensive income. Under HKFRS 9, ECL is assessed in three stages and the financial assets, loan commitments and financial guarantees are classified in one of the three stages.

Stage 1: if the financial instruments are not credit-impaired during origination and their credit risk has not increased significantly since origination, and the impairment allowance is measured at an amount up to 12-month ECL;

Stage 2: if the financial instruments are not credit-impaired during origination but their credit risk has increased significantly since origination, and the impairment allowance is measured at an amount equal to the lifetime ECL;

Stage 3: if the financial instruments are credit-impaired and their future cash flows of that financial instruments are adversely affected by one or more events, and the impairment allowance is also measured at an amount equal to the lifetime ECL.

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### Expected Credit Loss (“ECL”) Methodology (continued)

The Group has established the significant credit deterioration criteria framework to determine the stage of the financial instrument. The framework incorporates both quantitative and qualitative assessment, taking into account of factors such as number of days past due, change in IRB rating, low credit risk threshold and the watchlist.

The customer credit ratings in the internal model are classified into 27 grades. The lowest (27th) credit grading equates to defaulted customers while the others are assigned to non-defaulted customers. The quantitative and qualitative criteria considered in determining significant credit deterioration include:

#### Quantitative criteria

- Failure to make payments of principal or interest 30 days after the contractual due dates;
- At the reporting date, the credit risk is deemed to increase significantly when the remaining lifetime PD rises by more than a certain range from initial recognition, reflected as drop in credit rating by corresponding level according to the different PD at initial recognition. In majority cases, there is a significant increase in credit risk when the customer’s credit rating drops by 5 grades.

#### Qualitative criteria

- Significant adverse change in debtor’s operations or financial status;
- Customers with sign of credit deterioration are put into watchlist for staging review.

The Group leverages the parameters implemented under Basel II IRB models and internal models where feasible and available to assess ECL. For the portfolios without models, all other reasonable and supportable information such as historical information, relevant loss experience or proxies are utilised. The measurement of ECL is the product of the financial instrument’s probability of default (“PD”), loss given default (“LGD”) and exposure at default (“EAD”) discounted at the effective interest rate to the reporting date.

ECL is measured at an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes, the time value of money and reasonable and supportable information about past events, current conditions and forecasts of future economic conditions. The Group adopts three economic scenarios in the ECL measurement to meet the requirements of HKFRS 9. The “Baseline” scenario represents a most likely outcome and the other two scenarios, referred to as “Good” scenario and “Bad” scenario, represent less likely outcomes which are more optimistic or more pessimistic compared to Baseline scenario.

The Baseline scenario is prepared by our Economics & Strategic Planning Department. Historical data, economic trend, external forecast from governmental and non-governmental organisation, etc. are also used as benchmarks to ensure the scenario is reasonable and supportable. For the Good and Bad scenarios, the Group makes reference to the historical macroeconomics data.

The core macroeconomic factor in the major countries/regions the Group operates such as Gross Domestic Product growth, and other key macroeconomic factors such as Consumer Price Index, Property Price Index and Unemployment Rate are applied in the economic scenarios. These macroeconomic factors are considered to be important to the Group’s ECL in statistical analysis and business opinion.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### Expected Credit Loss (“ECL”) Methodology (continued)

The probability weight assigned for each scenario reflects the Group’s view for the economic environment, which implements the Group’s prudent and consistent credit strategy of ensuring the adequacy of impairment allowance. A higher probability weight is assigned to the Baseline scenario to reflect the most likely outcome and a lower probability weight is assigned to the Good and Bad scenarios to reflect the less likely outcomes. As of December 2021, the probability weight of the Group’s Baseline scenario is higher than the sum of probability weight of Good and Bad scenarios.

The core macroeconomic factor used by the Group to assess ECL:

Macroeconomic Factor	Bad Scenario	Baseline Scenario	Good Scenario
2022 Hong Kong GDP Growth	-5.88%	+3.50%	+6.77%

The calculation of ECL is affected by macroeconomic factors and economic scenarios. If more pessimistic macroeconomic factors are applied in ECL assessment or a higher probability weight is assigned to the Bad scenario, it would result in an increase in ECL. The Group reviews the macroeconomic factors used in the ECL model and the probability weight of economic scenarios on a quarterly basis according to the established mechanism.

As at 31 December 2021, the ECL will be increased by 2.95% if 5% of the probability weight is shifted from Baseline scenario to Bad scenario; and will be decreased by 2.51% if 5% of the probability weight is shifted from Baseline scenario to Good scenario.

RMC is responsible for approving ECL methodology and the Management is responsible for the ECL model implementation. Credit Risk Management is responsible for the maintenance of ECL methodology including models review and parameters update on a regular basis. Independent Model Validation Team is responsible for the annual validation of ECL models. If there is any change in ECL methodology, the Group will follow the proper approval process.

##### Collateral held as security and other credit enhancements

The valuation and management of collateral have been documented in the credit risk management policies and procedures which cover acceptance criteria, validity of collateral, loan-to-value ratio, haircut ratio, valuation and insurance, etc. The collateral is revalued on a regular basis, though the frequency and the method used varies with the type of collateral involved and the nature and the risk of the underlying credit. The Group has established a mechanism to update the value of its main type of collateral, property collateral including the use of public indices on a portfolio basis. Collateral is insured with the Group as the primary beneficiary. In the personal sector, the main types of collateral are real estate, cash deposits and securities. In the commercial and industrial sector, the types of collateral include real estate, securities, cash deposits, vessels, aircraft, etc.

For loans guaranteed by a third party, the Group will assess the guarantor’s financial condition, credit history and ability to meet obligations.

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### **Collateral held as security and other credit enhancements (continued)**

As at 31 December 2021, the fair value of collateral held by the Group that was permitted to sell or re-pledge in the absence of default by the borrower amounted to HK\$20,891 million (2020: HK\$5,168 million). The Group had not sold or re-pledged such collateral (2020: Nil). These transactions are conducted under terms that are usual and customary to reverse repurchase and securities borrowing agreements.

#### **(A) Credit exposures**

The maximum credit exposure is the worst case scenario of exposure to the Group without taking into account any collateral held or other credit enhancements. For on-balance sheet assets, the maximum exposure to credit risk equals their carrying amount. For letters of guarantee issued, the maximum exposure to credit risk is the maximum amount that the Group could be required to pay if the guarantees are called upon. For loan commitment and other credit related liabilities, the maximum exposure to credit risk is the full amount of the committed facilities.

The nature of the collateral held and other credit enhancements and their financial effect to the different classes of the Group's financial assets are as follows.

#### **Balances and placements with banks and other financial institutions**

These exposures are generally considered to be low risk due to the nature of the counterparties. Collateral is generally not sought on these assets.

#### **Financial assets at fair value through profit or loss and investment in securities**

Collateral is generally not sought on debt securities.

#### **Derivative financial instruments**

The Master Agreement published by the International Swaps and Derivatives Association, Inc. ("ISDA Master Agreement") is the preferred agreement for documenting derivative activities of the Group. It provides the contractual framework under which dealing activities of over-the-counter ("OTC") transactions are conducted, and sets out close-out netting provisions upon termination following the occurrence of an event of default or a termination event. In addition, if deemed necessary, Credit Support Annexes will be included to form part of the Schedule to the ISDA Master Agreement. Under the Credit Support Annexes, collateral is passed from one counterparty to another, as appropriate, to mitigate the credit exposures.

#### **Advances and other accounts, loan commitments and financial guarantee contracts**

The general types of collateral are disclosed on page 172. Advances and other accounts, loan commitments and financial guarantee contracts are collateralised to the extent considered appropriate by the Group taking account of the risk assessment of individual exposures. The collateral coverage of advances to customers is analysed on pages 182 to 183. The components and nature of loan commitments and financial guarantee contracts are disclosed in Note 41. Regarding the commitments that are unconditionally cancellable without prior notice, the Group would assess the necessity to withdraw the credit line in case where the credit quality of a borrower deteriorates. For loan commitments and financial guarantee contracts, 12.39% (2020: 13.25%) were covered by collateral as at 31 December 2021.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts

Gross advances and other accounts before impairment allowances are summarised by product type as follows:

	2021 HK\$'m	2020 HK\$'m
Advances to customers		
Personal		
– Mortgages	<b>386,220</b>	340,587
– Credit cards	<b>12,096</b>	10,981
– Others	<b>110,729</b>	107,009
Corporate		
– Commercial loans	<b>1,016,428</b>	972,790
– Trade finance	<b>73,611</b>	66,497
	<b>1,599,084</b>	1,497,864
Trade bills	<b>7,264</b>	9,826
Advances to banks and other financial institutions	<b>727</b>	1,898
	<b>1,607,075</b>	1,509,588

Advances with a specific repayment date are classified as overdue when the principal or interest is past due and remains unpaid. Advances repayable by regular instalments are classified as overdue when an instalment payment is past due and remains unpaid. Advances repayable on demand are classified as overdue either when a demand for repayment has been served on the borrower but repayment has not been made in accordance with the instruction or when the advances have remained continuously to exceed the approved limit that was advised to the borrower.

Advances classified as Stage 3 may not necessarily result in impairment loss where the advances are fully collateralised.

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (B) Advances and other accounts (continued)

Gross advances and other accounts before impairment allowances are analysed by internal credit grade and stage classification as follows:

	2021			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Advances to customers</b>				
Pass	1,558,267	25,138	–	1,583,405
Special mention	3,039	8,319	–	11,358
Substandard or below	–	–	4,321	4,321
	<b>1,561,306</b>	<b>33,457</b>	<b>4,321</b>	<b>1,599,084</b>
<b>Trade bills</b>				
Pass	7,264	–	–	7,264
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	<b>7,264</b>	<b>–</b>	<b>–</b>	<b>7,264</b>
<b>Advances to banks and other financial institutions</b>				
Pass	727	–	–	727
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	<b>727</b>	<b>–</b>	<b>–</b>	<b>727</b>
	<b>1,569,297</b>	<b>33,457</b>	<b>4,321</b>	<b>1,607,075</b>
Impairment allowances	(4,843)	(2,406)	(2,632)	(9,881)
	<b>1,564,454</b>	<b>31,051</b>	<b>1,689</b>	<b>1,597,194</b>

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts (continued)

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Advances to customers</b>				
Pass	1,466,646	20,352	–	1,486,998
Special mention	3,846	3,026	–	6,872
Substandard or below	–	–	3,994	3,994
	1,470,492	23,378	3,994	1,497,864
<b>Trade bills</b>				
Pass	9,826	–	–	9,826
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	9,826	–	–	9,826
<b>Advances to banks and other financial institutions</b>				
Pass	1,898	–	–	1,898
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	1,898	–	–	1,898
	1,482,216	23,378	3,994	1,509,588
Impairment allowances	(5,405)	(1,115)	(2,652)	(9,172)
	1,476,811	22,263	1,342	1,500,416





## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts (continued)

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Impairment allowances</b>				
At 1 January 2020	4,564	297	2,175	7,036
Transfer to Stage 1	96	(94)	(2)	–
Transfer to Stage 2	(166)	177	(11)	–
Transfer to Stage 3	(8)	(19)	27	–
Changes arising from transfer of stage	(76)	782	772	1,478
Charge for the year <sup>(i)</sup>	2,894	104	300	3,298
Reversal for the year <sup>(ii)</sup>	(1,920)	(132)	(235)	(2,287)
Write-offs	–	–	(561)	(561)
Recoveries	–	–	136	136
Exchange difference and others	21	–	51	72
At 31 December 2020	5,405	1,115	2,652	9,172
Charged to income statement (Note 13)				2,489

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Gross amount</b>				
At 1 January 2020	1,412,567	4,213	3,217	1,419,997
Transfer to Stage 1	1,207	(1,197)	(10)	–
Transfer to Stage 2	(22,369)	22,384	(15)	–
Transfer to Stage 3	(804)	(403)	1,207	–
Net change in exposures	87,260	(1,628)	62	85,694
Write-offs	–	–	(561)	(561)
Exchange difference and others	4,355	9	94	4,458
At 31 December 2020	1,482,216	23,378	3,994	1,509,588

(i) Charge for the year comprises the impairment losses attributable to new loans, remaining loans without stage transfers, and changes to risk parameters, etc.

(ii) Reversal for the year comprises reversal of impairment losses attributable to loan repaid, remaining loans without stage transfers, and changes to risk parameters, etc.

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (B) Advances and other accounts (continued)

##### (a) Impaired advances

Impaired advances to customers are analysed as follows:

	2021		2020	
	Impaired HK\$'m	Classified or impaired HK\$'m	Impaired HK\$'m	Classified or impaired HK\$'m
Gross advances to customers	4,321	4,321	3,994	3,994
Percentage of gross advances to customers	0.27%	0.27%	0.27%	0.27%
Impairment allowances made in respect of such advances	2,632	2,632	2,652	2,652

Classified or impaired advances to customers represent advances which are either classified as “substandard”, “doubtful” or “loss” under the Group’s classification of loan quality, or classified as Stage 3.

The impairment allowances were made after taking into account the value of collateral in respect of the credit-impaired advances.

	2021 HK\$'m	2020 HK\$'m
Current market value of collateral held against the covered portion of impaired advances to customers	2,260	3,046
Covered portion of impaired advances to customers	1,062	1,558
Uncovered portion of impaired advances to customers	3,259	2,436

As at 31 December 2021, there were no impaired trade bills and advances to banks and other financial institutions (2020: Nil).

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts (continued)

##### (b) Advances overdue for more than three months

The gross amount of advances overdue for more than three months is analysed as follows:

	2021		2020	
	Amount HK\$'m	% of gross advances to customers	Amount HK\$'m	% of gross advances to customers
Gross advances to customers which have been overdue for:				
– six months or less but over three months	245	0.02%	174	0.01%
– one year or less but over six months	1,291	0.08%	718	0.05%
– over one year	1,488	0.09%	2,137	0.14%
Advances overdue for over three months	3,024	0.19%	3,029	0.20%
Impairment allowances made in respect of such advances – Stage 3	1,907		2,332	

	2021 HK\$'m	2020 HK\$'m
Current market value of collateral held against the covered portion of such advances to customers	1,196	1,312
Covered portion of such advances to customers	814	913
Uncovered portion of such advances to customers	2,210	2,116

Collateral held against overdue or impaired loans is principally represented by charges over business assets such as commercial, residential premises and vessels for corporate loans and mortgages over residential properties for personal loans.

As at 31 December 2021, there were no trade bills and advances to banks and other financial institutions overdue for more than three months (2020: Nil).

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (B) Advances and other accounts (continued)

##### (c) Rescheduled advances

	2021		2020	
	Amount HK\$'m	% of gross advances to customers	Amount HK\$'m	% of gross advances to customers
Rescheduled advances to customers net of amounts included in "Advances overdue for more than three months"	<b>216</b>	<b>0.01%</b>	178	0.01%

Rescheduled advances are those advances that have been restructured and renegotiated between the bank and borrowers because of deterioration in the financial position of the borrower or the inability of the borrower to meet the original repayment schedule, and the revised repayment terms, either of interest or the repayment period, are "non-commercial" to the Group. Rescheduled advances, which have been overdue for more than three months under the revised repayment terms, are included in "Advances overdue for more than three months".

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts (continued)

##### (d) Concentration of advances to customers

##### (i) Sectoral analysis of gross advances to customers

The following analysis of the gross advances to customers by industry sector is based on the categories with reference to the completion instructions for the HKMA return of loans and advances.

	2021					
	Gross advances to customers HK\$'m	% covered by collateral or other security	Classified or impaired HK\$'m	Overdue HK\$'m	Impairment allowances – Stage 3 HK\$'m	Impairment allowances – Stages 1 and 2 HK\$'m
Loans for use in Hong Kong						
Industrial, commercial and financial						
– Property development	166,208	26.82%	–	171	–	899
– Property investment	78,125	62.89%	28	41	1	248
– Financial concerns	23,392	0.83%	–	–	–	39
– Stockbrokers	3,070	80.08%	–	–	–	5
– Wholesale and retail trade	27,281	47.95%	260	304	121	243
– Manufacturing	44,492	9.12%	31	3	20	180
– Transport and transport equipment	62,000	22.79%	–	–	–	368
– Recreational activities	176	97.15%	–	–	–	–
– Information technology	31,753	0.30%	32	32	20	61
– Others	145,302	43.76%	51	266	29	359
Individuals						
– Loans for the purchase of flats in Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	34,776	99.49%	15	221	–	21
– Loans for purchase of other residential properties	349,645	99.95%	129	1,153	1	129
– Credit card advances	12,079	–	91	419	48	174
– Others	104,906	95.19%	117	469	67	196
Total loans for use in Hong Kong	1,083,205	62.35%	754	3,079	307	2,922
Trade financing	73,611	15.17%	517	498	385	181
Loans for use outside Hong Kong	442,268	4.95%	3,050	2,703	1,940	4,142
Gross advances to customers	1,599,084	44.30%	4,321	6,280	2,632	7,245

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (B) Advances and other accounts (continued)

#### (d) Concentration of advances to customers (continued)

#### (i) Sectoral analysis of gross advances to customers (continued)

	2020					
	Gross advances to customers HK\$'m	% covered by collateral or other security	Classified or impaired HK\$'m	Overdue HK\$'m	Impairment allowances – Stage 3 HK\$'m	Impairment allowances – Stages 1 and 2 HK\$'m
Loans for use in Hong Kong						
Industrial, commercial and financial						
– Property development	132,966	27.12%	–	1	–	803
– Property investment	64,768	67.95%	111	184	15	186
– Financial concerns	24,110	0.74%	–	–	–	54
– Stockbrokers	1,656	78.86%	–	–	–	3
– Wholesale and retail trade	30,523	43.12%	198	239	109	411
– Manufacturing	53,629	8.05%	8	9	4	290
– Transport and transport equipment	74,633	23.05%	260	–	–	598
– Recreational activities	198	9.90%	–	–	–	2
– Information technology	25,579	0.81%	97	99	13	33
– Others	131,571	47.23%	18	200	4	409
Individuals						
– Loans for the purchase of flats in Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	27,809	99.33%	18	183	–	17
– Loans for purchase of other residential properties	311,070	99.92%	140	1,332	1	137
– Credit card advances	10,959	–	106	366	95	151
– Others	101,986	94.43%	126	537	81	384
Total loans for use in Hong Kong	991,457	61.86%	1,082	3,150	322	3,478
Trade financing	66,497	15.36%	569	573	372	202
Loans for use outside Hong Kong	439,910	5.29%	2,343	2,217	1,958	2,840
Gross advances to customers	1,497,864	43.18%	3,994	5,940	2,652	6,520

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (B) Advances and other accounts (continued)

##### (d) Concentration of advances to customers (continued)

##### (i) Sectoral analysis of gross advances to customers (continued)

For those industry sectors constitute not less than 10% of the Group's gross advances to customers, the amounts of new impairment allowances charged to the income statement, and classified or impaired loans written off during the year are shown below:

	2021		2020	
	New impairment allowances	Classified or impaired loans written off	New impairment allowances	Classified or impaired loans written off
	HK\$'m	HK\$'m	HK\$'m	HK\$'m
Loans for use in Hong Kong				
Industrial, commercial and financial				
– Property development	533	-	428	-
Individuals				
– Loans for purchase of other residential properties	57	-	52	-

##### (ii) Geographical analysis of gross advances to customers

The following geographical analysis of advances to customers is based on the locations of the counterparties, after taking into account the transfer of risk. For an advance to customer guaranteed by a party situated in a location different from the customer, the risk will be transferred to the location of the guarantor.

##### Gross advances to customers

	2021 HK\$'m	2020 HK\$'m
Hong Kong	1,332,801	1,218,633
Chinese Mainland	95,416	112,527
Others	170,867	166,704
	<b>1,599,084</b>	1,497,864
<b>Impairment allowances made in respect of the gross advances to customers – Stages 1 and 2</b>		
Hong Kong	3,830	4,551
Chinese Mainland	715	656
Others	2,700	1,313
	<b>7,245</b>	6,520



## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (B) Advances and other accounts (continued)

#### (d) Concentration of advances to customers (continued)

#### (ii) Geographical analysis of gross advances to customers (continued)

##### Overdue advances

	2021 HK\$'m	2020 HK\$'m
Hong Kong	3,954	4,115
Chinese Mainland	296	567
Others	2,030	1,258
	<b>6,280</b>	5,940
<b>Impairment allowances made in respect of the overdue advances – Stage 3</b>		
Hong Kong	741	1,308
Chinese Mainland	101	320
Others	1,173	908
	<b>2,015</b>	2,536

##### Classified or impaired advances

	2021 HK\$'m	2020 HK\$'m
Hong Kong	2,123	2,194
Chinese Mainland	207	404
Others	1,991	1,396
	<b>4,321</b>	3,994
<b>Impairment allowances made in respect of the classified or impaired advances – Stage 3</b>		
Hong Kong	1,111	1,410
Chinese Mainland	107	331
Others	1,414	911
	<b>2,632</b>	2,652

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (C) Repossessed assets

During the year, the Group obtained assets by taking possession of collateral held as security. The nature and carrying value of these assets held as at 31 December are summarised as follows:

	2021 HK\$'m	2020 HK\$'m
Commercial properties	122	–
Industrial properties	–	5
Residential properties	29	18
	<b>151</b>	23

The estimated market value of repossessed assets held by the Group as at 31 December 2021 amounted to HK\$274 million (2020: HK\$67 million). The repossessed assets comprise properties in respect of which the Group has acquired access or control (e.g. through court proceedings or voluntary actions by the proprietors concerned) for release in full or in part of the obligations of the borrowers.

When the repossessed assets are not readily convertible into cash, the Group may consider the following alternatives:

- adjusting the selling prices
- selling the loans together with the assets
- arranging loan restructuring

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (D) Balances and placements with banks and other financial institutions

Balances and placements with banks and other financial institutions before impairment allowances are analysed by internal credit grade and stage classification as follows:

	2021			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Central banks</b>				
Pass	160,930	–	–	160,930
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	<b>160,930</b>	<b>–</b>	<b>–</b>	<b>160,930</b>
<b>Other banks and other financial institutions</b>				
Pass	287,042	–	–	287,042
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	<b>287,042</b>	<b>–</b>	<b>–</b>	<b>287,042</b>
	<b>447,972</b>	<b>–</b>	<b>–</b>	<b>447,972</b>
Impairment allowances	(23)	–	–	(23)
	<b>447,949</b>	<b>–</b>	<b>–</b>	<b>447,949</b>

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (D) Balances and placements with banks and other financial institutions (continued)

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Central banks</b>				
Pass	183,571	–	–	183,571
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	183,571	–	–	183,571
<b>Other banks and other financial institutions</b>				
Pass	241,961	–	–	241,961
Special mention	–	–	–	–
Substandard or below	–	–	–	–
	241,961	–	–	241,961
	425,532	–	–	425,532
Impairment allowances	(8)	–	–	(8)
	425,524	–	–	425,524

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (D) Balances and placements with banks and other financial institutions (continued)

Reconciliation of impairment allowances for balances and placements with banks and other financial institutions is as follows:

	2021			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
At 1 January 2021	8	–	–	8
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	15	–	–	15
At 31 December 2021	23	–	–	23
Charged to income statement (Note 13)				15

  

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
At 1 January 2020	3	–	–	3
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	5	–	–	5
At 31 December 2020	8	–	–	8
Charged to income statement (Note 13)				5

As at 31 December 2021, there were no overdue or impaired balances and placements with banks and other financial institutions (2020: Nil).

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (E) Debt securities and certificates of deposit

The following tables present an analysis of the carrying value of debt securities and certificates of deposit by issue rating and stage classification. In the absence of such issue ratings, the ratings designated for the issuers are reported.

	2021 HK\$'m	2020 HK\$'m
<b>Investment in securities at fair value through other comprehensive income</b>		
– Stage 1		
Aaa	132,445	115,426
Aa1 to Aa3	233,943	153,601
A1 to A3	455,191	438,994
Lower than A3	25,242	26,555
Unrated	24,791	19,596
	<b>871,612</b>	754,172
– Stage 2		
Lower than A3	208	–
– Stage 3	–	–
	<b>871,820</b>	754,172
Of which: impairment allowances	<b>(288)</b>	(261)
<b>Investment in securities at amortised cost</b>		
– Stage 1		
Aaa	61,864	43,082
Aa1 to Aa3	25,404	6,730
A1 to A3	93,571	39,864
Lower than A3	28,761	23,923
Unrated	6,921	6,894
	<b>216,521</b>	120,493
– Stage 2		
Lower than A3	390	–
– Stage 3	–	–
	<b>216,911</b>	120,493
Impairment allowances	<b>(99)</b>	(62)
	<b>216,812</b>	120,431
<b>Financial assets at fair value through profit or loss</b>		
Aaa	2,830	1,095
Aa1 to Aa3	15,439	22,573
A1 to A3	10,814	8,412
Lower than A3	8,545	9,846
Unrated	3,430	2,070
	<b>41,058</b>	43,996

The preparation basis of the current year disclosure above has been refined to align with the credit risk management policy of the Group.

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (E) Debt securities and certificates of deposit (continued)

Reconciliation of impairment allowances for debt securities and certificates of deposit is as follows:

	2021			
	Stage 1 HK\$m	Stage 2 HK\$m	Stage 3 HK\$m	Total HK\$m
<b>Investment in securities at fair value through other comprehensive income</b>				
At 1 January 2021	261	–	–	261
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	25	1	–	26
Exchange difference and others	1	–	–	1
At 31 December 2021	287	1	–	288
Charged to income statement (Note 13)				26
<b>Investment in securities at amortised cost</b>				
At 1 January 2021	62	–	–	62
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	34	3	–	37
At 31 December 2021	96	3	–	99
Charged to income statement (Note 13)				37

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (E) Debt securities and certificates of deposit (continued)

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Investment in securities at fair value through other comprehensive income</b>				
At 1 January 2020	160	–	–	160
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	100	–	–	100
Exchange difference and others	1	–	–	1
At 31 December 2020	261	–	–	261
Charged to income statement (Note 13)				100
<b>Investment in securities at amortised cost</b>				
At 1 January 2020	46	–	–	46
Changes arising from transfer of stage	–	–	–	–
Net charge for the year	16	–	–	16
At 31 December 2020	62	–	–	62
Charged to income statement (Note 13)				16

As at 31 December 2021, there were no overdue or impaired debt securities and certificates of deposit (2020: Nil).



## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (F) Loan commitments and financial guarantee contracts

Loan commitments and financial guarantee contracts are analysed by internal credit grade and stage classification as follows:

	2021			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Loan commitments and financial guarantee contracts</b>				
Pass	766,298	2,939	–	769,237
Special mention	2,062	1,244	–	3,306
Substandard or below	–	–	403	403
	<b>768,360</b>	<b>4,183</b>	<b>403</b>	<b>772,946</b>

  

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
<b>Loan commitments and financial guarantee contracts</b>				
Pass	760,490	3,007	–	763,497
Special mention	1,640	1,225	–	2,865
Substandard or below	–	–	36	36
	762,130	4,232	36	766,398

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.1 Credit risk (continued)

##### (F) Loan commitments and financial guarantee contracts (continued)

Reconciliation of impairment allowances for loan commitments and financial guarantee contracts is as follows:

	2021			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
At 1 January 2021	594	44	20	658
Transfer to Stage 1	11	(11)	-	-
Transfer to Stage 2	(6)	6	-	-
Transfer to Stage 3	(5)	-	5	-
Changes arising from transfer of stage	(10)	3	133	126
Net (reversal)/charge for the year	(76)	33	(3)	(46)
Changes in models	(66)	(24)	-	(90)
Exchange difference and others	(3)	-	(2)	(5)
At 31 December 2021	439	51	153	643
Charged to income statement (Note 13)				80

  

	2020			
	Stage 1 HK\$'m	Stage 2 HK\$'m	Stage 3 HK\$'m	Total HK\$'m
At 1 January 2020	535	22	20	577
Transfer to Stage 1	13	(13)	-	-
Transfer to Stage 2	(3)	3	-	-
Transfer to Stage 3	-	-	-	-
Changes arising from transfer of stage	(12)	35	-	23
Net charge/(reversal) for the year	57	(3)	-	54
Exchange difference and others	4	-	-	4
At 31 December 2020	594	44	20	658
Charged to income statement (Note 13)				77

Majority of credit risk exposures of loan commitments and financial guarantee contracts are classified as Stage 1 and categorised as "Pass" in the internal credit grade throughout the year. Key stage transfer for the year mainly represents transfer of a financial guarantee contract from Stage 1 to Stage 3 (2020: Nil).

## 4. Financial risk management (continued)

### 4.1 Credit risk (continued)

#### (G) Credit risk management in response to COVID-19 pandemic

In 2021, the vaccination programme has rolled out in various countries, economic activities are expected to recover gradually. While the COVID-19 pandemic is still evolving and recurring, the operating environment and financial situations of borrowers remain challenging. The Group has taken a series of risk control measures in response to the adverse impact and the uncertainty from the pandemic:

- The Group coordinated with the HKMA in launching various relief measures for individuals and commercial borrowers, in order to alleviate the financial pressure and the impact of the pandemic. The terms of the payment holidays under relief measures are granted on commercial basis, therefore the extension of relief measures to the concerned borrowers do not automatically trigger the migration to Stage 2 and Stage 3, and are not classified as rescheduled advances.
- The implementation of quarantine measures severely hit several industries, including Trading, Retail, Aviation, Tourism (including hospitality), Catering, Entertainment etc. The Group continues to conduct risk-based assessments on the borrowers within these industries. The impacts of the pandemic on the affected borrowers, their respective mitigation measures and short-term refinancing plans are also assessed to identify the vulnerable borrowers, who are put into the watchlist for on-going close monitoring. The loan classification and internal ratings of these borrowers are timely reviewed according to their latest situation.
- The Group performed stress tests of different scenarios of containment of COVID-19 pandemic regularly to assess the potential impacts on credit loss and asset quality.
- The Group reviews the forward looking macroeconomic factors used in ECL model on a quarterly basis to reflect the dynamic changes of economic outlook. While the relief measures implemented by the governments of various countries have alleviated the default pressure of the affected borrowers under COVID-19 pandemic, the Group continues its close monitoring on those borrowers with multiple extensions of relief measures being granted, and additional impairment allowances have been made to address the potential higher default risk of this portfolio upon expiration of the relief measures.

The Group continues to closely monitor the situation brought by the COVID-19 pandemic on the economy and adopt prudent asset quality management to avoid significant deterioration in asset quality.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.2 Market risk

Market risk refers to the risk of loss arising from movements in the value of foreign exchange, interest rate, equity and commodity positions held by the Group due to the volatility of financial market price (foreign exchange rate, interest rate, equity price, commodity price). The Group adopts a moderate market risk appetite to achieve a balance between risk and return. The Group's objective in managing market risk is to secure healthy growth of the treasury business, by the effective management of potential market risk in the Group's business, according to the Group's overall risk appetite and strategy of the treasury business on the basis of a well-established risk management regime and related management measures.

In accordance with the Group's corporate governance principles in respect of risk management, the Board and RMC, senior management and functional departments/units perform their duties and responsibilities to manage the Group's market risk. The RMD is responsible for the Group's market risk management, assisting senior management to perform their day-to-day duties, independently monitoring the market risk profile and compliance of management policies and limits of the Group and BOCHK, and ensuring that the aggregate and individual market risks are within acceptable levels.

The Group's market risk management covers BOCHK and its subsidiaries. The Group establishes market risk management policies to regulate BOCHK's and its subsidiaries' market risk management; meanwhile, the Group sets up the Group's VaR and stress test limits, which are allocated and monitored across the Group according to the business requirements and risk tolerance levels. In line with the requirements set in the Group's policy, the subsidiaries formulate the detailed policies and procedures and are responsible for managing their daily market risk.

The Group sets up market risk indicators and limits to identify, measure, monitor and control market risk. Major risk indicators and limits include but are not limited to VaR, Stop Loss, Open Position, Stress Testing and Sensitivity Analysis (Basis Point Value, Greeks), etc. To meet management's requirements, major risk indicators and limits are classified into three levels, and are approved by the RMC, senior management or the head of the respective business unit respectively. The treasury business units of BOCHK and subsidiaries (as for Group Limit) are required to conduct their business within approved market risk indicators and limits.

#### **(A) VaR**

The Group uses the VaR to measure and report general market risks to the RMC and senior management on a periodic basis. The Group adopts a uniformed VaR calculation model, using a historical simulation approach and two years of historical market data, to calculate the VaR of the Group and its subsidiaries over a one-day holding period with a 99% confidence level, and sets up the VaR limit of the Group and its subsidiaries.

## 4. Financial risk management (continued)

### 4.2 Market risk (continued)

#### (A) VaR (continued)

The following table sets out the VaR for all general market risk exposures<sup>1</sup> of the Group.

	Year	At 31 December HK\$'m	Minimum for the year HK\$'m	Maximum for the year HK\$'m	Average for the year HK\$'m
VaR for all market risk	<b>2021</b>	<b>55.1</b>	<b>19.0</b>	<b>55.1</b>	<b>30.7</b>
	2020	27.4	17.5	50.1	31.1
VaR for foreign exchange risk	<b>2021</b>	<b>25.3</b>	<b>13.2</b>	<b>50.8</b>	<b>25.2</b>
	2020	27.8	6.5	30.8	21.1
VaR for interest rate risk in the trading book	<b>2021</b>	<b>57.9</b>	<b>6.2</b>	<b>57.9</b>	<b>16.5</b>
	2020	10.1	5.8	35.6	18.5
VaR for equity risk in the trading book	<b>2021</b>	<b>2.2</b>	<b>0.2</b>	<b>3.4</b>	<b>1.2</b>
	2020	0.8	0.3	2.9	1.0
VaR for commodity risk	<b>2021</b>	<b>0.4</b>	<b>0.0</b>	<b>35.2</b>	<b>7.0</b>
	2020	2.5	0.0	11.2	1.8

Note:

1. Structural FX positions have been excluded.

Although there is a valuable guide to market risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical market data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- the use of a one-day holding period assumes that all positions can be liquidated or hedged in one day. This may not fully reflect the market risk arising at times of severe illiquidity, when a one-day holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level, by definition, does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

The Group recognises these limitations by formulating stress test indicators and limits to assess and manage the market risk uncovered by VaR. The stress testing programme of the market risk includes sensitivity testing on changes in risk factors with various degrees of severity, as well as scenario analysis on historical events including the 1987 Equity Market Crash, 1994 Bond Market Crash, 1997 Asian Financial Crisis, 2001 9-11 event and 2008 Financial Tsunami, etc.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.2 Market risk (continued)

##### (B) Currency risk

The Group's assets and liabilities are denominated in major currencies, particularly HK Dollar, US Dollar and Renminbi. To ensure the currency risk exposure of the Group is kept to an acceptable level, risk limits (e.g. Position and VaR limit) are used to serve as a monitoring tool. Moreover, the Group seeks to minimise the gap between assets and liabilities in the same currency. Foreign exchange contracts (e.g. FX swaps) are usually used to manage FX risk associated with foreign currency-denominated assets and liabilities.

The following is a summary of the Group's major foreign currency exposures arising from trading, non-trading and structural positions and is prepared with reference to the completion instructions for the HKMA return of foreign currency position. The net options position is calculated based on the basis of delta-weighted positions of all foreign exchange options contracts.

	2021							
	Equivalent in million of HK\$							
	US Dollars	Pound Sterling	Japanese Yen	Euro	Renminbi	Australian Dollars	Other foreign currencies	Total foreign currencies
Spot assets	1,080,487	37,456	183,101	48,897	515,964	38,125	65,868	1,969,898
Spot liabilities	(977,297)	(44,696)	(6,489)	(37,534)	(586,921)	(32,656)	(64,951)	(1,750,544)
Forward purchases	899,315	26,016	13,259	32,049	558,540	15,695	53,741	1,598,615
Forward sales	(990,699)	(18,696)	(186,845)	(43,463)	(486,202)	(21,120)	(55,066)	(1,802,091)
Net options position	1,357	19	(5)	(1)	(1,331)	12	(11)	40
Net long/(short) position	13,163	99	3,021	(52)	50	56	(419)	15,918

  

	2020							
	Equivalent in million of HK\$							
	US Dollars	Pound Sterling	Japanese Yen	Euro	Renminbi	Australian Dollars	Other foreign currencies	Total foreign currencies
Spot assets	1,017,375	30,074	160,779	45,926	427,394	36,620	62,008	1,780,176
Spot liabilities	(877,494)	(25,986)	(8,006)	(27,974)	(412,245)	(30,815)	(60,400)	(1,442,920)
Forward purchases	617,715	23,737	18,050	39,254	365,271	15,063	54,352	1,133,442
Forward sales	(734,480)	(27,641)	(170,914)	(57,474)	(382,383)	(20,758)	(56,136)	(1,449,786)
Net options position	650	7	-	(2)	(406)	(1)	(1)	247
Net long/(short) position	23,766	191	(91)	(270)	(2,369)	109	(177)	21,159

## 4. Financial risk management (continued)

### 4.2 Market risk (continued)

#### (B) Currency risk (continued)

	2021					
	Equivalent in million of HK\$					
	US Dollars	Malaysian Baht	Philippine Ringgit	Philippine Peso	Other foreign currencies	Total foreign currencies
Net structural position	30,911	2,225	2,789	1,854	4,054	41,833

  

	2020					
	Equivalent in million of HK\$					
	US Dollars	Malaysian Baht	Philippine Ringgit	Philippine Peso	Other foreign currencies	Total foreign currencies
Net structural position	30,042	2,697	3,024	1,881	4,677	42,321

#### (C) Interest rate risk

Interest rate risk means the risks to a bank's earnings and economic value arising from movements in interest rate and term structures of the bank's asset and liability positions. The Group's interest rate risk exposures are mainly structural. The major types of interest rate risk from structural positions are:

- Gap risk: mismatches in the maturity or repricing periods of assets and liabilities that may affect net interest income and economic value;
- Basis risk: different pricing basis for different transactions resulting that the yield on assets and cost of liabilities may change by different amounts within the same repricing period; and
- Option risk: exercise of the options embedded in assets, liabilities or off-balance sheet items that can cause a change in the cash flows of assets and liabilities.

The Group's risk management framework applies also to interest rate risk management. The ALCO exercises its oversight of interest rate risk in accordance with the "BOCHK Group Banking Book Interest Rate Risk Management Policy" approved by the RMC. The RMD is responsible for the Group's interest rate risk management. With the cooperation of the Financial Management Department and Investment Management, etc., RMD assists the ALCO to perform day-to-day interest rate risk management. Its roles include, but are not limited to, the formulation of management policies, selection of methodologies, setting of risk indicators and limits, assessment of target balance sheet, monitoring of the compliance with policies and limits, and submission of interest rate risk management reports to senior management and the RMC, etc.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.2 Market risk (continued)

##### (C) Interest rate risk (continued)

The Group sets out interest rate risk indicators and limits to identify, measure, monitor and control interest rate risk on a daily basis. The indicators and limits include, but are not limited to, repricing gap limits, basis risk, duration, price value of a basis point ("PVBP"), net interest income sensitivity ratio ("NII"), economic value sensitivity ratio ("EVE"), etc. The indicators and limits are classified into different levels, which are approved by the CFO, CRO, ALCO and RMC accordingly. Risk-taking business units are required to conduct their business within the boundary of the interest rate risk limits. Before launching a new product or business in the banking book, the relevant departments are required to go through a risk assessment process, which includes the assessment of underlying interest rate risk and consideration of the adequacy of current risk monitoring mechanism. Any material impact on interest rate risk noted during the risk assessment process will be submitted to the RMC for approval.

NII and EVE assess the impact of interest rate movement on the Group's net interest income and capital base. They are the Group's key interest rate risk indicators. The former assesses the impact of interest rate movement on net interest income as a percentage to the projected net interest income for the year. The latter assesses the impact of interest rate movement on economic value (i.e. the net present value of cash flows of assets, liabilities and off-balance sheet items discounted using the market interest rate) as a percentage to the latest Tier 1 capital. Limits are set by the RMC on these two indicators to monitor and control the Group's banking book interest rate risk.

The Group uses scenario analyses and stress tests to assess the banking book interest rate risk that the Group would face under adverse circumstances. Scenario analyses and stress tests are also used to assess the impact on net interest income and economic value arising from the optionality of savings deposits, the prepayment of mortgage loans and the prepayment of debt securities with embedded options.



## 4. Financial risk management (continued)

### 4.2 Market risk (continued)

#### (C) Interest rate risk (continued)

The Group is principally exposed to HK Dollar, US Dollar and Renminbi in terms of interest rate risk. As at 31 December 2021, if market interest rates had a 100 basis point parallel shift of the yield curve with other variables held constant, the sensitivities on net interest income over a twelve-month period and on reserves for the Group would have been as follows:

	Impact on net interest income over the next twelve months at 31 December		Impact on reserves at 31 December	
	2021 HK\$'m	2020 HK\$'m	2021 HK\$'m	2020 HK\$'m
<b>100 basis point parallel up of yield curve</b>				
Total	<b>1,350</b>	2,623	<b>(7,656)</b>	(9,393)
Of which:				
HK Dollar	<b>3,963</b>	4,164	<b>(154)</b>	(677)
US Dollar	<b>(739)</b>	178	<b>(4,110)</b>	(5,263)
Renminbi	<b>(1,540)</b>	(1,437)	<b>(3,041)</b>	(2,627)
<b>100 basis point parallel down of yield curve</b>				
Total	<b>(1,350)</b>	(2,623)	<b>7,656</b>	9,393
Of which:				
HK Dollar	<b>(3,963)</b>	(4,164)	<b>154</b>	677
US Dollar	<b>739</b>	(178)	<b>4,110</b>	5,263
Renminbi	<b>1,540</b>	1,437	<b>3,041</b>	2,627

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.2 Market risk (continued)

##### (C) Interest rate risk (continued)

In a parallel shift up of 100 basis points of yield curve, the overall impact on net interest income of the above currencies is positive in 2021. Reserves of the Group would have been reduced because of the expected reduction in valuation of the debt securities portfolio and relevant interest rate derivatives under hedge accounting due to a parallel shift up of 100 basis points in the yield curve. The positive impact on net interest income is decreased as the size of current and savings deposits increased and the reduction of reserves is decreased compared with 2020 because the duration of the debt securities portfolio in capital market decreased.

In a parallel shift down of 100 basis points of yield curve, the overall impact on net interest income of the above currencies is negative in 2021. Reserves of the Group would have been increased because of the expected increase in valuation of the debt securities portfolio and relevant interest rate derivatives under hedge accounting due to a parallel shift down of 100 basis points in the yield curve. The negative impact on net interest income is decreased as the size of current and savings deposits increased and the increase in reserves is decreased compared with 2020 because the duration of the debt securities portfolio in capital market decreased.

The sensitivities above are for illustration only and are based on several assumptions, including, but not limited to, the change in the correlation between interest rates of relevant currencies, parallel movement of interest rates, the absence of actions that would be taken to mitigate the impact of interest rate risk, the effectiveness of hedge accounting, all positions being assumed to run to maturity, behavioural assumptions of products in which the actual repricing date differs from the contractual repricing date or products without contractual maturity. The above exposures form only a part of the Group's overall interest rate risk exposures.

## 4. Financial risk management (continued)

### 4.2 Market risk (continued)

#### (C) Interest rate risk (continued)

The tables below summarise the Group's on-balance sheet exposure to interest rate risk as at 31 December. Included in the tables are the assets and liabilities at carrying amounts, categorised by the earlier of contractual repricing date and maturity date.

	2021						Total HK\$'m
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	Non- interest bearing HK\$'m	
<b>Assets</b>							
Cash and balances and placements with banks and other financial institutions	362,264	17,281	23,108	1,416	-	61,466	465,535
Financial assets at fair value through profit or loss	19,727	11,620	8,995	10,145	8,968	14,082	73,537
Derivative financial instruments	-	-	-	-	-	33,186	33,186
Hong Kong SAR Government certificates of indebtedness	-	-	-	-	-	203,810	203,810
Advances and other accounts	1,336,894	164,780	35,656	44,032	7,956	7,876	1,597,194
Investment in securities							
– At FVOCI	115,427	309,399	136,185	205,404	105,405	5,601	877,421
– At amortised cost	2,521	7,402	19,723	108,207	78,959	-	216,812
Interests in associates and joint ventures	-	-	-	-	-	1,215	1,215
Investment properties	-	-	-	-	-	17,722	17,722
Properties, plant and equipment	-	-	-	-	-	46,441	46,441
Other assets (including current and deferred tax assets)	11,396	-	-	-	-	95,161	106,557
<b>Total assets</b>	<b>1,848,229</b>	<b>510,482</b>	<b>223,667</b>	<b>369,204</b>	<b>201,288</b>	<b>486,560</b>	<b>3,639,430</b>
<b>Liabilities</b>							
Hong Kong SAR currency notes in circulation	-	-	-	-	-	203,810	203,810
Deposits and balances from banks and other financial institutions	386,399	18,081	714	412	-	80,456	486,062
Financial liabilities at fair value through profit or loss	5,249	4,784	973	1,343	171	-	12,520
Derivative financial instruments	-	-	-	-	-	29,757	29,757
Deposits from customers	1,685,008	279,751	117,181	1,716	-	247,499	2,331,155
Debt securities and certificates of deposit in issue	563	-	-	1,860	-	-	2,423
Other accounts and provisions (including current and deferred tax liabilities)	11,341	7	140	947	224	79,672	92,331
Insurance contract liabilities	-	-	-	-	-	153,911	153,911
<b>Total liabilities</b>	<b>2,088,560</b>	<b>302,623</b>	<b>119,008</b>	<b>6,278</b>	<b>395</b>	<b>795,105</b>	<b>3,311,969</b>
Interest sensitivity gap	(240,331)	207,859	104,659	362,926	200,893	(308,545)	327,461

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.2 Market risk (continued)

##### (C) Interest rate risk (continued)

	2020						Total HK\$'m
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	Non- interest bearing HK\$'m	
<b>Assets</b>							
Cash and balances and placements with banks and other financial institutions	338,539	25,591	12,516	1,101	–	85,964	463,711
Financial assets at fair value through profit or loss	4,404	17,991	4,962	7,362	12,695	12,800	60,214
Derivative financial instruments	–	–	–	–	–	52,856	52,856
Hong Kong SAR Government certificates of indebtedness	–	–	–	–	–	189,550	189,550
Advances and other accounts	1,247,621	163,297	36,230	40,454	6,438	6,376	1,500,416
Investment in securities							
– At FVOCI	130,866	213,464	100,434	192,840	116,568	5,882	760,054
– At amortised cost	5,253	3,836	14,834	37,825	58,683	–	120,431
Interests in associates and joint ventures	–	–	–	–	–	1,485	1,485
Investment properties	–	–	–	–	–	18,441	18,441
Properties, plant and equipment	–	–	–	–	–	46,855	46,855
Other assets (including current and deferred tax assets)	20,813	–	–	–	–	86,155	106,968
<b>Total assets</b>	<b>1,747,496</b>	<b>424,179</b>	<b>168,976</b>	<b>279,582</b>	<b>194,384</b>	<b>506,364</b>	<b>3,320,981</b>
<b>Liabilities</b>							
Hong Kong SAR currency notes in circulation	–	–	–	–	–	189,550	189,550
Deposits and balances from banks and other financial institutions	226,861	565	1,322	1,243	–	96,504	326,495
Financial liabilities at fair value through profit or loss	11,551	4,346	3,690	387	362	–	20,336
Derivative financial instruments	–	–	–	–	–	60,313	60,313
Deposits from customers	1,575,155	246,117	110,992	1,715	–	249,730	2,183,709
Debt securities and certificates of deposit in issue	233	–	193	–	–	–	426
Other accounts and provisions (including current and deferred tax liabilities)	11,065	4	94	1,165	447	68,218	80,993
Insurance contract liabilities	–	–	–	–	–	139,504	139,504
<b>Total liabilities</b>	<b>1,824,865</b>	<b>251,032</b>	<b>116,291</b>	<b>4,510</b>	<b>809</b>	<b>803,819</b>	<b>3,001,326</b>
Interest sensitivity gap	(77,369)	173,147	52,685	275,072	193,575	(297,455)	319,655

## 4. Financial risk management (continued)

### 4.3 Liquidity risk

Liquidity risk is the risk that banks may not be able to obtain sufficient and timely funding at a reasonable cost to meet their obligations as they fall due. The Group maintains a sound liquidity risk appetite to provide stable, reliable and adequate sources of cash to meet liquidity needs under normal circumstances and stressed scenarios.

In accordance with the Group's corporate governance principles in respect of risk management, the Board and the RMC, senior management and functional departments/units perform their duties and responsibilities to manage the Group's liquidity risk. The RMC is the decision-making authority of liquidity risk management, and assumes the ultimate responsibility of liquidity risk management. As authorised by the RMC, ALCO exercises its oversight of liquidity risk and ensures the daily operations of the Group are in accordance with the risk appetite and policies as set by the RMC. The RMD is responsible for the Group's liquidity risk management. It cooperates with the Financial Management Department and Investment Management, etc. to assist the ALCO to perform liquidity management functions according to their specific responsibilities.

The Group's liquidity risk management objective is to effectively manage the liquidity of on- and off-balance sheet items with a reasonable cost based on the liquidity risk appetite to achieve sound operation and sustainable profitability. Deposits from customers are the Group's primary source of funds. To ensure stable and sufficient sources of funds are in place, the Group actively attracts new deposits, keeps the core deposit and obtains supplementary funding from the interbank market and by issuing bills in the capital market. According to different term maturities and the results of funding needs estimated from stressed scenarios, the Group adjusts its asset structure (including loans, bonds investment, interbank placement, etc.) to maintain sufficient liquid assets which provides adequate funds in support of normal business needs and ensure its ability to raise funds at a reasonable cost to serve external claims in case of emergency. The Group is committed to diversify the sources, tenors and use of funding to avoid excessive concentration of assets and liabilities; and prevent triggering liquidity risk due to the break of funding strand resulting from over-concentration of sources and use of funding in a particular area where problems occur. In order to manage such risk, the Group sets concentration limits on collateral pools and sources of funding such as Tier 1 high-quality readily liquefiable assets to total high-quality readily liquefiable assets ratio, top ten depositors ratio and large depositors ratio. Whenever necessary, the Group could improve the liquidity position by taking mitigation actions including, but not limited to obtaining funding through interbank borrowings or repos in the money market, selling bonds in the secondary market or retaining existing and attracting new customer deposits. Apart from increasing the funding, the Group would maintain good communication with the counterparties, the parent bank and the regulators to enhance mutual confidence.

The Group has established intra-group liquidity risk management guidelines to manage the liquidity funding among different entities within the Group, and to restrict their reliance of funding on each other. The Group also pays attention to manage liquidity risk created by off-balance sheet activities, such as loan commitments, derivatives, options and other complex structured products. The Group has an overall liquidity risk management strategy to cover the liquidity management of foreign currency assets and liabilities, collateral, intra-day liquidity, intra-group liquidity, the liquidity risk arising from other risks, etc., and has formulated corresponding contingency plan.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

The Group established liquidity risk management indicators and limits to identify, measure, monitor and control liquidity risk on a daily basis. These indicators and limits include, but are not limited to liquidity coverage ratio (“LCR”), net stable funding ratio (“NSFR”), loan-to-deposit ratio, Maximum Cumulative Cash Outflow (“MCO”) and liquidity cushion. The Group applies a cash flow analysis to assess the Group’s liquidity condition under normal conditions and also performs a liquidity stress test (including institution specific, general market crisis and combined crisis) and other methods at least on a monthly basis to assess the Group’s capability to withstand various severe liquidity crises. Also, relevant management information systems such as the Assets and Liabilities Management System and the Basel Liquidity Ratio Management System are developed to provide data and to prepare for regular management reports to facilitate liquidity risk management duties.

In accordance with the requirements of Supervisory Policy Manual LM-2 “Sound Systems and controls for Liquidity Risk Management” issued by the HKMA, the Group has implemented a behaviour model and assumptions of cash flow analysis and stress test to enhance the Group’s cash flow analysis under both normal and stressed conditions. In cash flow analysis under normal circumstances, assumptions have been made relating to on-balance sheet items (such as deposits from customers) and off-balance sheet items (such as loan commitments). According to various characteristics of the assets, liabilities and off-balance sheet items, the Group forecasts the future cash flow based on the contractual maturity date and the assumptions of customer behaviour and balance sheet changes. The Group establishes the MCO indicator which predicts the future 30 days maximum cumulative net cash outflow in normal situations based on the above assumptions, to assess if the Group has sufficient financing capacity to meet the cash flow gap in order to achieve the objective of continuing operations. As at 31 December 2021, before taking the cash inflow through the sale of outstanding marketable securities into consideration, BOCHK’s 30-day cumulative cash flow was a net cash inflow, amounting to HK\$160,744 million (2020: HK\$186,303 million) and was in compliance with the internal limit requirements.

In the liquidity stress test, institution specific, general market crisis and combined crisis scenarios have been set up, a combined crisis scenario is a combination of institution specific and general market crisis to assess the Group’s capability to withstand a more severe liquidity crisis, with a more stringent set of assumptions being adopted. Stress test assumptions include the run-off rate of retail, wholesale and interbank deposits; the drawdown rate of loan commitments and trade-related contingent liabilities; the delinquency ratio and rollover rate of customer loans; and haircut of interbank placement and marketable securities. As at 31 December 2021, the Group was able to maintain a net cash inflow under the three stressed scenarios, indicating the Group has the ability to meet financing needs under stressed conditions. In addition, the Group has a policy in place to maintain a liquidity cushion which includes high quality or comparable quality marketable securities issued or guaranteed by sovereigns, central banks, public sector entities or multilateral development banks with 0% or 20% risk weight or marketable securities issued by non-financial corporate with a corresponding external credit rating of A- or above to ensure funding needs even under stressed scenarios. As at 31 December 2021, the liquidity cushion (before haircut) of BOCHK was HK\$781,053 million (2020: HK\$645,716 million). A contingency plan is being established which details the conditions to trigger the plan based on stress test results and early warning indicators, the action plans and relevant procedures and responsibility of relevant departments.

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

The Group, being classified as a category 1 authorised institution by the HKMA, is required to calculate the LCR and NSFR on a consolidated basis in accordance with the Banking (Liquidity) Rules. The Group is required to maintain a LCR and NSFR not less than 100% in 2021.

In certain derivative contracts, the counterparties have the right to request from the Group additional collateral if they have concerns about the Group's creditworthiness.

The Group's liquidity risk management also covers new products or business developments. Before launching a new product or business, the relevant departments are required to go through a risk assessment process, which includes the assessment of underlying liquidity risk and consideration of the adequacy of the current risk management mechanism. Any material impact on liquidity risk noted during the risk assessment process will be reported to the RMC for approval.

The Group has established a set of uniform liquidity risk management policies which serve as standards and guidance to all the Group's members for liquidity risk management. On the basis of the Group's uniform policies, each of the subsidiaries develops its own liquidity management policies according to its own characteristics, and assumes its own liquidity risk management responsibility. Subsidiaries are required to report their respective liquidity positions with relevant liquidity ratios on a regular basis to the RMD of BOCHK, which consolidates this information and evaluates group-wide liquidity risk to ensure relevant requirements are satisfied.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

##### (A) Liquidity coverage ratio and net stable funding ratio

	2021	2020
Average value of liquidity coverage ratio		
– First quarter	<b>134.09%</b>	150.45%
– Second quarter	<b>134.20%</b>	131.38%
– Third quarter	<b>134.73%</b>	130.98%
– Fourth quarter	<b>146.70%</b>	132.76%

Average value of liquidity coverage ratio is calculated based on the arithmetic mean of the liquidity coverage ratio as at the end of each working day in the quarter and the calculation methodology and instructions set out in the HKMA return of liquidity position.

	2021	2020
Quarter-end value of net stable funding ratio		
– First quarter	<b>124.90%</b>	116.60%
– Second quarter	<b>118.50%</b>	117.49%
– Third quarter	<b>125.92%</b>	115.30%
– Fourth quarter	<b>126.96%</b>	125.31%

Quarter-end value of net stable funding ratio is calculated based on the calculation methodology and instructions set out in the HKMA return of stable funding position.

Liquidity coverage ratio and net stable funding ratio are computed on the consolidated basis which comprise the positions of BOCHK and certain subsidiaries specified by the HKMA in accordance with the Banking (Liquidity) Rules.



## 4. Financial risk management (continued)

### 4.3 Liquidity risk (continued)

#### (B) Maturity analysis

The tables below analyse the Group's assets and liabilities as at 31 December into relevant maturity groupings based on the remaining period at balance sheet date to the contractual maturity date.

	2021							Total HK\$'m
	On demand HK\$'m	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	Indefinite HK\$'m	
	<b>Assets</b>							
Cash and balances and placements with banks and other financial institutions	351,826	71,905	17,297	22,727	1,780	-	-	465,535
Financial assets at fair value through profit or loss	-	19,787	11,560	7,720	10,540	8,394	15,536	73,537
Derivative financial instruments	11,944	3,086	4,299	3,895	6,356	3,606	-	33,186
Hong Kong SAR Government certificates of indebtedness	203,810	-	-	-	-	-	-	203,810
Advances and other accounts	259,993	44,548	79,716	235,036	602,050	374,119	1,732	1,597,194
Investment in securities								
– At FVOCI	-	105,135	298,363	142,601	212,683	111,837	6,802	877,421
– At amortised cost	-	3,093	7,964	20,175	105,290	77,855	2,435	216,812
Interests in associates and joint ventures	-	-	-	-	-	-	1,215	1,215
Investment properties	-	-	-	-	-	-	17,722	17,722
Properties, plant and equipment	-	-	-	-	-	-	46,441	46,441
Other assets (including current and deferred tax assets)	43,664	21,400	1,806	2,763	23,750	10,987	2,187	106,557
<b>Total assets</b>	<b>871,237</b>	<b>268,954</b>	<b>421,005</b>	<b>434,917</b>	<b>962,449</b>	<b>586,798</b>	<b>94,070</b>	<b>3,639,430</b>
<b>Liabilities</b>								
Hong Kong SAR currency notes in circulation	203,810	-	-	-	-	-	-	203,810
Deposits and balances from banks and other financial institutions	292,365	174,423	17,452	1,028	794	-	-	486,062
Financial liabilities at fair value through profit or loss	-	5,249	4,790	974	1,337	170	-	12,520
Derivative financial instruments	7,626	2,321	2,607	3,813	8,576	4,814	-	29,757
Deposits from customers	1,521,727	410,780	279,751	117,181	1,716	-	-	2,331,155
Debt securities and certificates of deposit in issue	-	588	-	-	1,835	-	-	2,423
Other accounts and provisions (including current and deferred tax liabilities)	56,368	18,859	2,005	3,501	7,145	4,453	-	92,331
Insurance contract liabilities	53,766	2,759	2,669	4,064	29,531	61,122	-	153,911
<b>Total liabilities</b>	<b>2,135,662</b>	<b>614,979</b>	<b>309,274</b>	<b>130,561</b>	<b>50,934</b>	<b>70,559</b>	<b>-</b>	<b>3,311,969</b>
Net liquidity gap	(1,264,425)	(346,025)	111,731	304,356	911,515	516,239	94,070	327,461

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

##### (B) Maturity analysis (continued)

	2020							Total HK\$'m
	On demand	Up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Indefinite	
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	
<b>Assets</b>								
Cash and balances and placements with banks and other financial institutions	368,078	56,425	25,217	12,134	1,857	-	-	463,711
Financial assets at fair value through profit or loss	-	4,490	17,863	4,459	7,241	12,114	14,047	60,214
Derivative financial instruments	15,506	3,614	6,190	8,887	12,101	6,558	-	52,856
Hong Kong SAR Government certificates of indebtedness	189,550	-	-	-	-	-	-	189,550
Advances and other accounts	225,736	40,664	82,601	183,549	622,363	344,001	1,502	1,500,416
Investment in securities								
– At FVOCI	-	125,613	199,644	108,713	201,587	116,176	8,321	760,054
– At amortised cost	-	5,575	4,119	14,620	36,100	58,219	1,798	120,431
Interests in associates and joint ventures	-	-	-	-	-	-	1,485	1,485
Investment properties	-	-	-	-	-	-	18,441	18,441
Properties, plant and equipment	-	-	-	-	-	-	46,855	46,855
Other assets (including current and deferred tax assets)	50,984	15,340	3,263	5,498	17,717	12,275	1,891	106,968
<b>Total assets</b>	<b>849,854</b>	<b>251,721</b>	<b>338,897</b>	<b>337,860</b>	<b>898,966</b>	<b>549,343</b>	<b>94,340</b>	<b>3,320,981</b>
<b>Liabilities</b>								
Hong Kong SAR currency notes in circulation	189,550	-	-	-	-	-	-	189,550
Deposits and balances from banks and other financial institutions	269,742	53,625	564	1,322	1,242	-	-	326,495
Financial liabilities at fair value through profit or loss	-	11,552	4,348	3,690	386	360	-	20,336
Derivative financial instruments	11,253	5,064	7,058	9,461	16,758	10,719	-	60,313
Deposits from customers	1,459,907	364,978	246,117	110,992	1,715	-	-	2,183,709
Debt securities and certificates of deposit in issue	-	233	-	193	-	-	-	426
Other accounts and provisions (including current and deferred tax liabilities)	49,267	16,950	1,960	2,988	7,146	2,682	-	80,993
Insurance contract liabilities	57,335	1,296	1,194	5,832	22,214	51,633	-	139,504
<b>Total liabilities</b>	<b>2,037,054</b>	<b>453,698</b>	<b>261,241</b>	<b>134,478</b>	<b>49,461</b>	<b>65,394</b>	<b>-</b>	<b>3,001,326</b>
Net liquidity gap	(1,187,200)	(201,977)	77,656	203,382	849,505	483,949	94,340	319,655

The analysis of debt securities by remaining period to maturity is based on contractual maturity date. The disclosure does not imply that the securities will be held to maturity.

The above analysis in respect of insurance contract liabilities represents the estimated timing of net cash outflows resulting from recognised insurance contract liabilities on the balance sheet as at 31 December.

## 4. Financial risk management (continued)

### 4.3 Liquidity risk (continued)

#### (C) Analysis of undiscounted cash flows by contractual maturities

##### (a) Non-derivative cash flows

The tables below summarise the cash flows of the Group as at 31 December for non-derivative financial liabilities by remaining contractual maturity.

	2021					Total HK\$'m
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	
	<b>Financial liabilities</b>					
Hong Kong SAR currency notes in circulation	203,810	-	-	-	-	203,810
Deposits and balances from banks and other financial institutions	466,849	17,507	1,054	877	-	486,287
Financial liabilities at fair value through profit or loss	5,250	4,793	992	1,350	169	12,554
Deposits from customers	1,932,586	280,074	117,795	1,742	-	2,332,197
Debt securities and certificates of deposit in issue	589	-	26	1,891	-	2,506
Lease liabilities	57	102	412	746	69	1,386
Other financial liabilities	61,243	305	261	15	5	61,829
<b>Total financial liabilities</b>	<b>2,670,384</b>	<b>302,781</b>	<b>120,540</b>	<b>6,621</b>	<b>243</b>	<b>3,100,569</b>

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

##### (C) Analysis of undiscounted cash flows by contractual maturities (continued)

##### (a) Non-derivative cash flows (continued)

	2020					Total HK\$'m
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	
	<b>Financial liabilities</b>					
Hong Kong SAR currency notes in circulation	189,550	–	–	–	–	189,550
Deposits and balances from banks and other financial institutions	323,387	568	1,342	1,251	–	326,548
Financial liabilities at fair value through profit or loss	11,552	4,349	3,698	409	342	20,350
Deposits from customers	1,824,955	246,406	111,817	1,754	–	2,184,932
Debt securities and certificates of deposit in issue	233	–	194	–	–	427
Lease liabilities	62	115	480	1,023	134	1,814
Other financial liabilities	50,820	282	144	7	6	51,259
<b>Total financial liabilities</b>	<b>2,400,559</b>	<b>251,720</b>	<b>117,675</b>	<b>4,444</b>	<b>482</b>	<b>2,774,880</b>

## 4. Financial risk management (continued)

### 4.3 Liquidity risk (continued)

#### (C) Analysis of undiscounted cash flows by contractual maturities (continued)

##### (b) Derivative cash flows

The tables below summarise the cash flows of the Group by remaining contractual maturity as at 31 December for derivative financial liabilities that will be settled on a net basis, together with all derivative financial instruments that will be settled on a gross basis regardless of whether the contract is in an asset or liability position. The amounts disclosed in the tables are the contractual undiscounted cash flows, except for certain derivatives which are disclosed at fair value.

The Group's derivative financial instruments that will be settled on a net basis mainly include interest rate swaps whereas derivative financial instruments that will be settled on a gross basis mainly include currency forwards and currency swaps.

	2021					
	Up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
Derivative financial liabilities settled on a net basis	(8,138)	(1,181)	(4,315)	(6,464)	(1,162)	(21,260)
Derivative financial instruments settled on a gross basis						
Total inflow	926,726	414,179	314,868	82,945	6,666	1,745,384
Total outflow	(925,727)	(410,520)	(314,351)	(82,820)	(6,657)	(1,740,075)

  

	2020					
	Up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
Derivative financial liabilities settled on a net basis	(12,478)	(1,828)	(6,454)	(15,829)	(2,184)	(38,773)
Derivative financial instruments settled on a gross basis						
Total inflow	431,862	356,732	369,126	128,138	5,646	1,291,504
Total outflow	(433,394)	(357,868)	(369,544)	(127,575)	(5,573)	(1,293,954)

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.3 Liquidity risk (continued)

##### (C) Analysis of undiscounted cash flows by contractual maturities (continued)

###### (c) Off-balance sheet items

###### Loan commitments

The contractual amounts of the Group's off-balance sheet financial instruments as at 31 December 2021 that the Group commits to extend credit to customers and other facilities amounted to HK\$715,718 million (2020: HK\$705,866 million). Majority of those loan commitments can be drawn within one year.

###### Financial guarantee contracts

Majority of financial guarantees and other financial facilities of the Group as at 31 December 2021 amounting to HK\$57,228 million (2020: HK\$60,532 million) are maturing no later than one year.

#### 4.4 Insurance risk

The Group is in the business of insuring against the risk of mortality, morbidity, disability, critical illness, accidents and related risks. The Group manages these risks through the application of its underwriting strategy, reinsurance arrangements and regular experience monitoring.

The underwriting strategy is intended to set premium pricing at an appropriate level that corresponds with the underlying exposure of the risks underwritten and the Group's underwriting procedures include screening processes, such as the review of health condition and family medical history to ensure alignment with the underwriting strategy.

Within the insurance process, concentrations of risk may arise where a particular event or a series of events could impact heavily on the Group's claim liabilities. Such concentrations may arise from a single insurance contract or through a small number of related contracts, and relate to circumstances where significant claim liabilities could arise.

For the in-force insurance contracts, most of the underlying insurance liabilities are related to endowment, universal life, annuity, whole life and unit-linked insurance products. For most of the insurance policies issued, the Group has a retention limit on any single life insured. The Group cedes the excess of the insured benefit over the limit to reinsurer under an excess of loss reinsurance arrangement. For some of the insurance business, the Group has entered into reinsurance arrangements that reinsure most of the insurance risk.

Uncertainty in the estimation of future benefit payments and premium receipts for long-term insurance contracts arises from the unpredictability of long-term changes in overall levels of mortality, morbidity and persistency. In this regard, the Group has conducted relevant experience studies and researches regularly to identify emerging trends. Results would be taken into account in pricing and underwriting management. The results of such studies are also considered in determining the assumptions of insurance liability which include an appropriate level of prudential margins.

## 4. Financial risk management (continued)

### 4.4 Insurance risk (continued)

#### (A) Process used to decide on assumptions

In determining the long term business fund liabilities, the Group follows the Insurance (Determination of Long Term Liabilities) Rules and makes prudent assumptions which include appropriate margins for adverse deviation of the relevant factors. It takes account of all prospective liabilities as determined by the policy terms and conditions for each existing contract, taking credit for premiums payable after the valuation date. The determination of liability is based on current assumptions made as at the valuation date as to mortality rates and morbidity rates, and takes into account of various appropriate discount rates, and with due regard to the reasonable expectation of policyholders. A prudent margin for adverse deviations is included in the assumptions.

The assumptions adopted for the insurance liabilities disclosed in this note are summarised as follows:

#### Mortality and morbidity

The amount of liability in respect of any category of contract shall, where relevant, be determined on the basis of prudent rates of mortality and morbidity, plus a margin for adverse deviation. The assumptions used for the determination of future liabilities are based on population statistics or reinsurance information, adjusted where appropriate to reflect the Group's own experience and relevant reinsurance arrangements.

#### Interest rates adopted for valuation purposes

Homogeneous life insurance policies are grouped into segments and are matched by specific assets. The duration of liabilities under each segment is calculated for valuation purposes.

#### Investment guarantee of investment contract with discretionary participating feature

The amount of the liability in respect of the investment guarantee provided by the investment contract with discretionary participation feature is determined by stochastic analysis based on historical economic data to reflect the value-at-risk at 99% confidence level.

#### Acquisition expense

The acquisition expense assumptions used for determination of future liabilities are based on the Group's own experience. The Group has changed the acquisition expense assumptions for new business written based on updated expense experience of the Group.

#### (B) Change in assumptions

The Group has updated the lapse assumptions to reflect the Group's own experience, and the interest rates adopted for the valuation purposes to reflect the changes in the market interest rates and the yields of investment portfolio backing the policy liabilities. The valuation interest rate assumptions used for the year end valuation purpose were in the range of 0% to 3.16% in 2021 (2020: 0% to 3.04%).

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.4 Insurance risk (continued)

##### (C) Sensitivity analysis

The following table presents the sensitivity of the long-term business fund liabilities to movements in the key assumptions used in the estimation of insurance liabilities:

Sensitivity analysis – life and annuity insurance contracts:

Scenario	Change in variable	Decrease in profit after tax due to changes in insurance liabilities	
		2021 HK\$'m	2020 HK\$'m
Worsening of mortality and morbidity	10%	(223)	(221)
Lowering of interest rate	50 basis points	(723)	(1,099)

The above analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated, for example, changes in interest rate and in market values; and changes in lapses and in future mortality and morbidity.

Sensitivity analysis – linked long term insurance contracts, retirement scheme management category III insurance contracts, and retirement scheme management category I investment contracts with “DPF”:

The reserves on retirement scheme management category III insurance contracts, retirement scheme management category I investment contracts with “DPF” and non-unitised reserve on linked long term insurance contracts are insignificant to the whole portfolio, and no sensitivity analysis has been performed. The insurance liabilities for these three components contributed to less than 0.1% of the total insurance liabilities at the balance sheet date.

For unit-linked fund liabilities (unitised reserve), the liabilities are backed by the unit-linked fund asset values.

Among linked long term insurance contracts, there are contracts with minimum guaranteed death benefits that expose the Group to the risk arising from declines in the value of underlying investments. This may increase the Group’s net exposure to mortality risk.

#### 4.5 Capital management

The major objective of the Group’s capital management is to maximise total shareholders’ return while maintaining a capital adequacy position in relation to the Group’s overall risk profile. The ALCO periodically reviews the Group’s capital structure to maintain an optimal balance among risk, return and capital adequacy.

The Group has developed and maintained a sound framework of policies and controls on capital management to support the development of the Group’s business and to meet the statutory capital adequacy ratio.



## 4. Financial risk management (continued)

### 4.5 Capital management (continued)

The Group has complied with all the statutory capital requirements of the HKMA for the reported periods in respect of banking operation. The HKMA supervises BOCHK and certain subsidiaries specified by the HKMA on a consolidated and solo basis and, as such, receives information on the capital adequacy of, and sets capital requirements for those companies as a whole. Individual overseas banking subsidiaries and branches are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements. Certain non-banking financial subsidiaries are also subject to the supervision and capital requirements of local regulatory authorities.

The ALCO monitors the Group's capital adequacy and adjusts the capital mix where appropriate. The Group has adopted the foundation internal ratings-based ("FIRB") approach to calculate the credit risk capital charge for the majority of its non-securitisation exposures. Small residual credit exposures are remained under the standardised (credit risk) ("STC") approach. The Group has adopted the standardised credit valuation adjustment ("CVA") method to calculate the capital charge for the CVA risk of the counterparty.

The Group continues to adopt the internal models ("IMM") approach to calculate the general market risk capital charge for foreign exchange and interest rate exposures and, with the approval from the HKMA, exclude its structural FX positions in the calculation of the market risk capital charge. The Group continues to adopt the standardised (market risk) ("STM") approach to calculate the market risk capital charge for the remaining exposures.

The Group continues to adopt the standardised (operational risk) ("STO") approach to calculate the operational risk capital charge.

The Group has continued to adopt an internal capital adequacy assessment process ("ICAAP") to comply with the HKMA's requirements in the Supervisory Policy Manual "Supervisory Review Process" in 2021. Based on the HKMA's guidelines on Pillar II, ICAAP has been initiated to assess the extra capital needed to cover the material risks not captured or not adequately captured under Pillar I, and therefore minimum Common Equity Tier 1 capital ratio, minimum Tier 1 capital ratio and minimum Total capital ratio are determined. Meanwhile, operating ranges for the aforementioned capital ratios have also been established which enable the flexibility for future business growth and efficiency of capital utilisation. The Group considers this ICAAP as an on-going process for capital management and periodically reviews and adjusts its capital structure where appropriate in relation to the overall risk profile.

In addition, the capital plan of the Group is drawn up annually and then submitted to the Board for approval after endorsement of the ALCO. The plan is built up by assessing the implications of various factors upon capital adequacy such as the business strategies, return on equity, risk appetite, credit rating, as well as regulatory requirements. Hence, the future capital requirement is determined and capital sources are identified also. The plan is to ensure the Group maintains adequate capital and appropriate capital structure which align with its business development needs, thereby achieving an optimal balance among risk, return and capital adequacy.

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.5 Capital management (continued)

##### (A) Basis of regulatory consolidation

The consolidation basis for regulatory purposes comprises the positions of BOCHK and certain subsidiaries specified by the HKMA in accordance with the Banking (Capital) Rules. For accounting purposes, subsidiaries are consolidated in accordance with HKFRSs.

The Company, its subsidiaries of BOC Group Life Assurance Company Limited, BOCHK Asset Management (Cayman) Limited and BOC Insurance (International) Holdings Company Limited (including their subsidiaries), and certain subsidiaries of BOCHK are included within the accounting scope of consolidation but not included within the regulatory scope of consolidation.

The particulars of the above-mentioned subsidiaries of BOCHK are as follows:

Name	2021		2020	
	Total assets HK\$'m	Total equity HK\$'m	Total assets HK\$'m	Total equity HK\$'m
BOC Group Trustee Company Limited	200	200	200	200
BOCI-Prudential Trustee Limited	593	491	553	498
China Bridge (Malaysia) Sdn. Bhd.	12	2	13	9
Bank of China (Hong Kong) Nominees Limited	–	–	–	–
Bank of China (Hong Kong) Trustees Limited	8	8	11	11
BOC Financial Services (Nanning) Company Limited	199	40	248	43
BOCHK Information Technology (Shenzhen) Co., Ltd.	399	275	387	265
BOCHK Information Technology Services (Shenzhen) Co., Ltd.	441	373	421	360
Che Hsing (Nominees) Limited*	N/A	N/A	–	–
Po Sang Financial Investment Services Company Limited	364	345	364	345
Po Sang Securities and Futures Limited	595	415	952	375
Sin Hua Trustee Limited	5	5	5	5
Billion Express Development Inc.	–	–	–	–
Billion Orient Holdings Ltd.	–	–	–	–
Elite Bond Investments Ltd.	–	–	–	–
Express Capital Enterprise Inc.	–	–	–	–
Express Charm Holdings Corp.	–	–	–	–
Express Shine Assets Holdings Corp.	–	–	–	–
Express Talent Investment Ltd.	–	–	–	–
Gold Medal Capital Inc.	–	–	–	–
Gold Tap Enterprises Inc.	–	–	–	–
Maxi Success Holdings Ltd.	–	–	–	–
Smart Linkage Holdings Inc.	–	–	–	–
Smart Union Capital Investments Ltd.	–	–	–	–
Success Trend Development Ltd.	–	–	–	–
Wise Key Enterprises Corp.	–	–	–	–

\* Che Hsing (Nominees) Limited was dissolved on 16 February 2021.

## 4. Financial risk management (continued)

### 4.5 Capital management (continued)

#### (A) Basis of regulatory consolidation (continued)

The principal activities of the above subsidiaries are set out in “Appendix – Subsidiaries of the Company”.

There were no subsidiaries which are included within the regulatory scope of consolidation but not included within the accounting scope of consolidation as at 31 December 2021 (2020: Nil).

There were also no subsidiaries which are included within both the accounting scope of consolidation and the regulatory scope of consolidation where the methods of consolidation differ as at 31 December 2021 (2020: Nil).

The Group operates subsidiaries in different countries/regions where capital is governed by local rules and there may be restrictions on the transfer of funds or regulatory capital between the members of the Group.

#### (B) Capital ratio

The capital ratios are analysed as follows:

	2021	2020
CET1 capital ratio	17.30%	17.75%
Tier 1 capital ratio	19.11%	19.67%
Total capital ratio	21.44%	22.10%

## NOTES TO THE FINANCIAL STATEMENTS

### 4. Financial risk management (continued)

#### 4.5 Capital management (continued)

##### (B) Capital ratio (continued)

The consolidated capital base after deductions used in the calculation of the above capital ratios is analysed as follows:

	2021 HK\$'m	2020 HK\$'m
CET1 capital: instruments and reserves		
Directly issued qualifying CET1 capital instruments	43,043	43,043
Retained earnings	193,800	184,230
Disclosed reserves	45,033	45,100
CET1 capital before regulatory deductions	281,876	272,373
CET1 capital: regulatory deductions		
Valuation adjustments	(66)	(24)
Other intangible assets (net of associated deferred tax liabilities)	(1,623)	(1,502)
Deferred tax assets (net of associated deferred tax liabilities)	(185)	(91)
Gains and losses due to changes in own credit risk on fair valued liabilities	(31)	(21)
Cumulative fair value gains arising from the revaluation of land and buildings (own-use and investment properties)	(49,709)	(49,413)
Regulatory reserve for general banking risks	(6,073)	(4,780)
Total regulatory deductions to CET1 capital	(57,687)	(55,831)
CET1 capital	224,189	216,542
AT1 capital: instruments		
Qualifying AT1 capital instruments classified as equity under applicable accounting standards	23,476	23,476
AT1 capital	23,476	23,476
Tier 1 capital	247,665	240,018
Tier 2 capital: instruments and provisions		
Collective provisions and regulatory reserve for general banking risks eligible for inclusion in Tier 2 capital	7,805	7,322
Tier 2 capital before regulatory deductions	7,805	7,322
Tier 2 capital: regulatory deductions		
Add back of cumulative fair value gains arising from the revaluation of land and buildings (own-use and investment properties) eligible for inclusion in Tier 2 capital	22,369	22,236
Total regulatory adjustments to Tier 2 capital	22,369	22,236
Tier 2 capital	30,174	29,558
<b>Total regulatory capital</b>	<b>277,839</b>	<b>269,576</b>

## 4. Financial risk management (continued)

### 4.5 Capital management (continued)

#### (B) Capital ratio (continued)

The capital buffer ratios are analysed as follows:

	2021	2020
Capital conservation buffer ratio	2.500%	2.500%
Higher loss absorbency ratio	1.500%	1.500%
Countercyclical capital buffer ratio	0.799%	0.790%

#### (C) Leverage ratio

The leverage ratio is analysed as follows:

	2021 HK\$'m	2020 HK\$'m
Tier 1 capital	247,665	240,018
Leverage ratio exposure	3,357,085	3,036,425
Leverage ratio	7.38%	7.90%

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy as defined in HKFRS 13, "Fair value measurement". The categorisation are determined with reference to the observability and significance of the inputs used in the valuation methods and based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1: based on quoted prices (unadjusted) in active markets for identical assets or liabilities. This category includes equity securities listed on exchange, debt instruments issued by certain governments and certain exchange-traded derivative contracts.
- Level 2: based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly. This category includes majority of the OTC derivative contracts, debt securities and certificates of deposit with quote from pricing services vendors, issued structured deposits and other debt instruments. It also includes certain foreign exchange contracts, precious metals and properties with insignificant adjustments or calibrations made to observable market inputs.
- Level 3: based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable. This category includes equity investments, debt instruments and certain OTC derivative contracts with significant unobservable components. It also includes properties with significant adjustments made to observable market inputs.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

#### 5.1 Financial instruments measured at fair value

The Group has an established governance structure and controls framework to ensure that fair values are either determined or validated by control units independent of the front offices. Control units have overall responsibility for independent verification of valuation results from front line businesses and all other significant fair value measurements. Other specific controls include verification of observable pricing inputs; review and approval for new models and changes to models; calibration and back-testing of models against observed market transactions; analysis and investigation of significant daily valuation movements; review of significant unobservable inputs and valuation adjustments. Significant valuation issues are reported to senior management, Risk Committee and Audit Committee.

Generally, the unit of account for a financial instrument is the individual instrument. HKFRS 13 permits a portfolio exception, through an accounting policy election, to measure the fair value of a portfolio of financial assets and financial liabilities on the basis of the net open risk position when certain criteria are met. The Group applies valuation adjustments at an individual instrument level, consistent with that unit of account. According to its risk management policies and systems to manage derivative financial instruments, the fair value adjustments of certain derivative portfolios that meet those criteria is measured on the basis of the price to be received or paid for net open risk. Those portfolio-level adjustments are allocated to the individual assets and liabilities on the basis of its relative net risk exposure to the portfolio.

The Group uses valuation techniques or broker/dealer quotations to determine the fair value of financial instruments when unable to obtain the open market quotation in active markets.

## 5. Fair values of assets and liabilities (continued)

### 5.1 Financial instruments measured at fair value (continued)

The main parameters used in valuation techniques for financial instruments held by the Group include bond prices, interest rates, foreign exchange rates, equity and stock prices, commodity prices, volatilities and correlations, counterparty credit spreads and others, which are mostly observable and obtainable from open market.

The technique used to calculate the fair value of the following financial instruments is as below:

#### **Debt securities and certificates of deposit and other debt instruments**

The fair value of these instruments is determined by obtaining quoted market prices from exchange, dealer or independent pricing service vendors or using discounted cash flow technique. Discounted cash flow model is a valuation technique that measures present value using estimated expected future cash flows from the instruments and then discounts these flows using a discount rate or discount margin that reflects the credit spreads required by the market for instruments with similar risk. These inputs are observable or can be corroborated by observable or unobservable market data.

#### **Asset backed securities**

For this class of instruments, external prices are obtained from independent third parties. The valuation of these securities, depending on the nature of transaction, is estimated from market standard cash flow models with input parameter which include spreads to discount rates, default and recovery rates and prepayment rates that may be observable or compiled through matrix pricing for similar issues.

#### **Derivatives**

OTC derivative contracts include forward, swap and option contracts on foreign exchange, interest rate, equity, commodity or credit. The fair values of these contracts are mainly measured using valuation techniques such as discounted cash flow models and option pricing models. The inputs can be observable or unobservable market data. Observable inputs include interest rate, foreign exchange rates, equity and stock prices, commodity prices, credit default swap spreads, volatilities and correlations. Unobservable inputs may be used for less commonly traded option products which are embedded in structured deposits. For certain complex derivative contracts, the fair values are determined based on broker/dealer price quotations.

Credit valuation adjustments (“CVAs”) and debit valuation adjustments (“DVAs”) are applied to the Group’s OTC derivatives. These adjustments reflect market factors movement, expectations of counterparty creditworthiness and the Group’s own credit spread respectively. They are mainly determined for each counterparty and are dependent on expected future values of exposures, default probabilities and recovery rates.

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.1 Financial instruments measured at fair value (continued)

##### (A) Fair value hierarchy

	2021			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Financial assets</b>				
Trading assets (Note 23)				
– Debt securities and certificates of deposit	121	23,746	–	23,867
– Equity securities	23	–	–	23
– Other debt instruments	–	3,201	–	3,201
Other financial assets mandatorily classified at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	1,481	13,433	800	15,714
– Equity securities	2,520	144	193	2,857
– Fund	4,550	1,776	4,876	11,202
Financial assets designated at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	711	766	–	1,477
– Other debt instruments	–	15,196	–	15,196
Derivative financial instruments (Note 24)	20	33,166	–	33,186
Advances and other accounts at FVOCI (Note 25)	–	2,757	–	2,757
Investment in securities at FVOCI (Note 26)				
– Debt securities and certificates of deposit	291,912	578,691	1,217	871,820
– Equity securities	2,010	1,459	2,132	5,601
<b>Financial liabilities</b>				
Financial liabilities at fair value through profit or loss (Note 32)				
– Trading liabilities	–	12,322	–	12,322
– Financial liabilities designated at fair value through profit or loss	–	198	–	198
Derivative financial instruments (Note 24)	11	29,746	–	29,757



## 5. Fair values of assets and liabilities (continued)

### 5.1 Financial instruments measured at fair value (continued)

#### (A) Fair value hierarchy (continued)

	2020			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Financial assets</b>				
Trading assets (Note 23)				
– Debt securities and certificates of deposit	–	26,817	–	26,817
– Equity securities	49	–	–	49
– Other debt instruments	–	3,300	–	3,300
Other financial assets mandatorily classified at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	–	15,026	846	15,872
– Equity securities	3,910	–	–	3,910
– Fund	4,934	1,183	2,724	8,841
Financial assets designated at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	720	587	–	1,307
– Other debt instruments	–	118	–	118
Derivative financial instruments (Note 24)	33	52,823	–	52,856
Advances and other accounts at FVOCI (Note 25)	–	1,163	–	1,163
Investment in securities at FVOCI (Note 26)				
– Debt securities and certificates of deposit	258,764	493,776	1,632	754,172
– Equity securities	2,441	1,074	2,367	5,882
<b>Financial liabilities</b>				
Financial liabilities at fair value through profit or loss (Note 32)				
– Trading liabilities	–	20,336	–	20,336
– Financial liabilities designated at fair value through profit or loss	–	–	–	–
Derivative financial instruments (Note 24)	35	60,278	–	60,313

There were no financial asset and liability transfers between level 1 and level 2 for the Group during 2021 (2020: There were transfers of derivative financial assets of HK\$15,498 million and derivative financial liabilities of HK\$11,227 million from level 1 to level 2 for the Group during 2020 as a result of calibrations of market observable inputs on certain financial instruments. The impact arising from such calibrations was insignificant to the fair value measurement of the relevant financial instruments).

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.1 Financial instruments measured at fair value (continued)

##### (B) Reconciliation of level 3 items

	2021					
	Financial assets					
	Other financial assets mandatorily classified at FVPL			Investment in securities at FVOCI		
	Debt securities HK\$'m	Equity securities HK\$'m	Fund HK\$'m	Derivative financial instruments HK\$'m	Debt securities HK\$'m	Equity securities HK\$'m
At 1 January 2021	846	-	2,724	-	1,632	2,367
(Losses)/gains						
- Income statement						
- Net trading gain	-	-	-	-	-	-
- Net (loss)/gain on other financial instruments at fair value through profit or loss	(46)	(1)	509	-	-	-
- Other comprehensive income						
- Change in fair value	-	-	-	-	(69)	(246)
Additions	-	194	1,661	-	-	11
Disposals, redemptions and maturity	-	-	(18)	-	(346)	-
Transfer out of level 3	-	-	-	-	-	-
At 31 December 2021	800	193	4,876	-	1,217	2,132
Total unrealised (losses)/gains for the year included in income statement for financial assets held as at 31 December 2021						
- Net (loss)/gain on other financial instruments at fair value through profit or loss	(46)	(1)	509	-	-	-

## 5. Fair values of assets and liabilities (continued)

### 5.1 Financial instruments measured at fair value (continued)

#### (B) Reconciliation of level 3 items (continued)

	2020					
	Financial assets					
	Other financial assets mandatorily classified at FVPL			Investment in securities at FVOCI		
	Debt securities HK\$'m	Equity securities HK\$'m	Fund HK\$'m	Derivative financial instruments HK\$'m	Debt securities HK\$'m	Equity securities HK\$'m
At 1 January 2020	2,252	–	1,474	11	1,867	2,154
Gains						
– Income statement						
– Net trading gain	–	–	–	146	–	–
– Net gain on other financial instruments at fair value through profit or loss	223	–	107	–	–	–
– Other comprehensive income						
– Change in fair value	–	–	–	–	191	213
Additions	194	–	1,143	–	–	–
Disposals, redemptions and maturity	(1,823)	–	–	–	(426)	–
Transfer out of level 3	–	–	–	(157)	–	–
At 31 December 2020	846	–	2,724	–	1,632	2,367
Total unrealised gains for the year included in income statement for financial assets held as at 31 December 2020						
– Net gain on other financial instruments at fair value through profit or loss	49	–	107	–	–	–

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.1 Financial instruments measured at fair value (continued)

##### (B) Reconciliation of level 3 items (continued)

As at 31 December 2021 and 2020, financial instruments categorised as level 3 are mainly comprised of debt securities, fund, unlisted equity shares and certain OTC derivative contracts.

For certain illiquid debt securities, equity securities and fund, the Group obtains valuation quotations from counterparties which may be based on unobservable inputs with significant impact on the valuation. For certain OTC derivative contracts, the counterparty credit spreads used in valuation techniques are unobservable inputs with significant impact on valuation. Therefore, these instruments have been classified by the Group as level 3. Transfers out of level 3 during 2020 were due to change of valuation observability. The Group has established internal control procedures to control the Group's exposure to such financial instruments.

The fair values of unlisted FVOCI equity investments are determined with reference to (i) multiples of comparable listed companies, including average of the price/earnings ratios and average of the price/book values ratios of the comparables; or (ii) dividend discount model calculation of the underlying equity investments; or (iii) net asset value with fair value adjustments on certain assets or liabilities held (if applicable), if neither appropriate comparables nor dividend discount model calculation is available or applicable. The significant unobservable inputs and their range applied in the fair values measurement of the Group's unlisted FVOCI equity investments includes price/earnings ratios of the comparables of 25.76x – 51.58x, price/book values ratios of the comparables of 0.49x – 1.04x, liquidity discount of 30%, dividend payout ratio of 23.44% – 83.51% and return on shareholders' equity of 7.95% – 12.21%. The fair value is positively correlated to the price/earnings ratios and price/book value ratios of appropriate comparables, forecasted stream of future dividend payout or net asset values, and is negatively correlated to the liquidity discount used in the average of price/earnings ratios and price/book value ratios of comparables or discount rate used in dividend discount model.

Had all of the significant unobservable inputs applied on the valuation techniques favourably changed/unfavourably changed by 5% (2020: 5%), the Group's other comprehensive income would have increased by HK\$96 million and decreased by HK\$94 million, respectively (2020: increased by HK\$55 million and decreased by HK\$54 million, respectively).

### 5. Fair values of assets and liabilities (continued)

#### 5.2 Financial instruments not measured at fair value

Fair value estimates are made at a specific point in time based on relevant market information and information about various financial instruments. The following methods and assumptions have been used to estimate the fair value of each class of financial instrument as far as practicable.

##### **Balances with/from banks and other financial institutions and trade bills**

Substantially all the financial assets and liabilities mature within one year from the balance sheet date and their carrying value approximates fair value.

##### **Advances to customers and banks and other financial institutions**

Substantially all the advances to customers and banks and other financial institutions are on floating rate terms, bear interest at prevailing market interest rates and their carrying value approximates fair value.

##### **Investment in securities at amortised cost**

The fair value of securities at amortised cost is determined by using the same approach as those debt securities and certificates of deposit and asset backed securities measured at fair value as described in Note 5.1.

##### **Deposits from customers**

Substantially all the deposits from customers mature within one year from the balance sheet date and their carrying value approximates fair value.

##### **Debt securities and certificates of deposit in issue**

The fair value of these instruments is determined by using the same approach as those debt securities and certificates of deposit measured at fair value as described in Note 5.1.

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.2 Financial instruments not measured at fair value (continued)

The following tables set out the carrying values and fair values of the financial instruments not measured at fair value, except for the above with their carrying values being approximation of fair values.

	2021		2020	
	Carrying value HK\$'m	Fair value HK\$'m	Carrying value HK\$'m	Fair value HK\$'m
<b>Financial assets</b>				
Investment in securities at amortised cost (Note 26)	<b>216,812</b>	<b>219,917</b>	120,431	127,060
<b>Financial liabilities</b>				
Debt securities and certificates of deposit in issue (Note 34)	<b>2,423</b>	<b>2,426</b>	426	426

The following tables show the fair value hierarchy for financial instruments with fair values disclosed.

	2021			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Financial assets</b>				
Investment in securities at amortised cost	<b>995</b>	<b>215,416</b>	<b>3,506</b>	<b>219,917</b>
<b>Financial liabilities</b>				
Debt securities and certificates of deposit in issue	–	<b>2,426</b>	–	<b>2,426</b>

  

	2020			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Financial assets</b>				
Investment in securities at amortised cost	957	122,887	3,216	127,060
<b>Financial liabilities</b>				
Debt securities and certificates of deposit in issue	–	426	–	426

## 5. Fair values of assets and liabilities (continued)

### 5.3 Non-financial instruments measured at fair value

The Group uses valuation techniques or quoted market prices in active market to determine the fair value of non-financial instruments.

#### Investment properties and premises

The Group's properties can be divided into investment properties and premises. All of the Group's investment properties and premises were revalued as at year end. This year, the valuations were carried out by an independent firm of chartered surveyors, Knight Frank Petty Limited, who have among their staff Fellow and Members of The Hong Kong Institute of Surveyors with recent experience in the locations and categories of properties being valued. The Group's Management had discussions with the surveyors on the valuation methods, valuation assumptions and valuation results when the valuation is performed at each interim and annual reporting date. There has been no change in valuation methods during the year and the methods used are consistent with last year.

#### (i) Valuation methods and inputs used in level 2 fair value measurements

The fair value of properties classified as level 2 is determined using either the market comparison approach by reference to recent sales price of comparable properties or the income capitalisation approach by reference to market rent and capitalisation rate, with appropriate adjustments to reflect the differences between the comparable properties and the subject properties. These adjustments are considered as insignificant to the measurement.

The Group's properties are located in Hong Kong, certain major cities in the mainland, Thailand and Malaysia where the property markets are considered active and transparent. Sales price, market rent and capitalisation rate of comparable properties are generally observable either directly or indirectly in these markets.

#### (ii) Information about level 3 fair value measurements

The fair value of all of the Group's properties classified as level 3, except for the bank vault, is determined using either the market comparison approach or the income capitalisation approach, adjusted for a premium or a discount specific to the features of the Group's properties compared to the comparable properties.

The fair value of the bank vault is determined using the depreciated replacement cost approach as no direct comparable is available given the specialised nature of the property. The major inputs are the market value of the existing land, the current cost of replacing the property and the depreciation rate. Appropriate adjustments are made to reflect the specialised nature of the property.

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.3 Non-financial instruments measured at fair value (continued)

##### Investment properties and premises (continued)

##### (ii) Information about level 3 fair value measurements (continued)

The valuation methods and significant unobservable inputs used in the fair value measurement of the Group's properties classified as level 3 are as follows:

	Valuation method	Significant unobservable inputs	Weighted average	Relationship of unobservable inputs to fair value
Bank vault	Depreciated replacement cost approach	Depreciation rate	2% (2020: 2%) per year	The higher the depreciation rate, the lower the fair value.
		Premium on specialised nature of the property	+15% (2020: +15%) to building cost	The higher the premium, the higher the fair value.
Other properties	Market comparison approach or income capitalisation approach	Premium/(discount) on features of the property compared to comparable properties	-3.7% (2020: -8%)	The higher the premium, the higher the fair value.  The higher the discount, the lower the fair value.

Premium/(discount) on features of a property is determined after taken into account various factors, such as time for market movement, location, accessibility, building age/condition, floor level, size, layout, etc., with reference to the differences in features with comparable properties.

For the fair value of the investment property with a redevelopment plan, it is measured on a redevelopment basis by adopting residual approach which is a valuation method generally used to value development of lands. Gross Development Value ("GDV") is first determined using market comparison approach by reference to recent transactions of comparable properties and adjusted for a premium or a discount specific to the quality of the Group's development compared to the comparable properties. The ultimate fair value of the redevelopment is the residual value after deducting the present value of the development costs (including professional fees, demolition cost, constructions cost etc.) and developer's profit from the present value of the GDV. The higher the GDV, the higher the fair value; the higher the development costs and the discount rate, the lower is the fair value.

##### Precious metals

The fair values of precious metals are determined by obtaining quoted market prices in active market or market quote with certain adjustments.



## 5. Fair values of assets and liabilities (continued)

### 5.3 Non-financial instruments measured at fair value (continued)

#### (A) Fair value hierarchy

	2021			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Non-financial assets</b>				
Investment properties (Note 28)	–	477	17,245	17,722
Properties, plant and equipment (Note 29)				
– Premises	–	3,302	40,482	43,784
Other assets (Note 30)				
– Precious metals	–	10,207	–	10,207
	2020			
	Level 1 HK\$'m	Level 2 HK\$'m	Level 3 HK\$'m	Total HK\$'m
<b>Non-financial assets</b>				
Investment properties (Note 28)	–	697	17,744	18,441
Properties, plant and equipment (Note 29)				
– Premises	–	2,601	40,947	43,548
Other assets (Note 30)				
– Precious metals	–	10,697	–	10,697

There were no non-financial asset transfers between level 1 and level 2 for the Group during the year (2020: There were transfers of HK\$5,721 million of precious metals from level 1 to level 2 for the Group during 2020 as a result of calibrations of market observable inputs on precious metals. The impact arising from such calibrations was insignificant to the fair value measurement of precious metals. There were no other non-financial asset transfers between level 1 and level 2 for the Group during the year).

## NOTES TO THE FINANCIAL STATEMENTS

### 5. Fair values of assets and liabilities (continued)

#### 5.3 Non-financial instruments measured at fair value (continued)

##### (B) Reconciliation of level 3 items

	2021	
	Non-financial assets	
	Investment properties HK\$'m	Properties, plant and equipment Premises HK\$'m
At 1 January 2021	17,744	40,947
Losses		
– Income statement		
– Net loss from fair value adjustments on investment properties	(230)	–
– Net loss from revaluation of premises	–	(16)
– Other comprehensive income		
– Revaluation of premises	–	616
Depreciation	–	(1,129)
Additions	232	38
Transfer into level 3	412	606
Transfer out of level 3	(163)	(1,291)
Reclassification	(750)	750
Exchange difference	–	(39)
At 31 December 2021	17,245	40,482
Total unrealised losses for the year included in income statement for non-financial assets held as at 31 December 2021		
– Net loss from fair value adjustments on investment properties	(230)	–
– Net loss from revaluation of premises	–	(16)
	(230)	(16)

## 5. Fair values of assets and liabilities (continued)

### 5.3 Non-financial instruments measured at fair value (continued)

#### (B) Reconciliation of level 3 items (continued)

	2020	
	Non-financial assets	
	Investment properties HK\$'m	Properties, plant and equipment Premises HK\$'m
At 1 January 2020	19,714	45,322
Losses		
– Income statement		
– Net loss from fair value adjustments on investment properties	(1,622)	–
– Net loss from revaluation of premises	–	(57)
– Other comprehensive income		
– Revaluation of premises	–	(1,720)
Depreciation	–	(1,157)
Additions	9	87
Transfer into level 3	–	–
Transfer out of level 3	(277)	(1,608)
Reclassification	(80)	80
Exchange difference	–	–
At 31 December 2020	17,744	40,947
Total unrealised losses for the year included in income statement for non-financial assets held as at 31 December 2020		
– Net loss from fair value adjustments on investment properties	(1,622)	–
– Net loss from revaluation of premises	–	(57)
	(1,622)	(57)

The transfer of properties into and out of level 3 is due to change in the premium/(discount) on features applied between the subject and comparable properties during the year. Premium/(discount) on features is determined with reference to differences in features between the subject properties and the comparable properties recently transacted in the market. As comparable properties that come from recent market transactions may be different in each year, the premium/(discount) on features applied between the subject and comparable properties would change from year to year accordingly. As a result, the significance of adjustments made to observable market inputs may vary and lead to the transfer of properties into and out of level 3.

## NOTES TO THE FINANCIAL STATEMENTS

### 6. Net interest income

	2021 HK\$'m	2020 HK\$'m
<b>Interest income</b>		
Advances to customers, due from banks and other financial institutions	<b>27,419</b>	34,744
Investment in securities and financial assets at fair value through profit or loss	<b>12,760</b>	14,960
Others	<b>119</b>	224
	<b>40,298</b>	49,928
<b>Interest expense</b>		
Deposits from customers, due to banks and other financial institutions	<b>(8,238)</b>	(14,743)
Debt securities and certificates of deposit in issue	<b>(42)</b>	(2)
Subordinated liabilities	–	(80)
Lease liabilities	<b>(34)</b>	(54)
Others	<b>(43)</b>	(311)
	<b>(8,357)</b>	(15,190)
<b>Net interest income</b>	<b>31,941</b>	34,738

Included within interest income are HK\$32,018 million (2020: HK\$38,633 million) and HK\$7,464 million (2020: HK\$10,122 million) for financial assets measured at amortised cost and at fair value through other comprehensive income respectively.

Included within interest expense are HK\$8,346 million (2020: HK\$14,947 million) for financial liabilities that are not measured at fair value through profit or loss.

## 7. Net fee and commission income

	2021 HK\$'m	2020 HK\$'m
<b>Fee and commission income</b>		
Securities brokerage	3,743	3,567
Loan commissions	2,746	2,310
Credit card business	2,141	1,859
Insurance	1,529	1,272
Trust and custody services	764	689
Payment services	751	740
Funds distribution	724	767
Bills commissions	623	591
Safe deposit box	306	306
Funds management	161	130
Currency exchange	119	226
Others	1,196	1,058
	<b>14,803</b>	13,515
<b>Fee and commission expense</b>		
Credit card business	(1,400)	(1,179)
Securities brokerage	(458)	(415)
Insurance	(434)	(405)
Others	(639)	(674)
	<b>(2,931)</b>	(2,673)
<b>Net fee and commission income</b>	<b>11,872</b>	10,842
Of which arise from:		
Financial assets or financial liabilities that are not measured at fair value through profit or loss		
– Fee and commission income	3,073	2,588
– Fee and commission expense	(13)	(9)
	<b>3,060</b>	2,579
Trust and other fiduciary activities		
– Fee and commission income	967	888
– Fee and commission expense	(39)	(30)
	<b>928</b>	858

## NOTES TO THE FINANCIAL STATEMENTS

### 8. Net trading gain

	2021 HK\$'m	2020 HK\$'m
Net gain/(loss) from:		
Foreign exchange and foreign exchange products	4,725	5,282
Interest rate instruments and items under fair value hedge	(60)	(619)
Commodities	175	361
Equity and credit derivative instruments	251	150
	<b>5,091</b>	<b>5,174</b>

### 9. Net (loss)/gain on other financial instruments at fair value through profit or loss

	2021 HK\$'m	2020 HK\$'m
Net (loss)/gain on other financial instruments mandatorily classified at fair value through profit or loss	(1,110)	1,838
Net (loss)/gain on financial instruments designated at fair value through profit or loss	(26)	121
	<b>(1,136)</b>	<b>1,959</b>

### 10. Net gain on other financial instruments

	2021 HK\$'m	2020 HK\$'m
Net gain on disposal/redemption of investment in securities at FVOCI	1,171	4,503
Net (loss)/gain on disposal/redemption of investment in securities at amortised cost	(76)	62
Others	25	7
	<b>1,120</b>	<b>4,572</b>

Gain on disposal of investment in securities at amortised cost due to credit deterioration amounted to HK\$41 million (2020: HK\$98 million).

## 11. Other operating income

	2021 HK\$'m	2020 HK\$'m
Dividend income		
– From investment in securities at FVOCI derecognised during the year	61	36
– From investment in securities at FVOCI held at the end of the year	303	199
Gross rental income from investment properties	564	587
Less: Outgoings in respect of investment properties	(57)	(61)
Others	112	135
	<b>983</b>	896

Included in the “Outgoings in respect of investment properties” is HK\$7 million (2020: HK\$4 million) of direct operating expenses related to investment properties that were not let during the year.

## 12. Net insurance benefits and claims and movement in liabilities

	2021 HK\$'m	2020 HK\$'m
<b>Gross insurance benefits and claims and movement in liabilities</b>		
Claims, benefits and surrenders paid	(15,563)	(14,036)
Movement in liabilities	(13,079)	(20,077)
	<b>(28,642)</b>	(34,113)
<b>Reinsurers' share of benefits and claims and movement in liabilities</b>		
Reinsurers' share of claims, benefits and surrenders paid	10,537	8,371
Reinsurers' share of movement in liabilities	1,512	3,575
	<b>12,049</b>	11,946
<b>Net insurance benefits and claims and movement in liabilities</b>	<b>(16,593)</b>	(22,167)

## 13. Net charge of impairment allowances

	2021 HK\$'m	2020 HK\$'m
Net charge of impairment allowances on:		
Advances and other accounts	(1,966)	(2,489)
Balances and placements with banks and other financial institutions	(15)	(5)
Investment in securities		
– At FVOCI	(26)	(100)
– At amortised cost	(37)	(16)
	<b>(63)</b>	(116)
Loan commitments and financial guarantee contracts	(80)	(77)
	<b>(2,124)</b>	(2,687)
Others	(21)	(20)
Net charge of impairment allowances	<b>(2,145)</b>	(2,707)

## NOTES TO THE FINANCIAL STATEMENTS

### 14. Operating expenses

	2021 HK\$'m	2020 HK\$'m
Staff costs (including directors' emoluments)		
– Salaries and other costs	9,005	8,916
– Pension cost	537	545
	<b>9,542</b>	9,461
Premises and equipment expenses (excluding depreciation and amortisation)		
– Short-term leases, leases of low-value assets and variable lease payments	11	11
– Others	1,221	1,224
	<b>1,232</b>	1,235
Depreciation and amortisation	<b>3,039</b>	3,040
Auditor's remuneration		
– Audit services	25	29
– Non-audit services	9	14
Other operating expenses	<b>2,560</b>	2,568
	<b>16,407</b>	16,347

### 15. Net loss from disposal of/fair value adjustments on investment properties

	2021 HK\$'m	2020 HK\$'m
Net loss from fair value adjustments on investment properties (Note 28)	<b>(229)</b>	(1,622)

### 16. Net loss from disposal/revaluation of properties, plant and equipment

	2021 HK\$'m	2020 HK\$'m
Net loss from disposal of equipment, fixtures and fittings	<b>(3)</b>	(4)
Net loss from revaluation of premises (Note 29)	<b>(17)</b>	(59)
	<b>(20)</b>	(63)



## 17. Taxation

Taxation in the income statement represents:

	2021 HK\$'m	2020 HK\$'m
Current tax		
Hong Kong profits tax		
– Current year taxation	4,829	5,412
– Over-provision in prior years	(283)	(180)
	4,546	5,232
Taxation outside Hong Kong		
– Current year taxation	447	419
– Over-provision in prior years	(1)	(25)
	4,992	5,626
Deferred tax		
Origination and reversal of temporary differences and unused tax credits (Note 36)	(23)	(511)
	4,969	5,115

Hong Kong profits tax has been provided at the rate of 16.5% (2020: 16.5%) on the estimated assessable profits arising in Hong Kong during the year. Taxation on profits outside Hong Kong has been calculated on the estimated assessable profits for the year at the rates of taxation prevailing in the countries/regions in which the Group operates.

The taxation on the Group's profit before taxation that differs from the theoretical amount that would arise using the taxation rate of Hong Kong is as follows:

	2021 HK\$'m	2020 HK\$'m
Profit before taxation	29,968	33,583
Calculated at a taxation rate of 16.5% (2020: 16.5%)	4,945	5,541
Effect of different taxation rates in other countries/regions	199	75
Income not subject to taxation	(240)	(410)
Expenses not deductible for taxation purposes	489	461
Utilisation of previously unrecognised tax losses	(15)	(10)
Over-provision in prior years	(284)	(205)
Withholding tax outside Hong Kong	101	(110)
Others	(226)	(227)
Taxation charge	4,969	5,115
Effective tax rate	16.6%	15.2%

## NOTES TO THE FINANCIAL STATEMENTS

### 18. Dividends

	2021		2020	
	Per share HK\$	Total HK\$'m	Per share HK\$	Total HK\$'m
Interim dividend paid	<b>0.447</b>	<b>4,726</b>	0.447	4,726
Proposed final dividend	<b>0.683</b>	<b>7,221</b>	0.795	8,405
	<b>1.130</b>	<b>11,947</b>	1.242	13,131

At a meeting held on 30 August 2021, the Board declared an interim dividend of HK\$0.447 per ordinary share for the first half of 2021 amounting to approximately HK\$4,726 million.

At a meeting held on 29 March 2022, the Board proposed to recommend to the Annual General Meeting on 29 June 2022 a final dividend of HK\$0.683 per ordinary share for the year ended 31 December 2021 amounting to approximately HK\$7,221 million. This proposed final dividend is not reflected as a dividend payable in these financial statements, but will be reflected as an appropriation of retained earnings for the year ending 31 December 2022.

### 19. Earnings per share

The calculation of basic earnings per share for the year ended 31 December 2021 is based on the consolidated profit for the year attributable to equity holders of the Company of approximately HK\$22,970 million (2020: HK\$26,487 million) and on the ordinary shares in issue of 10,572,780,266 shares (2020: 10,572,780,266 ordinary shares).

There was no dilution of earnings per share as no potential ordinary shares were in issue for the year ended 31 December 2021 (2020: Nil).

### 20. Retirement benefit costs

Retirement benefits are provided to eligible employees of the Group. In Hong Kong, defined contribution schemes for the Group's employees are ORSO schemes exempted under the MPF Schemes Ordinance and the BOC-Prudential Easy Choice MPF Scheme.

Under the ORSO schemes, employees make monthly contributions to the ORSO schemes equal to 5% of their basic salaries, while the employer makes monthly contributions equal to 5% to 15% of the employees' monthly basic salaries, depending on years of service. The employees are entitled to receive 100% of the employer's contributions upon retirement, early retirement or termination of employment after completing 10 years of service. Employees with 3 to 9 years of service are entitled to receive the employer's contributions at a scale ranging from 30% to 90% upon termination of employment for other reasons other than summary dismissal. All employer's contributions received by employee are subject to MPF Schemes Ordinance.

With the implementation of the MPF Schemes Ordinance on 1 December 2000, the Group also launched the MPF Scheme according to the regulatory requirement. Since 2019, employees with 5 years of service or above are entitled to employer's voluntary contribution. The trustee of the Scheme is BOCI-Prudential Trustee and the investment manager is BOCI-Prudential Asset Management, which are related parties of the Company.

The Group's total contributions made to the ORSO schemes for the year ended 31 December 2021 amounted to approximately HK\$361 million (2020: approximately HK\$375 million), after a deduction of forfeited contributions of approximately HK\$20 million (2020: approximately HK\$10 million). For the MPF Scheme, the Group contributed approximately HK\$132 million (2020: approximately HK\$132 million) for the year ended 31 December 2021.

## 21. Directors', senior management's and key personnel's emoluments

### (a) Directors' and senior management's emoluments

#### (i) Directors' emoluments

Details of the emoluments paid to or receivable by the directors of the Company in respect of their services rendered for the Company and managing the subsidiaries within the Group during the year are as follows:

	2021				
	Directors' fee HK\$'000	Basic salaries, allowances and benefits in kind HK\$'000	Bonus HK\$'000	Other payments <sup>#</sup> HK\$'000	Total HK\$'000
<b>Executive Directors</b>					
SUN Yu (Chief Executive)	–	5,390	2,905	–	8,295
<b>Non-executive Directors</b>					
LIU Liange	–	–	–	–	–
LIU Jin <sup>Note 1</sup>	–	–	–	–	–
WANG Jiang <sup>Note 2</sup>	–	–	–	–	–
LIN Jingzhen	–	–	–	–	–
CHENG Eva*	600	–	–	–	600
CHOI Koon Shum*	600	–	–	–	600
KOH Beng Seng*	650	–	–	–	650
LAW Yee Kwan Quinn*	550	–	–	–	550
TUNG Savio Wai-Hok*	700	–	–	–	700
	<b>3,100</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>3,100</b>
	<b>3,100</b>	<b>5,390</b>	<b>2,905</b>	<b>–</b>	<b>11,395</b>

Note 1: Appointed during the year.

Note 2: Resigned during the year.

## NOTES TO THE FINANCIAL STATEMENTS

### 21. Directors', senior management's and key personnel's emoluments (continued)

#### (a) Directors' and senior management's emoluments (continued)

##### (i) Directors' emoluments (continued)

	2020				
	Directors' fee HK\$'000	Basic salaries, allowances and benefits in kind HK\$'000	Bonus HK\$'000	Other payments <sup>#</sup> HK\$'000	Total HK\$'000
<b>Executive Directors</b>					
SUN Yu (Chief Executive)	–	140	31	–	171
GAO Yingxin (Chief Executive)	–	3,041	1,636	–	4,677
	–	3,181	1,667	–	4,848
<b>Non-executive Directors</b>					
LIU Liang	–	–	–	–	–
WANG Jiang	–	–	–	–	–
LIN Jingzhen	–	–	–	–	–
CHENG Eva*	600	–	–	–	600
CHOI Koon Shum*	600	–	–	–	600
KOH Beng Seng*	650	–	–	–	650
LAW Yee Kwan Quinn*	550	–	–	–	550
TUNG Savio Wai-Hok*	700	–	–	–	700
	3,100	–	–	–	3,100
	3,100	3,181	1,667	–	7,948

\* Independent Non-executive Directors

# Including the contributions to pension scheme for directors, inducement to join the Group and the compensation for the loss of office paid to or receivable by directors.

There were no directors waived emoluments for the year ended 31 December 2021 (2020: Nil).

## 21. Directors', senior management's and key personnel's emoluments (continued)

### (a) Directors' and senior management's emoluments (continued)

#### (ii) Five highest paid individuals

The five individuals whose emoluments were the highest in the Group for the year include one (2020: Nil) director whose emolument is reflected in the analysis presented above. The emoluments payable to the remaining four (2020: five) individuals during the year are as follows:

	2021 HK\$'m	2020 HK\$'m
Basic salaries and allowances	18	26
Bonus	9	10
Contributions to pension schemes	1	1
	<b>28</b>	<b>37</b>

Emoluments paid to or receivable by individuals during the year with reference to their tenure are within the following bands:

	Number of individuals	
	2021	2020
HK\$6,000,001 to HK\$6,500,000	1	–
HK\$6,500,001 to HK\$7,000,000	–	1
HK\$7,000,001 to HK\$7,500,000	2	2
HK\$7,500,001 to HK\$8,000,000	1	1
HK\$8,500,001 to HK\$9,000,000	–	1

## NOTES TO THE FINANCIAL STATEMENTS

### 21. Directors', senior management's and key personnel's emoluments (continued)

#### (a) Directors' and senior management's emoluments (continued)

##### (iii) Senior management's emoluments

Emoluments paid to or receivable by individuals during the year with reference to their tenure as senior management are within the following bands:

	Number of individuals	
	2021	2020
HK\$0 to HK\$500,000	–	1
HK\$500,001 to HK\$1,000,000	1	–
HK\$3,500,001 to HK\$4,000,000	1	1
HK\$4,500,001 to HK\$5,000,000	1	1
HK\$5,000,001 to HK\$5,500,000	1	2
HK\$5,500,001 to HK\$6,000,000	1	1
HK\$6,000,001 to HK\$6,500,000	2	1
HK\$6,500,001 to HK\$7,000,000	–	1
HK\$7,000,001 to HK\$7,500,000	1	1
HK\$7,500,001 to HK\$8,000,000	–	1
HK\$8,000,001 to HK\$8,500,000	1	–

#### (b) Remuneration for Senior Management and Key Personnel under CG-5

For the purpose of disclosure, Senior Management and Key Personnel are defined as follows:

- Senior Management: The senior executives designated by the Board who are responsible for oversight of the firm-wide strategy or material business lines, including the Chief Executive, Deputy Chief Executives, Chief Financial Officer, Chief Risk Officer, Chief Operating Officer, Board Secretary and General Manager of Group Audit.
- Key Personnel: The employees whose individual business activities involve the assumption of material risk which may have significant impact on risk exposure, or whose individual responsibilities are directly and materially linked to the risk management, or those who have direct influence to the profit, including heads of material business lines, heads of major subsidiaries, senior executives of Southeast Asian entities, head of trading, as well as heads of risk control functions.

## 21. Directors', senior management's and key personnel's emoluments (continued)

### (b) Remuneration for Senior Management and Key Personnel under CG-5 (continued)

Details of the remuneration for Senior Management and Key Personnel of the Group during the year are as follows:

#### (i) Remuneration awarded during financial year

	2021		2020	
	Senior Management	Key Personnel	Senior Management	Key Personnel
	HK\$'m	HK\$'m	HK\$'m	HK\$'m
Fixed remuneration				
Cash-based	42	146	45	153
<i>Of which: deferred</i>	–	–	–	–
Variable remuneration				
Cash-based	16	60	18	60
<i>Of which: deferred</i>	4	13	5	13
Total remuneration	58	206	63	213
Number of employees				
Fixed remuneration	11	60	13	58
Variable remuneration	10	55	13	57

#### (ii) Special payments

	2021		2020	
	Senior Management	Key Personnel	Senior Management	Key Personnel
	HK\$'m	HK\$'m	HK\$'m	HK\$'m
Sign-on awards	–	1	–	3
Number of employees	–	2	–	2

There were no guaranteed bonuses and severance payments to Senior Management and Key Personnel for the year ended 31 December 2021 (2020: Nil).

## NOTES TO THE FINANCIAL STATEMENTS

### 21. Directors', senior management's and key personnel's emoluments (continued)

(b) Remuneration for Senior Management and Key Personnel under CG-5 (continued)

(iii) Deferred remuneration

	2021				
	Total amount of outstanding deferred remuneration HK\$'m	Of which: Total amount of outstanding deferred remuneration exposed to post explicit and/or implicit adjustment HK\$'m	Total amount of amendment during the year due to ex post explicit adjustments HK\$'m	Total amount of amendment during the year due to ex post implicit adjustments HK\$'m	Total amount of deferred remuneration paid out in the financial year HK\$'m
Senior Management					
Cash	9	9	–	(1)	(4)
Key Personnel					
Cash	28	28	–	(3)	(18)
<b>Total</b>	<b>37</b>	<b>37</b>	<b>–</b>	<b>(4)</b>	<b>(22)</b>
	2020				
	Total amount of outstanding deferred remuneration HK\$'m	Of which: Total amount of outstanding deferred remuneration exposed to post explicit and/or implicit adjustment HK\$'m	Total amount of amendment during the year due to ex post explicit adjustments HK\$'m	Total amount of amendment during the year due to ex post implicit adjustments HK\$'m	Total amount of deferred remuneration paid out in the financial year HK\$'m
Senior Management					
Cash	10	10	–	–	(5)
Key Personnel					
Cash	36	36	–	–	(19)
<b>Total</b>	<b>46</b>	<b>46</b>	<b>–</b>	<b>–</b>	<b>(24)</b>



## 22. Cash and balances and placements with banks and other financial institutions

	2021 HK\$'m	2020 HK\$'m
Cash	17,586	38,187
Balances with central banks	142,560	141,803
Placements with central banks maturing within one month	12,882	36,842
Placements with central banks maturing between one and twelve months	4,332	3,379
Placements with central banks maturing over one year	1,156	1,547
	<b>160,930</b>	183,571
Balances with other banks and other financial institutions	191,682	188,089
Placements with other banks and other financial institutions maturing within one month	59,035	19,588
Placements with other banks and other financial institutions maturing between one and twelve months	35,701	33,974
Placements with other banks and other financial institutions maturing over one year	624	310
	<b>287,042</b>	241,961
	<b>465,558</b>	463,719
Less: Impairment allowances		
– Stage 1	(23)	(8)
– Stage 2	–	–
– Stage 3	–	–
	<b>465,535</b>	463,711

## NOTES TO THE FINANCIAL STATEMENTS

### 23. Financial assets at fair value through profit or loss

	2021 HK\$'m	2020 HK\$'m
Securities		
Trading assets		
– Treasury bills	11,548	19,491
– Certificates of deposit	1,506	171
– Other debt securities	10,813	7,155
	<b>23,867</b>	26,817
– Equity securities	23	49
	<b>23,890</b>	26,866
Other financial assets mandatorily classified at fair value through profit or loss		
– Treasury bills	1,481	–
– Other debt securities	14,233	15,872
	<b>15,714</b>	15,872
– Equity securities	2,857	3,910
– Fund	11,202	8,841
	<b>29,773</b>	28,623
Financial assets designated at fair value through profit or loss		
– Certificates of deposit	–	–
– Other debt securities	1,477	1,307
	<b>1,477</b>	1,307
Total securities	<b>55,140</b>	56,796
Other debt instruments		
Trading assets	3,201	3,300
Financial assets designated at fair value through profit or loss	15,196	118
Total other debt instruments	<b>18,397</b>	3,418
	<b>73,537</b>	60,214

## 23. Financial assets at fair value through profit or loss (continued)

Total securities are analysed by place of listing as follows:

	2021 HK\$'m	2020 HK\$'m
Debt securities and certificates of deposit		
– Listed in Hong Kong	9,199	8,102
– Listed outside Hong Kong	8,212	8,133
– Unlisted	23,647	27,761
	<b>41,058</b>	43,996
Equity securities		
– Listed in Hong Kong	2,234	2,610
– Listed outside Hong Kong	453	1,265
– Unlisted	193	84
	<b>2,880</b>	3,959
Fund		
– Listed in Hong Kong	1,469	–
– Listed outside Hong Kong	239	491
– Unlisted	9,494	8,350
	<b>11,202</b>	8,841
Total securities	<b>55,140</b>	56,796

Total securities are analysed by type of issuer as follows:

	2021 HK\$'m	2020 HK\$'m
Sovereigns	21,713	26,207
Public sector entities	748	535
Banks and other financial institutions	23,806	20,935
Corporate entities	8,873	9,119
Total securities	<b>55,140</b>	56,796

## NOTES TO THE FINANCIAL STATEMENTS

### 24. Derivative financial instruments and hedge accounting

The Group enters into exchange rate, interest rate, commodity, equity and credit related derivative financial instrument contracts for trading and risk management purposes.

Currency forwards represent commitments to purchase and sell foreign currency on a future date. Interest rate futures are contractual obligations to receive or pay a net amount based on changes in interest rates or buy or sell interest rate financial instruments on a future date at an agreed price in the financial market under the administration of the stock exchange. Forward rate agreements are individually negotiated interest rate futures that call for a cash settlement at a future date for the difference between a contract rate of interest and the current market rate, based on a notional principal amount.

Currency, interest rate and commodity swaps are commitments to exchange one set of cash flows or commodity for another. Swaps result in an exchange of currencies, interest rates (for example, fixed rate for floating rate), or precious metals (for example, silver swaps) or a combination of all these (for example, cross-currency interest rate swaps). Except for certain currency swap contracts, no exchange of principal takes place.

Foreign currency, interest rate, precious metal and equity options are contractual agreements under which the seller (writer) grants the purchaser (holder) the right, but not the obligation, either to buy (a call option) or sell (a put option) at or by a set date or during a set period, a specific amount of the financial instrument at a predetermined price. In consideration for the assumption of foreign exchange and interest rate risk, the seller receives a premium from the purchaser. Options are negotiated over-the-counter between the Group and its counterparty or traded through the stock exchange (for example, exchange-traded stock option).

The contract/notional amounts and fair values of derivative financial instruments held by the Group are set out in the following tables. The contract/notional amounts of these instruments indicate the volume of transactions outstanding at the balance sheet dates and certain of them provide a basis for comparison with the fair values of instruments recognised on the balance sheet. However, they do not necessarily indicate the amounts of future cash flows involved or the current fair values of the instruments and, therefore, do not indicate the Group's exposure to credit or market risks. The derivative financial instruments become favourable (assets) or unfavourable (liabilities) as a result of fluctuations in foreign exchange rates, market interest rates, commodity prices or equity prices relative to their terms. The aggregate fair values of derivative financial instruments can fluctuate significantly from time to time.

#### (a) Derivative financial instruments

The Group trades derivative products (both exchange-traded and OTC) mainly for customer business. The Group strictly follows risk management policies and requirements in providing derivative products to our customers and in trading of derivative products in the interbank market.

Derivatives are also used to manage the interest rate risk of the banking book. A derivative instrument must be included in the approved product list before any transactions for that instrument can be made. There are limits to control the notional amount of exposure arising from derivative transactions, and the maximum tenor of the deal is set. Every derivative transaction must be input into the relevant system for settlement, mark-to-market revaluation, reporting and control.

## 24. Derivative financial instruments and hedge accounting (continued)

### (a) Derivative financial instruments (continued)

The following tables summarise the contract/notional amounts and fair values of each class of derivative financial instrument as at 31 December:

	2021		
	Contract/ notional amounts HK\$'m	Fair values	
		Assets HK\$'m	Liabilities HK\$'m
Exchange rate contracts			
Spot, forwards and futures	203,700	11,720	(7,545)
Swaps	1,602,271	11,558	(8,476)
Options	40,382	92	(86)
	<b>1,846,353</b>	<b>23,370</b>	<b>(16,107)</b>
Interest rate contracts			
Futures	2,220	1	(3)
Swaps	1,084,835	9,361	(13,321)
Options	567	–	–
	<b>1,087,622</b>	<b>9,362</b>	<b>(13,324)</b>
Commodity contracts	13,873	388	(265)
Equity contracts	1,470	66	(61)
	<b>2,949,318</b>	<b>33,186</b>	<b>(29,757)</b>

## NOTES TO THE FINANCIAL STATEMENTS

### 24. Derivative financial instruments and hedge accounting (continued)

#### (a) Derivative financial instruments (continued)

	2020		
	Contract/ notional amounts HK\$'m	Fair values	
		Assets HK\$'m	Liabilities HK\$'m
Exchange rate contracts			
Spot, forwards and futures	250,999	13,496	(9,914)
Swaps	1,157,985	18,667	(20,759)
Options	21,443	147	(136)
	1,430,427	32,310	(30,809)
Interest rate contracts			
Futures	488	–	–
Swaps	1,152,857	17,211	(26,218)
Options	5,845	–	–
	1,159,190	17,211	(26,218)
Commodity contracts	42,819	3,282	(3,246)
Equity contracts	2,526	53	(40)
	2,634,962	52,856	(60,313)

#### (b) Hedge accounting

##### Fair value hedges

The Group uses interest rate swaps to hedge against change in fair value of financial assets and liabilities arising from movements in market interest rates. Interest rate risk to which the Group applies hedge accounting arises from fixed-rate debt securities, whose fair value fluctuates when benchmark interest rates change. The Group only designates interest rate risks to the extent of benchmark interest rates as the hedged risks because the changes in fair value of the fixed-rate debt securities are significantly influenced by the changes in the benchmark interest rates. Hedge accounting is applied where economic hedging relationships meet the hedge accounting criteria.

Possible sources of ineffectiveness are as follows:

- Notional and timing differences between the hedged items and hedging instruments;
- Significant changes in counterparties' credit risk.

## 24. Derivative financial instruments and hedge accounting (continued)

### (b) Hedge accounting (continued)

#### Fair value hedges (continued)

The table below summarises the contract/notional amounts of the hedging instruments as at 31 December by remaining contractual maturity.

	2021					
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	Total HK\$'m
Interest rate swaps	1,513	2,821	11,543	65,070	42,111	123,058

  

	2020					
	Up to 1 month HK\$'m	1 to 3 months HK\$'m	3 to 12 months HK\$'m	1 to 5 years HK\$'m	Over 5 years HK\$'m	Total HK\$'m
Interest rate swaps	1,875	2,011	8,382	61,441	37,545	111,254

The amounts relating to items designated as hedging instruments are as follows:

	2021			
	Contract/ notional amounts HK\$'m	Fair values		Change in fair value used for recognising hedge ineffectiveness HK\$'m
		Assets HK\$'m	Liabilities HK\$'m	
Derivative financial instruments				
Interest rate swaps	123,058	741	(2,617)	4,046

  

	2020			
	Contract/ notional amounts HK\$'m	Fair values		Change in fair value used for recognising hedge ineffectiveness HK\$'m
		Assets HK\$'m	Liabilities HK\$'m	
Derivative financial instruments				
Interest rate swaps	111,254	50	(6,196)	(4,074)

## NOTES TO THE FINANCIAL STATEMENTS

### 24. Derivative financial instruments and hedge accounting (continued)

#### (b) Hedge accounting (continued)

##### Fair value hedges (continued)

The amounts relating to hedged items are as follows:

	2021		
	Carrying amounts HK\$'m	Accumulated amount of fair value hedge adjustment included in the carrying amounts HK\$'m	Change in value used for recognising hedge ineffectiveness HK\$'m
Investment in securities			
Debt securities	127,438	3,096	(4,216)

  

	2020		
	Carrying amounts HK\$'m	Accumulated amount of fair value hedge adjustment included in the carrying amounts HK\$'m	Change in value used for recognising hedge ineffectiveness HK\$'m
Investment in securities			
Debt securities	119,092	6,538	4,302

Hedge ineffectiveness recognised is as follows:

	2021 HK\$'m	2020 HK\$'m
Net trading (loss)/gain	(170)	228



## 25. Advances and other accounts

	2021 HK\$'m	2020 HK\$'m
Personal loans and advances	509,045	458,577
Corporate loans and advances	1,090,039	1,039,287
Advances to customers	1,599,084	1,497,864
Less: Impairment allowances		
– Stage 1	(4,839)	(5,405)
– Stage 2	(2,406)	(1,115)
– Stage 3	(2,632)	(2,652)
	1,589,207	1,488,692
Trade bills	7,264	9,826
Less: Impairment allowances		
– Stage 1	(1)	–
– Stage 2	–	–
– Stage 3	–	–
	7,263	9,826
Advances to banks and other financial institutions	727	1,898
Less: Impairment allowances		
– Stage 1	(3)	–
– Stage 2	–	–
– Stage 3	–	–
	724	1,898
	<b>1,597,194</b>	1,500,416

As at 31 December 2021, advances to customers included accrued interest of HK\$1,890 million (2020: HK\$1,958 million).

As at 31 December 2021, advances and other accounts at fair value through other comprehensive income amounted to HK\$2,757 million (2020: HK\$1,163 million).

## NOTES TO THE FINANCIAL STATEMENTS

### 26. Investment in securities

	2021 HK\$'m	2020 HK\$'m
Investment in securities at fair value through other comprehensive income		
– Treasury bills	<b>410,163</b>	334,480
– Certificates of deposit	<b>38,059</b>	46,029
– Other debt securities	<b>423,598</b>	373,663
	<b>871,820</b>	754,172
– Equity securities	<b>5,601</b>	5,882
	<b>877,421</b>	760,054
Investment in securities at amortised cost		
– Certificates of deposit	<b>2,693</b>	984
– Other debt securities	<b>214,218</b>	119,509
	<b>216,911</b>	120,493
Less: Impairment allowances		
– Stage 1	<b>(96)</b>	(62)
– Stage 2	<b>(3)</b>	–
– Stage 3	–	–
	<b>216,812</b>	120,431
	<b>1,094,233</b>	880,485

## 26. Investment in securities (continued)

Investment in securities is analysed by place of listing as follows:

	2021 HK\$'m	2020 HK\$'m
Investment in securities at fair value through other comprehensive income		
Debt securities and certificates of deposit		
– Listed in Hong Kong	106,919	98,647
– Listed outside Hong Kong	182,018	158,283
– Unlisted	582,883	497,242
	<b>871,820</b>	754,172
Equity securities		
– Listed in Hong Kong	2,351	2,777
– Listed outside Hong Kong	455	496
– Unlisted	2,795	2,609
	<b>5,601</b>	5,882
	<b>877,421</b>	760,054
Investment in securities at amortised cost		
Debt securities and certificates of deposit		
– Listed in Hong Kong	39,845	28,050
– Listed outside Hong Kong	103,719	59,685
– Unlisted	73,248	32,696
	<b>216,812</b>	120,431
	<b>1,094,233</b>	880,485
Market value of listed securities at amortised cost	<b>145,392</b>	92,341

Investment in securities is analysed by type of issuer as follows:

	2021 HK\$'m	2020 HK\$'m
Sovereigns	558,915	426,384
Public sector entities	55,078	26,363
Banks and other financial institutions	306,006	270,645
Corporate entities	174,234	157,093
	<b>1,094,233</b>	880,485

## NOTES TO THE FINANCIAL STATEMENTS

### 26. Investment in securities (continued)

The movements in investment in securities are summarised as follows:

	2021	
	At fair value through other comprehensive income HK\$'m	At amortised cost HK\$'m
At 1 January 2021	760,054	120,431
Additions	1,501,274	132,794
Disposals, redemptions and maturity	(1,364,521)	(37,870)
Amortisation	(1,114)	427
Change in fair value/fair value hedge adjustment	(5,850)	(71)
Net charge of impairment allowances	–	(37)
Exchange difference	(12,422)	1,138
At 31 December 2021	877,421	216,812

  

	2020	
	At fair value through other comprehensive income HK\$'m	At amortised cost HK\$'m
At 1 January 2020	690,670	110,983
Additions	1,149,390	58,961
Disposals, redemptions and maturity	(1,102,401)	(49,850)
Amortisation	478	260
Change in fair value/fair value hedge adjustment	10,537	(15)
Net charge of impairment allowances	–	(16)
Exchange difference	11,380	108
At 31 December 2020	760,054	120,431

The Group has designated certain equity securities as equity securities at fair value through other comprehensive income. The fair value through other comprehensive income designation was made because these are held for strategic investments. Investments include subordinated Additional Tier 1 securities, listed and unlisted equity shares.

The Group derecognised certain equity securities at fair value through other comprehensive income with fair value of HK\$2,356 million (2020: HK\$2,289 million) during the year. The derecognition was made because of portfolio rebalancing and the redemption by issuer.

## 27. Interests in associates and joint ventures

	2021 HK\$'m	2020 HK\$'m
At 1 January	1,485	1,632
Additions	–	6
Share of results	(197)	(126)
Share of tax	(16)	(26)
Dividend received	(57)	(3)
Exchange difference	–	2
At 31 December	1,215	1,485

The particulars of the Group's associates and joint ventures, all of which are unlisted, are as follows:

Name	Place of incorporation and operation	Issued share capital	Interest	
			held	Principal activities
BOC Services Company Limited	PRC	Registered capital RMB50,000,000	45%	Credit card back-end service support
FutureX Innovation Limited	Cayman Islands	US\$1	20%	Investment holding
Golden Harvest (Cayman) Limited	Cayman Islands	US\$100	49%	Investment holding
Joint Electronic Teller Services Limited	Hong Kong	HK\$10,025,200	19.96%	Operation of a private inter-bank message switching network in respect of ATM services
Livi Bank Limited	Hong Kong	HK\$2,500,000,000	44%	Banking business
Sunac Realtor Capital Limited	Cayman Islands	US\$1	20%	Investment holding
盈進智能製造(深圳)投資中心 (有限合夥)	PRC	Paid in capital RMB9,500,000	52.63%	Investment holding

None of the above associates and joint ventures is considered individually or in aggregate material to the Group.

## NOTES TO THE FINANCIAL STATEMENTS

### 28. Investment properties

	2021 HK\$'m	2020 HK\$'m
At 1 January	18,441	20,110
Additions	233	9
Fair value losses (Note 15)	(229)	(1,622)
Reclassification to properties, plant and equipment (Note 29)	(723)	(56)
At 31 December	<b>17,722</b>	18,441

The carrying value of investment properties is analysed based on the remaining terms of the leases as follows:

	2021 HK\$'m	2020 HK\$'m
Held in Hong Kong		
On long-term lease (over 50 years)	4,942	4,720
On medium-term lease (10 to 50 years)	12,421	13,362
Held outside Hong Kong		
On medium-term lease (10 to 50 years)	328	328
On short-term lease (less than 10 years)	31	31
	<b>17,722</b>	18,441

As at 31 December 2021, investment properties were included in the balance sheet at valuation carried out at 31 December 2021 on the basis of their fair value by an independent firm of chartered surveyors, Knight Frank Petty Limited. The fair value represents the price that would be received to sell each investment property in an orderly transaction with market participants at the measurement date.

## 29. Properties, plant and equipment

	Premises HK\$'m	Equipment, fixtures and fittings HK\$'m	Right-of-use assets HK\$'m	Total HK\$'m
Net book value at 1 January 2021	43,548	1,582	1,725	46,855
Additions	40	344	341	725
Disposals	(4)	(11)	(41)	(56)
Revaluation	634	–	–	634
Depreciation for the year	(1,154)	(567)	(700)	(2,421)
Reclassification from investment properties (Note 28)	723	–	–	723
Impairment for the year	–	(4)	–	(4)
Exchange difference	(3)	(6)	(6)	(15)
Net book value at 31 December 2021	43,784	1,338	1,319	46,441
At 31 December 2021				
Cost or valuation	43,784	7,032	2,775	53,591
Accumulated depreciation and impairment	–	(5,694)	(1,456)	(7,150)
Net book value at 31 December 2021	43,784	1,338	1,319	46,441
The analysis of cost or valuation of the above assets is as follows:				
At 31 December 2021				
At cost	–	7,032	2,775	9,807
At valuation	43,784	–	–	43,784
	43,784	7,032	2,775	53,591

There was no transfer of application software to other assets during 2021 (2020: Application software with net book value of HK\$1,862 million, representing cost of HK\$5,101 million and accumulated amortisation of HK\$3,239 million, was transferred to other assets and presented as intangible assets on 31 December 2020).

## NOTES TO THE FINANCIAL STATEMENTS

### 29. Properties, plant and equipment (continued)

	Premises HK\$'m	Equipment, fixtures and fittings HK\$'m	Right-of-use assets HK\$'m	Total HK\$'m
Net book value at 1 January 2020	46,342	3,331	1,929	51,602
Additions	91	1,232	561	1,884
Disposals	(2)	(13)	(10)	(25)
Revaluation	(1,766)	–	–	(1,766)
Depreciation for the year	(1,173)	(1,107)	(760)	(3,040)
Reclassification from investment properties (Note 28)	56	–	–	56
Transfer to other assets (Note 30)	–	(1,862)	–	(1,862)
Exchange difference	–	1	5	6
Net book value at 31 December 2020	43,548	1,582	1,725	46,855
At 31 December 2020				
Cost or valuation	43,548	7,006	3,001	53,555
Accumulated depreciation and impairment	–	(5,424)	(1,276)	(6,700)
Net book value at 31 December 2020	43,548	1,582	1,725	46,855
The analysis of cost or valuation of the above assets is as follows:				
At 31 December 2020				
At cost	–	7,006	3,001	10,007
At valuation	43,548	–	–	43,548
	43,548	7,006	3,001	53,555



## 29. Properties, plant and equipment (continued)

The carrying value of premises is analysed based on the remaining terms of the leases as follows:

	2021 HK\$'m	2020 HK\$'m
Held in Hong Kong		
On long-term lease (over 50 years)	<b>12,725</b>	12,904
On medium-term lease (10 to 50 years)	<b>30,712</b>	30,292
Held outside Hong Kong		
On long-term lease (over 50 years)	<b>71</b>	75
On medium-term lease (10 to 50 years)	<b>276</b>	277
	<b>43,784</b>	43,548

As at 31 December 2021, premises were included in the balance sheet at valuation carried out at 31 December 2021 on the basis of their fair value by an independent firm of chartered surveyors, Knight Frank Petty Limited. The fair value represents the price that would be received to sell each premises in an orderly transaction with market participants at the measurement date.

As a result of the above-mentioned revaluations, changes in value of the premises were recognised as follows:

	2021 HK\$'m	2020 HK\$'m
Decrease in valuation charged to income statement (Note 16)	<b>(17)</b>	(59)
Increase/(decrease) in valuation credited/(charged) to other comprehensive income	<b>651</b>	(1,707)
	<b>634</b>	(1,766)

As at 31 December 2021, the net book value of premises that would have been included in the Group's balance sheet had the premises been carried at cost less accumulated depreciation and impairment losses was HK\$9,363 million (2020: HK\$8,748 million).

## NOTES TO THE FINANCIAL STATEMENTS

### 30. Other assets

	2021 HK\$'m	2020 HK\$'m
Repossessed assets	151	23
Precious metals	10,207	10,697
Intangible assets <sup>(1)</sup>	2,025	1,862
Reinsurance assets	59,696	55,672
Accounts receivable and prepayments	34,193	38,481
	<b>106,272</b>	106,735

(1) The movements in intangible assets are summarised as follows:

	2021 HK\$'m
Net book value at 1 January	1,862
Additions	781
Amortisation for the year	(618)
Net book value at 31 December	<b>2,025</b>
At 31 December	
Cost	5,866
Accumulated amortisation and impairment	(3,841)
Net book value at 31 December	<b>2,025</b>

### 31. Hong Kong SAR currency notes in circulation

The Hong Kong SAR currency notes in circulation are secured by deposit of funds in respect of which the Hong Kong SAR Government certificates of indebtedness are held.

### 32. Financial liabilities at fair value through profit or loss

	2021 HK\$'m	2020 HK\$'m
Trading liabilities		
– Short positions in Exchange Fund Bills and Notes	12,322	20,336
Financial liabilities designated at fair value through profit or loss		
– Repurchase agreements	198	–
	<b>12,520</b>	20,336

As at 31 December 2021, the carrying amount of financial liabilities designated at fair value through profit or loss was approximately the same as the amount that the Group would be contractually required to pay at maturity to the holders.

### 33. Deposits from customers

	2021 HK\$'m	2020 HK\$'m
Demand deposits and current accounts		
– Corporate	229,326	222,286
– Personal	97,908	87,940
	<b>327,234</b>	310,226
Savings deposits		
– Corporate	513,556	499,740
– Personal	680,538	649,295
	<b>1,194,094</b>	1,149,035
Time, call and notice deposits		
– Corporate	544,036	454,852
– Personal	265,791	269,596
	<b>809,827</b>	724,448
	<b>2,331,155</b>	2,183,709

### 34. Debt securities and certificates of deposit in issue

	2021 HK\$'m	2020 HK\$'m
At amortised cost		
– Certificates of deposit	563	233
– Other debt securities	1,860	193
	<b>2,423</b>	426

### 35. Other accounts and provisions

	2021 HK\$'m	2020 HK\$'m
Other accounts payable and provisions	81,080	68,682
Lease liabilities	1,318	1,710
Impairment allowances on loan commitments and financial guarantee contracts		
– Stage 1	439	594
– Stage 2	51	44
– Stage 3	153	20
	<b>83,041</b>	71,050

## NOTES TO THE FINANCIAL STATEMENTS

### 36. Deferred taxation

Deferred tax is recognised in respect of the temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements and unused tax credits in accordance with HKAS 12 "Income Taxes".

The major components of deferred tax (assets)/liabilities recorded in the balance sheet, and the movements during the year are as follows:

	2021					
	Accelerated tax depreciation	Property revaluation	Losses	Impairment allowances	Others	Total
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
At 1 January 2021	797	6,560	(46)	(1,153)	(289)	5,869
Charged/(credited) to income statement (Note 17)	29	(63)	10	23	(22)	(23)
Charged/(credited) to other comprehensive income	-	109	-	-	(401)	(292)
Release upon disposal of equity instruments at fair value through other comprehensive income	-	-	-	-	19	19
Exchange difference and others	-	-	32	2	-	34
At 31 December 2021	826	6,606	(4)	(1,128)	(693)	5,607
	2020					
	Accelerated tax depreciation	Property revaluation	Losses	Impairment allowances	Others	Total
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
At 1 January 2020	756	6,997	-	(804)	(532)	6,417
Charged/(credited) to income statement (Note 17)	41	(140)	(15)	(349)	(48)	(511)
(Credited)/charged to other comprehensive income	-	(297)	-	-	253	(44)
Release upon disposal of equity instruments at fair value through other comprehensive income	-	-	(31)	-	32	1
Release upon redemption of financial liabilities designated at fair value through profit or loss	-	-	-	-	6	6
At 31 December 2020	797	6,560	(46)	(1,153)	(289)	5,869

### 36. Deferred taxation (continued)

Deferred tax assets and liabilities are offset on an individual entity basis when there is a legal right to set off current tax assets against current tax liabilities and when the deferred taxation relates to the same authority. The following amounts, determined after appropriate offsetting, are shown in the balance sheet:

	2021 HK\$'m	2020 HK\$'m
Deferred tax assets	(192)	(95)
Deferred tax liabilities	5,799	5,964
	<b>5,607</b>	<b>5,869</b>

  

	2021 HK\$'m	2020 HK\$'m
Deferred tax assets to be recovered after more than twelve months	(153)	(112)
Deferred tax liabilities to be settled after more than twelve months	6,435	6,244
	<b>6,282</b>	<b>6,132</b>

As at 31 December 2021, the Group has no unrecognised deferred tax assets in respect of tax losses (2020: Nil). All of the amount for the Group has no expiry date under the current tax legislation in different countries/regions.

### 37. Insurance contract liabilities

	2021 HK\$'m	2020 HK\$'m
At 1 January	139,504	117,269
Benefits paid	(14,784)	(13,288)
Claims incurred and movement in liabilities	29,191	35,523
At 31 December	<b>153,911</b>	<b>139,504</b>

The insurance contract liabilities that are covered by reinsurance arrangements amounted to HK\$48,037 million (2020: HK\$45,615 million) and the associated reinsurance assets of HK\$59,696 million (2020: HK\$55,672 million) are included in "Other assets" (Note 30).

## NOTES TO THE FINANCIAL STATEMENTS

### 38. Share capital

	2021 HK\$'m	2020 HK\$'m
Issued and fully paid: 10,572,780,266 ordinary shares	<b>52,864</b>	52,864

### 39. Other equity instruments

	2021 HK\$'m	2020 HK\$'m
Undated non-cumulative subordinated Additional Tier 1 capital securities	<b>23,476</b>	23,476

In September 2018, BOCHK issued USD3,000 million undated non-cumulative subordinated Additional Tier 1 capital securities. The capital securities are perpetual securities in respect of which there is no fixed redemption date and are not callable within the first 5 years. They have an initial rate of distribution of 5.90% per annum payable semi-annually which may be cancelled at the sole discretion of BOCHK. Dividend paid to other equity instrument holders in 2021 amounted to HK\$1,378 million (2020: HK\$1,376 million).

## 40. Notes to consolidated cash flow statement

### (a) Reconciliation of operating profit to operating cash inflow before taxation

	2021 HK\$'m	2020 HK\$'m
Operating profit	<b>30,430</b>	35,420
Depreciation and amortisation	<b>3,039</b>	3,040
Net charge of impairment allowances	<b>2,145</b>	2,707
Unwind of discount on impairment allowances	<b>(37)</b>	(8)
Advances written off net of recoveries	<b>(1,157)</b>	(425)
Interest expense on lease liabilities	<b>34</b>	54
Change in balances and placements with banks and other financial institutions with original maturity over three months	<b>(622)</b>	3,800
Change in financial assets at fair value through profit or loss	<b>1,835</b>	21,655
Change in derivative financial instruments	<b>(10,886)</b>	5,563
Change in advances and other accounts	<b>(97,487)</b>	(89,591)
Change in investment in securities	<b>(157,171)</b>	(49,999)
Change in other assets	<b>548</b>	(13,863)
Change in deposits and balances from banks and other financial institutions	<b>159,567</b>	58,606
Change in financial liabilities at fair value through profit or loss	<b>(7,816)</b>	1,130
Change in deposits from customers	<b>147,446</b>	174,436
Change in debt securities and certificates of deposit in issue	<b>1,997</b>	310
Change in other accounts and provisions	<b>12,388</b>	(9,527)
Change in insurance contract liabilities	<b>14,407</b>	22,235
Effect of changes in exchange rates	<b>(5,278)</b>	(13,269)
Operating cash inflow before taxation	<b>93,382</b>	152,274
Cash flows from operating activities included		
– interest received	<b>39,160</b>	51,764
– interest paid	<b>8,482</b>	17,674
– dividend received	<b>364</b>	235

## NOTES TO THE FINANCIAL STATEMENTS

### 40. Notes to consolidated cash flow statement (continued)

#### (b) Reconciliation of liabilities arising from financing activities

	2020 HK\$'m
Subordinated liabilities	
At 1 January	12,954
Cash flows:	
Payment for redemption of subordinated liabilities	(12,603)
Interest paid for subordinated liabilities	(350)
	(12,953)
Non-cash changes:	
Change in fair value of own credit risk credited to other comprehensive income	(1)
Exchange difference	(39)
Other changes	39
At 31 December	–

	2021 HK\$'m	2020 HK\$'m
Lease liabilities		
At 1 January	<b>1,710</b>	1,850
Cash flows:		
Payment of lease liabilities	<b>(716)</b>	(733)
Non-cash changes:		
Additions	<b>331</b>	549
Disposal	<b>(41)</b>	(10)
Other changes	<b>34</b>	54
At 31 December	<b>1,318</b>	1,710



#### 40. Notes to consolidated cash flow statement (continued)

##### (c) Analysis of the balances of cash and cash equivalents

	2021 HK\$'m	2020 HK\$'m
Cash and balances and placements with banks and other financial institutions with original maturity within three months	424,780	423,563
Treasury bills, certificates of deposit and other debt instruments with original maturity within three months		
– financial assets at fair value through profit or loss	18,461	3,303
– investment in securities	88,674	29,192
	<b>531,915</b>	456,058

#### 41. Contingent liabilities and commitments

The following is a summary of the contractual amounts of each significant class of contingent liability and commitment and the aggregate credit risk-weighted amount and is prepared with reference to the completion instructions for the HKMA return of capital adequacy ratio.

	2021 HK\$'m	2020 HK\$'m
Direct credit substitutes	1,338	2,487
Transaction-related contingencies	30,075	30,215
Trade-related contingencies	25,815	27,830
Commitments that are unconditionally cancellable without prior notice	526,430	511,975
Other commitments with an original maturity of		
– up to one year	15,665	20,416
– over one year	173,623	173,475
	<b>772,946</b>	766,398
Credit risk-weighted amount	<b>83,704</b>	87,517

The credit risk-weighted amount is calculated in accordance with the Banking (Capital) Rules. The amount is dependent upon the status of the counterparty and the maturity characteristics of each type of contract.

## NOTES TO THE FINANCIAL STATEMENTS

### 42. Capital commitments

The Group has the following outstanding capital commitments not provided for in the financial statements:

	2021 HK\$'m	2020 HK\$'m
Authorised and contracted for but not provided for	183	274
Authorised but not contracted for	119	70
	<b>302</b>	344

The above capital commitments mainly relate to commitments to purchase computer equipment and software, and to renovate the Group's premises.

### 43. Operating lease commitments

#### As lessor

The Group has contracted with tenants for the following future minimum lease receivables under non-cancellable operating leases:

	2021 HK\$'m	2020 HK\$'m
Properties and equipment		
– Not later than one year	469	520
– One to two years	241	313
– Two to three years	103	101
– Three to four years	16	14
– Four to five years	5	10
– Later than five years	–	–
	<b>834</b>	958

The Group leases its investment properties under operating lease arrangements, with leases typically for a period from one to three years. The terms of the leases generally require the tenants to pay security deposits and provide for rent adjustments according to the prevailing market conditions upon the lease renewal.

### 44. Litigation

The Group has been served a number of claims and counterclaims by various independent parties. These claims and counterclaims are in relation to the normal commercial activities of the Group.

No material provision was made against these claims and counterclaims because the directors believe that the Group has meritorious defences against the claimants or the amounts involved in these claims are not expected to be material.

### 45. Segmental reporting

The Group manages the business mainly from a business segment perspective and over 90% of the Group's revenues, profits before tax and assets are derived from Hong Kong. Currently, four operating segments are identified: Personal Banking, Corporate Banking, Treasury and Insurance. The classification of the Group's operating segments is based on customer segment and product type, which is aligned with the RPC (relationship, product and channel) management model of the Group.

Both Personal Banking and Corporate Banking provide general banking services including various deposit products, overdrafts, loans, credit cards, trade related products and other credit facilities, investment and insurance products, and foreign currency and derivative products. Personal Banking mainly serves retail customers and small enterprises, while Corporate Banking mainly deals with corporate customers. Treasury manages the funding and liquidity, and the interest rate and foreign exchange positions of the Group in addition to proprietary trades. The Insurance segment represents business mainly relating to life insurance products, including individual life insurance and group life insurance products. "Others" mainly represents the Group's holdings of premises, investment properties, equity investments, certain interests in associates and joint ventures and the businesses of the Southeast Asian entities.

Measurement of segment assets, liabilities, income, expenses, results and capital expenditure is based on the Group's accounting policies. The segment information includes items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Inter-segment funding is charged according to the internal funds transfer pricing mechanism of the Group, which is primarily based on market rates with the consideration of specific features of the product.

As the Group derives a majority of revenue from interest and the senior management relies primarily on net interest income in managing the business, interest income and expense for all reportable segments are presented on a net basis. Under the same consideration, insurance premium income and insurance benefits and claims are also presented on a net basis.

## NOTES TO THE FINANCIAL STATEMENTS

### 45. Segmental reporting (continued)

	Personal Banking HK\$'m	Corporate Banking HK\$'m	Treasury HK\$'m	Insurance HK\$'m	Others HK\$'m	Subtotal HK\$'m	Eliminations HK\$'m	Consolidated HK\$'m
<b>Year ended 31 December 2021</b>								
Net interest income/(expense)								
– External	4,063	12,411	9,859	3,808	1,800	31,941	–	31,941
– Inter-segment	2,790	(1,301)	(1,264)	(11)	(214)	–	–	–
	6,853	11,110	8,595	3,797	1,586	31,941	–	31,941
Net fee and commission income/(expense)	7,663	4,033	150	(677)	1,240	12,409	(537)	11,872
Net insurance premium income	–	–	–	15,726	–	15,726	(22)	15,704
Net trading gain	1,066	1,452	1,876	69	545	5,008	83	5,091
Net loss on other financial instruments at fair value through profit or loss	–	–	(75)	(1,073)	–	(1,148)	12	(1,136)
Net gain on other financial instruments	–	16	940	153	11	1,120	–	1,120
Other operating income	62	1	97	182	1,926	2,268	(1,285)	983
<b>Total operating income</b>	<b>15,644</b>	<b>16,612</b>	<b>11,583</b>	<b>18,177</b>	<b>5,308</b>	<b>67,324</b>	<b>(1,749)</b>	<b>65,575</b>
Net insurance benefits and claims and movement in liabilities	–	–	–	(16,593)	–	(16,593)	–	(16,593)
<b>Net operating income before impairment allowances</b>	<b>15,644</b>	<b>16,612</b>	<b>11,583</b>	<b>1,584</b>	<b>5,308</b>	<b>50,731</b>	<b>(1,749)</b>	<b>48,982</b>
Net reversal/(charge) of impairment allowances	128	(295)	(55)	(12)	(1,911)	(2,145)	–	(2,145)
<b>Net operating income</b>	<b>15,772</b>	<b>16,317</b>	<b>11,528</b>	<b>1,572</b>	<b>3,397</b>	<b>48,586</b>	<b>(1,749)</b>	<b>46,837</b>
Operating expenses	(9,518)	(3,393)	(1,295)	(549)	(3,401)	(18,156)	1,749	(16,407)
<b>Operating profit/(loss)</b>	<b>6,254</b>	<b>12,924</b>	<b>10,233</b>	<b>1,023</b>	<b>(4)</b>	<b>30,430</b>	<b>–</b>	<b>30,430</b>
Net loss from disposal of/fair value adjustments on investment properties	–	–	–	–	(229)	(229)	–	(229)
Net loss from disposal/revaluation of properties, plant and equipment	(4)	–	–	–	(16)	(20)	–	(20)
Share of results after tax of associates and joint ventures	81	–	5	–	(299)	(213)	–	(213)
<b>Profit/(loss) before taxation</b>	<b>6,331</b>	<b>12,924</b>	<b>10,238</b>	<b>1,023</b>	<b>(548)</b>	<b>29,968</b>	<b>–</b>	<b>29,968</b>
<b>At 31 December 2021</b>								
<b>ASSETS</b>								
Segment assets	533,841	1,031,942	1,733,682	197,906	176,059	3,673,430	(35,215)	3,638,215
Interests in associates and joint ventures	633	–	8	–	574	1,215	–	1,215
	534,474	1,031,942	1,733,690	197,906	176,633	3,674,645	(35,215)	3,639,430
<b>LIABILITIES</b>								
Segment liabilities	1,203,126	1,100,321	753,782	186,277	103,678	3,347,184	(35,215)	3,311,969
<b>Year ended 31 December 2021</b>								
<b>Other information</b>								
Capital expenditure	35	24	1	97	1,582	1,739	–	1,739
Depreciation and amortisation	1,266	295	107	67	1,339	3,074	(35)	3,039

## 45. Segmental reporting (continued)

	Personal Banking HK\$'m	Corporate Banking HK\$'m	Treasury HK\$'m	Insurance HK\$'m	Others HK\$'m	Subtotal HK\$'m	Eliminations HK\$'m	Consolidated HK\$'m
<b>Year ended 31 December 2020</b>								
Net interest income/(expense)								
– External	2,014	14,846	12,623	3,437	1,818	34,738	–	34,738
– Inter-segment	10,955	(1,352)	(8,840)	(13)	(750)	–	–	–
	12,969	13,494	3,783	3,424	1,068	34,738	–	34,738
Net fee and commission income/(expense)	7,092	3,522	253	(626)	1,262	11,503	(661)	10,842
Net insurance premium income	–	–	–	18,482	–	18,482	(22)	18,460
Net trading gain	1,004	1,311	2,012	259	435	5,021	153	5,174
Net gain/(loss) on other financial instruments at fair value through profit or loss	–	–	208	1,743	(3)	1,948	11	1,959
Net gain on other financial instruments	–	7	4,376	189	–	4,572	–	4,572
Other operating income	18	5	80	123	2,055	2,281	(1,385)	896
<b>Total operating income</b>	21,083	18,339	10,712	23,594	4,817	78,545	(1,904)	76,641
Net insurance benefits and claims and movement in liabilities	–	–	–	(22,167)	–	(22,167)	–	(22,167)
<b>Net operating income before impairment allowances</b>	21,083	18,339	10,712	1,427	4,817	56,378	(1,904)	54,474
Net charge of impairment allowances	(421)	(1,877)	(87)	(36)	(286)	(2,707)	–	(2,707)
<b>Net operating income</b>	20,662	16,462	10,625	1,391	4,531	53,671	(1,904)	51,767
Operating expenses	(9,684)	(3,427)	(1,269)	(537)	(3,334)	(18,251)	1,904	(16,347)
<b>Operating profit</b>	10,978	13,035	9,356	854	1,197	35,420	–	35,420
Net loss from disposal of/fair value adjustments on investment properties	–	–	–	–	(1,622)	(1,622)	–	(1,622)
Net loss from disposal/revaluation of properties, plant and equipment	(3)	–	–	–	(60)	(63)	–	(63)
Share of results after tax of associates and joint ventures	42	–	5	–	(199)	(152)	–	(152)
<b>Profit/(loss) before taxation</b>	11,017	13,035	9,361	854	(684)	33,583	–	33,583
<b>At 31 December 2020</b>								
<b>ASSETS</b>								
Segment assets	491,213	985,638	1,538,239	179,865	159,589	3,354,544	(35,048)	3,319,496
Interests in associates and joint ventures	603	–	9	–	873	1,485	–	1,485
	491,816	985,638	1,538,248	179,865	160,462	3,356,029	(35,048)	3,320,981
<b>LIABILITIES</b>								
Segment liabilities	1,159,255	1,013,145	601,497	168,463	94,014	3,036,374	(35,048)	3,001,326
<b>Year ended 31 December 2020</b>								
<b>Other information</b>								
Capital expenditure	29	8	1	52	1,803	1,893	–	1,893
Depreciation and amortisation	1,274	281	107	64	1,349	3,075	(35)	3,040

## NOTES TO THE FINANCIAL STATEMENTS

### 46. Offsetting financial instruments

The following tables present details of the Group's financial instruments subject to offsetting, enforceable master netting arrangements and similar agreements.

	2021					
	Gross amounts of recognised		Net amounts of financial assets presented in the balance sheet	Related amounts not set off in the balance sheet		Net amount
	Gross amounts of recognised financial assets	financial liabilities set off in the balance sheet		Financial instruments	Cash collateral received	
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
<b>Assets</b>						
Derivative financial instruments	16,703	-	16,703	(12,337)	(3,869)	497
Reverse repurchase agreements	17,064	-	17,064	(17,064)	-	-
Securities borrowing agreements	3,201	-	3,201	(3,201)	-	-
Other assets	12,008	(8,908)	3,100	(1)	-	3,099
	48,976	(8,908)	40,068	(32,603)	(3,869)	3,596

	2021					
	Gross amounts of recognised		Net amounts of financial liabilities presented in the balance sheet	Related amounts not set off in the balance sheet		Net amount
	Gross amounts of recognised financial liabilities	financial assets set off in the balance sheet		Financial instruments	Cash collateral pledged	
	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m	HK\$'m
<b>Liabilities</b>						
Derivative financial instruments	18,116	-	18,116	(12,337)	(5,592)	187
Repurchase agreements	68,268	-	68,268	(68,268)	-	-
Other liabilities	9,540	(8,908)	632	(1)	-	631
	95,924	(8,908)	87,016	(80,606)	(5,592)	818

## 46. Offsetting financial instruments (continued)

	2020					
	Gross amounts of recognised financial assets HK\$'m	Gross amounts of recognised financial liabilities set off in the balance sheet HK\$'m	Net amounts of financial assets presented in the balance sheet HK\$'m	Related amounts not set off in the balance sheet		Net amount HK\$'m
				Financial instruments HK\$'m	Cash	
					collateral received HK\$'m	
<b>Assets</b>						
Derivative financial instruments	35,570	–	35,570	(28,032)	(3,314)	4,224
Reverse repurchase agreements	1,284	–	1,284	(1,284)	–	–
Securities borrowing agreements	3,300	–	3,300	(3,300)	–	–
Other assets	19,737	(14,300)	5,437	–	–	5,437
	59,891	(14,300)	45,591	(32,616)	(3,314)	9,661

  

	2020					
	Gross amounts of recognised financial liabilities HK\$'m	Gross amounts of recognised financial assets set off in the balance sheet HK\$'m	Net amounts of financial liabilities presented in the balance sheet HK\$'m	Related amounts not set off in the balance sheet		Net amount HK\$'m
				Financial instruments HK\$'m	Cash	
					collateral pledged HK\$'m	
<b>Liabilities</b>						
Derivative financial instruments	48,805	–	48,805	(28,032)	(16,858)	3,915
Repurchase agreements	210	–	210	(210)	–	–
Other liabilities	15,454	(14,300)	1,154	–	–	1,154
	64,469	(14,300)	50,169	(28,242)	(16,858)	5,069

For master netting agreements of OTC derivative, sale and repurchase and securities lending and borrowing transactions entered into by the Group, related amounts with the same counterparty can be offset if an event of default or other predetermined events occur.

## NOTES TO THE FINANCIAL STATEMENTS

### 47. Assets pledged as security

As at 31 December 2021, the liabilities of the Group amounting to HK\$12,788 million (2020: HK\$15,293 million) were secured by assets deposited with central depositories to facilitate settlement operations. In addition, the liabilities of the Group amounting to HK\$88,268 million (2020: HK\$210 million) were secured by debt securities related to sale and repurchase arrangements. The amount of assets pledged by the Group to secure these liabilities was HK\$103,349 million (2020: HK\$15,570 million) mainly included in “Financial assets at fair value through profit or loss” and “Investment in securities”.

### 48. Transfers of financial assets

The transferred financial assets of the Group below that do not qualify for derecognition are debt securities held by counterparties as collateral under sale and repurchase agreements.

	2021		2020	
	Carrying amount of transferred assets HK\$'m	Carrying amount of associated liabilities HK\$'m	Carrying amount of transferred assets HK\$'m	Carrying amount of associated liabilities HK\$'m
Repurchase agreements	70,488	68,268	231	210

### 49. Interests in unconsolidated structured entities

The Group involves a number of fund investments in the normal course of business and earns management fee and trustee fee, which meet the definition of unconsolidated structured entities. As at 31 December 2021, the total net asset value of unconsolidated structured entities amounted to HK\$160,458 million (2020: HK\$181,781 million). The Group's investment holding interests in the unconsolidated structured entities were recognised in financial assets measured at FVPL amounted to HK\$1,228 million (2020: HK\$1,923 million). For the year ended 31 December 2021, the above-mentioned management fee and trustee fee amounted to HK\$671 million (2020: HK\$619 million). The maximum exposure to loss from Group's interests in these fund investments is equal to the total fair value of its investments in these funds.

### 50. Loans to directors

Particulars of loans made to directors of the Company pursuant to section 383 of the Hong Kong Companies Ordinance and Part 3 of the Companies (Disclosure of Information about Benefits of Directors) Regulation are as follows:

	2021 HK\$'m	2020 HK\$'m
Aggregate amount of relevant transactions outstanding at year end	–	–
Maximum aggregate amount of relevant transactions outstanding during the year	1	–



## **51. Significant related party transactions**

The Group is subject to the control of the State Council of the PRC Government through China Investment Corporation (“CIC”), its wholly-owned subsidiary Central Huijin Investment Ltd. (“Central Huijin”), and BOC in which Central Huijin has controlling equity interests.

### **(a) Transactions with the parent companies and the other companies controlled by the parent companies**

General information of the parent companies:

The Group is controlled by BOC. Central Huijin is the controlling entity of BOC, and it is a wholly-owned subsidiary of CIC which is a wholly state-owned company engaging in foreign currency investment management.

Central Huijin has controlling equity interests in certain other entities in the PRC.

The Group enters into banking and other transactions with these entities in the normal course of business which include loans, investment securities, money market and reinsurance transactions.

The majority of transactions with BOC arise from money market activities. As at 31 December 2021, the Group’s related aggregate amounts due from and to BOC were HK\$191,806 million (2020: HK\$188,781 million) and HK\$245,648 million (2020: HK\$110,389 million) respectively. The aggregate amounts of income and expenses of the Group arising from these transactions with BOC for the year ended 31 December 2021 were HK\$1,598 million (2020: HK\$1,037 million) and HK\$936 million (2020: HK\$157 million) respectively. The related party transactions above constitute connected transactions as defined in Chapter 14A of the Listing Rules but under exemption from its disclosure requirement.

As at 31 December 2021, the related aggregate amounts due from and to subsidiaries of BOC were HK\$1,113 million (31 December 2020: HK\$405 million) and HK\$10,139 million (31 December 2020: HK\$5,657 million) respectively.

Other transactions with companies controlled by BOC are not considered material.

### **(b) Transactions with government authorities, agencies, affiliates and other state controlled entities**

The Group is subject to the control of the State Council of the PRC Government through CIC and Central Huijin, which also directly or indirectly controls a significant number of entities through its government authorities, agencies, affiliates and other state controlled entities. The Group enters into banking transactions with government authorities, agencies, affiliates and other state controlled entities in the normal course of business at commercial terms.

These transactions include, but are not limited to, the following:

- lending, provision of credits and guarantees, and deposit taking;
- inter-bank balance taking and placing;
- sales, purchases, underwriting and redemption of bonds issued by other state controlled entities;

## NOTES TO THE FINANCIAL STATEMENTS

### 51. Significant related party transactions (continued)

(b) Transactions with government authorities, agencies, affiliates and other state controlled entities (continued)

- rendering of foreign exchange, remittance and investment related services;
- provision of fiduciary activities; and
- purchase of utilities, transport, telecommunication and postage services.

(c) Summary of transactions entered into during the ordinary course of business with associates, joint ventures and other related parties

The aggregate income/expenses and balances arising from related party transactions with associates, joint ventures and other related parties of the Group are summarised as follows:

	2021 HK\$'m	2020 HK\$'m
Income statement items		
Associates and joint ventures		
– Fee and commission income	60	43
– Interest expenses	1	1
– Other operating expenses	79	80
Other related parties		
– Fee and commission income	14	12
Balance sheet items		
Associates and joint ventures		
– Other assets	11	11
– Deposits and balances from banks and other financial institutions	77	38
– Deposits from customers	120	124
– Other accounts and provisions	–	7

The related party transactions in respect of the other operating expenses arising from associates and joint ventures above constitute connected transactions as defined in Chapter 14A of the Listing Rules and the required disclosures are provided in “Connected transactions” on pages 291 to 292.

(d) Key management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including directors and senior management. The Group accepts deposits from and grants loans and credit facilities to key management personnel in the ordinary course of business. During both the current and prior years, no material transaction was conducted with key management personnel of the Company and its holding companies, as well as parties related to them.

The compensation of key management personnel for the year ended 31 December is detailed as follows:

	2021 HK\$'m	2020 HK\$'m
Salaries and other short-term employee benefits	52	55

## 52. IBOR reform

The Group has fair value hedge accounting relationships that are exposed to different interbank offered rates, predominantly US Dollar LIBOR. External progress on the transition to risk-free interest rates is being monitored, with the objective of ensuring a smooth transition for the Group's hedge accounting relationships. The specific issues arising will vary with the details of each hedging relationship, but may arise due to the transition of existing products included in the designation, a change in expected volumes of products to be issued, a change in contractual terms of new products issued, or a combination of these factors. Some hedges may need to be de-designated and new relationships entered into, while others may survive IBOR reform.

The hedged items that are affected by the adoption of the applicable temporary reliefs in hedge accounting relationships are debt securities which are presented in the consolidated balance sheet as "Investment in securities". When identifying the hedged items that are affected by the adoption of the applicable temporary reliefs, judgement has been exercised by the Group in determining when uncertainty is expected to be resolved and therefore when the applicable temporary reliefs will cease to apply. As at 31 December 2021, the Group believed that the uncertainty continued to exist and so the applicable temporary reliefs apply to all of the Group's hedge accounting relationships that reference benchmarks subject to reform or replacement.

As at 31 December 2021, the contract/notional amounts of interest rate derivatives designated in fair value hedge accounting relationships was HK\$77,496 million (2020: HK\$104,022 million), which represented the extent of the risk exposure around fair value hedging relationships managed by the Group that was directly affected by IBOR reform and impacted by applicable temporary reliefs.

The Group manages risks related to IBOR reform and completed most of the system updates. The Group continuously monitors the risk exposure of IBOR reform, converts existing contracts and actively communicates with customers.

The Group is exposed to different interbank offered rates, predominantly US Dollar LIBOR. The following table contains details of financial instruments that the Group holds as at 31 December 2021 which reference LIBOR and have not yet transitioned to an alternative interest rate benchmark:

	2021	
	Financial instruments yet to transition to alternative benchmarks	
	USD LIBOR HK\$'m	Others* HK\$'m
Non-derivative financial assets	183,073	23,227
Non-derivative financial liabilities	626	–
Derivative contract/notional amounts	501,140	–

\* Comprises financial instruments referencing other significant benchmark rates yet to transition to alternative benchmarks (GBP LIBOR and JPY LIBOR).

## NOTES TO THE FINANCIAL STATEMENTS

### 53. International claims

The below analysis is prepared with reference to the completion instructions for the HKMA return of international banking statistics. International claims are exposures to counterparties on which the ultimate risk lies based on the locations of the counterparties after taking into account the transfer of risk, and represent the sum of cross-border claims in all currencies and local claims in foreign currencies. For a claim guaranteed by a party situated in a location different from the counterparty, the risk will be transferred to the location of the guarantor. For a claim on an overseas branch of a bank whose head office is located in another location, the risk will be transferred to the location where its head office is located.

Claims on individual countries/regions, after risk transfer, amounting to 10% or more of the aggregate international claims of the Group in either year end are shown as follows:

	2021				
	Non-bank private sector				Total HK\$'m
	Banks HK\$'m	Official sector HK\$'m	Non-bank	Non-financial	
			financial institutions HK\$'m	private sector HK\$'m	
Chinese Mainland	413,327	149,879	29,297	143,351	735,854
Hong Kong	30,507	3,341	50,196	379,250	463,294
United States	18,373	147,258	15,829	19,879	201,339

  

	2020				
	Non-bank private sector				Total HK\$'m
	Banks HK\$'m	Official sector HK\$'m	Non-bank	Non-financial	
			financial institutions HK\$'m	private sector HK\$'m	
Chinese Mainland	384,517	134,057	24,283	151,545	694,402
Hong Kong	7,263	185	46,394	341,442	395,284
United States	10,575	136,361	16,957	21,578	185,471

## 54. Non-bank Mainland exposures

The analysis of non-bank Mainland exposures is based on the categories of non-bank counterparties and the types of direct exposures with reference to the completion instructions for the HKMA return of Mainland activities, which includes the Mainland exposures extended by BOCHK's Hong Kong office only.

	Items in the HKMA return	2021		Total exposure HK\$'m
		On-balance sheet exposure HK\$'m	Off-balance sheet exposure HK\$'m	
Central government, central government-owned entities and their subsidiaries and joint ventures	1	391,272	28,052	419,324
Local governments, local government-owned entities and their subsidiaries and joint ventures	2	78,458	10,669	89,127
PRC nationals residing in Mainland or other entities incorporated in Mainland and their subsidiaries and joint ventures	3	128,755	26,084	154,839
Other entities of central government not reported in item 1 above	4	28,200	1,333	29,533
Other entities of local governments not reported in item 2 above	5	1,001	7	1,008
PRC nationals residing outside Mainland or entities incorporated outside Mainland where the credit is granted for use in Mainland	6	74,082	12,916	86,998
Other counterparties where the exposures are considered to be non-bank Mainland exposures	7	3,713	–	3,713
Total	8	<b>705,481</b>	<b>79,061</b>	<b>784,542</b>
Total assets after provision	9	<b>3,372,961</b>		
On-balance sheet exposures as percentage of total assets	10	<b>20.92%</b>		

## NOTES TO THE FINANCIAL STATEMENTS

### 54. Non-bank Mainland exposures (continued)

	Items in the HKMA return	2020		Total exposure HK\$'m
		On-balance sheet exposure HK\$'m	Off-balance sheet exposure HK\$'m	
Central government, central government-owned entities and their subsidiaries and joint ventures	1	349,405	36,110	385,515
Local governments, local government-owned entities and their subsidiaries and joint ventures	2	69,104	11,230	80,334
PRC nationals residing in Mainland or other entities incorporated in Mainland and their subsidiaries and joint ventures	3	109,921	23,386	133,307
Other entities of central government not reported in item 1 above	4	32,628	4,765	37,393
Other entities of local governments not reported in item 2 above	5	1,002	–	1,002
PRC nationals residing outside Mainland or entities incorporated outside Mainland where the credit is granted for use in Mainland	6	83,664	8,477	92,141
Other counterparties where the exposures are considered to be non-bank Mainland exposures	7	1,849	10	1,859
Total	8	647,573	83,978	731,551
Total assets after provision	9	3,067,224		
On-balance sheet exposures as percentage of total assets	10	21.11%		

## 55. Balance sheet and statement of changes in equity

### (a) Balance sheet

As at 31 December	2021 HK\$'m	2020 HK\$'m
<b>ASSETS</b>		
Bank balances with a subsidiary	547	1,474
Investment in securities	955	1,412
Investment in subsidiaries	55,322	55,322
Amounts due from a subsidiary	7,059	7,403
Investment in associates and joint ventures	1,100	1,100
Other assets	1	2
Total assets	64,984	66,713
<b>LIABILITIES</b>		
Amounts due to a subsidiary	2	2
Total liabilities	2	2
<b>EQUITY</b>		
Share capital	52,864	52,864
Reserves	12,118	13,847
Total equity	64,982	66,711
Total liabilities and equity	64,984	66,713

Approved by the Board of Directors on 29 March 2022 and signed on behalf of the Board by:



**LIU Liange**  
Director



**SUN Yu**  
Director

## NOTES TO THE FINANCIAL STATEMENTS

### 55. Balance sheet and statement of changes in equity (continued)

#### (b) Statement of changes in equity

	Reserves			Total equity HK\$'m
	Share capital HK\$'m	Reserve for fair value changes HK\$'m	Retained earnings HK\$'m	
At 1 January 2020	52,864	(2,503)	19,413	69,774
Profit for the year	–	–	12,222	12,222
Other comprehensive income:				
Equity instruments at fair value through other comprehensive income	–	(71)	–	(71)
Total comprehensive income	–	(71)	12,222	12,151
Dividends	–	–	(15,214)	(15,214)
At 31 December 2020	52,864	(2,574)	16,421	66,711
At 1 January 2021	<b>52,864</b>	<b>(2,574)</b>	<b>16,421</b>	<b>66,711</b>
Profit for the year	–	–	<b>11,859</b>	<b>11,859</b>
Other comprehensive income:				
Equity instruments at fair value through other comprehensive income	–	<b>(457)</b>	–	<b>(457)</b>
Total comprehensive income	–	<b>(457)</b>	<b>11,859</b>	<b>11,402</b>
Dividends	–	–	<b>(13,131)</b>	<b>(13,131)</b>
At 31 December 2021	<b>52,864</b>	<b>(3,031)</b>	<b>15,149</b>	<b>64,982</b>



## 56. Principal subsidiaries

The following is a list of principal subsidiaries as at 31 December 2021:

Name	Place of incorporation and operation	Issued share capital	Interest held	Principal activities
Bank of China (Hong Kong) Limited	Hong Kong	HK\$43,042,840,858	*100%	Banking business
BOC Group Life Assurance Company Limited	Hong Kong	HK\$3,538,000,000	*51%	Life insurance business
BOC Credit Card (International) Limited	Hong Kong	HK\$565,000,000	100%	Credit card services
Bank of China (Malaysia) Berhad	Malaysia	RM760,518,480	100%	Banking business
Bank of China (Thai) Public Company Limited	Thailand	Baht10,000,000,000	100%	Banking business
Po Sang Securities and Futures Limited	Hong Kong	HK\$335,000,000	100%	Securities and futures brokerage

\* Shares held directly by the Company

The particulars of a subsidiary with significant non-controlling interests are as follows:

### BOC Group Life Assurance Company Limited

	2021	2020
Proportion of ownership interests and voting rights held by non-controlling interests	49%	49%

  

	2021 HK\$'m	2020 HK\$'m
Profit attributable to non-controlling interests	469	424
Accumulated non-controlling interests	5,699	5,587
Summarised financial information:		
– total assets	197,906	179,865
– total liabilities	186,277	168,463
– profit for the year	956	866
– total comprehensive income for the year	261	1,349

## NOTES TO THE FINANCIAL STATEMENTS

### 57. Ultimate holding company

The Group is subject to the control of the State Council of the PRC Government through China Investment Corporation, its wholly-owned subsidiary Central Huijin Investment Ltd. ("Central Huijin"), and BOC in which Central Huijin has controlling equity interests.

### 58. Events after the balance sheet date

On 17 February 2022, the Group issued HK\$2 billion "sustainable and smart living" themed green bonds, which was listed on The Stock Exchange of Hong Kong Limited, as part of the Group's USD15 billion Medium Term Note Programme. The themed green bonds are denominated in HKD, have a maturity of 2 years due in 2024, and bear a fixed interest rate of 1.33% per annum payable semi-annually in arrear.

### 59. Approval of financial statements

The financial statements were approved and authorised for issue by the Board of Directors on 29 March 2022.