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 24/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 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 2.24 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.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018

Standards/ Amendments/ Interpretation	Content	Applicable for financial years beginning on/after	Currently relevant to the Group
HKAS 28 (2011) (Amendments)	Investments in Associates and Joint Ventures	1 January 2018	No
HKAS 40 (Amendments)	Transfers of Investment Property	1 January 2018	Yes
HKFRS 1 (Amendments)	First-Time Adoption of Hong Kong Financial Reporting Standards	1 January 2018	No
HKFRS 2 (Amendment)	Share-Based Payment: Classification and Measurement of Share-Based Payment Transactions	1 January 2018	No
HKFRS 4 (Amendments)	Applying HKFRS 9 Financial Instruments with HKFRS 4 Insurance Contracts	1 January 2018	No
HKFRS 9	Financial Instruments	1 January 2018	Yes
HKFRS 9 (Amendments)	Financial Instruments: Prepayment Features with Negative Compensation	1 January 2019	Yes
HKFRS 15	Revenue from Contracts with Customers	1 January 2018	Yes
HKFRS 15 (Amendments)	Clarifications to HKFRS 15	1 January 2018	Yes
HK(IFRIC) – Int 22	Foreign Currency Transactions and Advance Consideration	1 January 2018	Yes

- HKAS 40 (Amendments), "Transfers of Investment Property". The amendments clarify that there must be a change in use when a property is transferred to or from investment properties. A change in use would involve an assessment of whether a property meets, or has ceased to meet, the definition of investment property; and supporting evidence that a change in use has occurred. The requirements of these amendments are consistent with the Group's current practice and do not have a material impact on the Group's financial statements.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

- HKFRS 9, "Financial Instruments". The issuance of IFRS 9 "Financial Instruments" completes the International Accounting Standards Board's comprehensive response to the 2008 financial crisis. HKFRS 9, the equivalent standard of IFRS 9 under HKFRS, includes a logical model for classification and measurement, a single, forward-looking "expected loss" impairment model and a tighter linkage of risk management to hedge accounting. The Group has also early adopted HKFRS 9 (Amendments) "Financial Instruments: Prepayment Features with Negative Compensation" which is mandatorily effective for reporting periods beginning on or after 1 January 2019 with earlier application permitted. The changes introduced in HKFRS 9 are highlighted as follows:

(i) Classification and measurement

Financial assets are required to be classified into one of the following measurement categories from the original four categories under HKAS 39: (1) measured subsequently at amortised cost, (2) measured subsequently at fair value through other comprehensive income (all fair value changes other than interest accrual, amortisation and impairment will be recognised in other comprehensive income), or (3) measured subsequently at fair value through profit or loss. Classification of financial assets was made on transition, and subsequently on initial recognition. 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.

For a description of how the Group classifies and measures financial assets and recognises related gains and losses under HKFRS 9, please refer to the respective accounting policy in Note 2.8.

The classification and measurement requirements of financial liabilities have been basically carried forward with minimal amendments from HKAS 39.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

The accounting for fair value option of financial liabilities was changed to address own credit risk. The amount of change in fair value attributable to changes in the credit risk of the financial liabilities designated at fair value is presented in other comprehensive income. The remaining amount of the total gain or loss is included in the income statement. If this creates or enlarges an accounting mismatch in profit or loss, then the whole fair value change would be presented in the income statement. The determination of whether there will be a mismatch will need to be made at initial recognition of individual financial liabilities and will not be re-assessed. Amounts presented in other comprehensive income are not subsequently reclassified to the income statement but may be transferred within equity. This removes the volatility in profit or loss that was caused by changes in the credit risk of financial liabilities elected to be measured at fair value. It also means that gains caused by the deterioration of an entity's own credit risk on such liabilities will no longer be recognised in profit or loss. No accumulated fair value change in own credit risk is reclassified by the Group from retained earnings to other comprehensive income upon transition.

The standard also eliminates the exception from fair value measurement contained in HKAS 39 for derivative financial instruments that are linked to and must be settled by delivery of an unquoted equity instrument.

Upon transition, the Group has performed a detailed analysis for each class of the Group's financial assets and financial liabilities on 1 January 2018, and the below accompanying notes explain the original measurement categories under HKAS 39 and the new measurement categories under HKFRS 9.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

Financial assets	Notes	Original classification under HKAS 39	New classification under HKFRS 9	Original gross carrying amount under HKAS 39 HK$'m	Re-classification HK$'m	Re-measurement HK$'m	New gross carrying amount under HKFRS 9 HK$'m
Cash and balances and placements with banks and other financial institutions		L&R	AC	426,604	–	–	426,604
Financial assets at fair value through profit or loss – debt instruments		FVPL (T)	FVPL (T)	49,710	–	–	49,710
		FVPL (T)	FVPL (M)	183	–	–	183
	(a)	FVPL (T)	FVOCI	179	(179)	–	–
	(b)	FVPL (T)	AC	712	(712)	–	–
	(c)	AFS	FVPL (M)	–	988	–	988
	(d)	HTM	FVPL (M)	–	1,381	(4)	1,377
	(e)	FVPL (D)	FVPL (M)	19,336	–	–	19,336
	(a)	FVPL (D)	FVOCI	5,079	(5,079)	–	–
	(b)	FVPL (D)	AC	5,249	(5,249)	–	–
	(f)	AFS	FVPL (D)	–	7,818	–	7,818
Financial assets at fair value through profit or loss – equity securities and fund		FVPL (T)	FVPL (T)	203	–	–	203
	(g)	FVPL (D)	FVPL (M)	12,543	–	–	12,543
	(h)	AFS	FVPL (M)	–	552	–	552
Hong Kong SAR Government certificates of indebtedness		L&R	AC	146,200	–	–	146,200
Derivative financial instruments		FVPL (T)	FVPL (T)	33,543	–	–	33,543
Advances and other accounts		L&R	AC	1,195,660	–	–	1,195,660

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

Financial assets	Notes	Original classification under HKAS 39	New classification under HKFRS 9	Original gross carrying amount under HKAS 39 HK$'m	Re-classification HK$'m	Re-measurement HK$'m	New gross carrying amount under HKFRS 9 HK$'m
Investment in securities – debt instruments		AFS	FVOCI	531,964	–	–	531,964
	(c)	AFS	FVPL (M)	988	(988)	–	–
	(f)	AFS	FVPL (D)	7,818	(7,818)	–	–
	(i)	AFS	AC	20,931	(20,931)	–	–
	(a)	FVPL (T)	FVOCI	–	179	–	179
	(a)	FVPL (D)	FVOCI	–	5,079	–	5,079
	(j)	HTM	FVOCI	–	123	1	124
	(k)	L&R	FVOCI	–	499	(1)	498
	(l)	HTM	AC	49,118	–	(5)	49,113
	(d)	HTM	FVPL (M)	1,381	(1,381)	–	–
	(j)	HTM	FVOCI	123	(123)	–	–
	(b)	FVPL (T)	AC	–	712	(35)	677
	(b)	FVPL (D)	AC	–	5,249	(186)	5,063
	(i)	AFS	AC	–	20,931	508	21,439
	(k)	L&R	FVOCI	499	(499)	–	–
Investment in securities – equity securities	(m)	AFS	FVOCI	4,862	–	–	4,862
	(h)	AFS	FVPL (M)	552	(552)	–	–
Other financial assets		L&R	AC	23,353	–	–	23,353
Total financial assets				**2,536,790**	**–**	**278**	**2,537,068**

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

Financial liabilities	Notes	Original classification under HKAS 39	New classification under HKFRS 9	Original gross carrying amount under HKAS 39 HK$'m	Re-classification HK$'m	Re-measurement HK$'m	New gross carrying amount under HKFRS 9 HK$'m
Hong Kong SAR currency notes in circulation		AC	AC	146,200	–	–	146,200
Deposits and balances from banks and other financial institutions		AC	AC	223,427	–	–	223,427
Financial liabilities at fair value through profit or loss		FVPL (T)	FVPL (T)	16,936	–	–	16,936
		FVPL (D)	FVPL (D)	2,784	–	–	2,784
Derivative financial instruments		FVPL (T)	FVPL (T)	31,046	–	–	31,046
Deposits from customers		AC	AC	1,775,090	–	–	1,775,090
Debt securities and certificates of deposit in issue		AC	AC	21,641	–	–	21,641
Subordinated liabilities		AC	AC	63	–	–	63
	(n)	AC	FVPL (D)	18,917	–	2,068	20,985
Other financial liabilities		AC	AC	42,144	–	–	42,144
Total financial liabilities				**2,278,248**	**–**	**2,068**	**2,280,316**

Remarks:

FVPL (T)	**Trading assets/liabilities at fair value through profit or loss**
FVPL (M)	**Other financial assets mandatorily classified at fair value through profit or loss**
FVPL (D)	**Financial assets/liabilities designated at fair value through profit or loss**
FVOCI	**Fair value through other comprehensive income**
AC	**Amortised cost**
AFS	**Available-for-sale**
HTM	**Held-to-maturity**
L&R	**Loans and receivables**

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

Notes:

(a) Certain debt securities were reclassified as FVOCI out of FVPL because their contractual cash flows demonstrate solely payments of principal and interest on the principal outstanding. The Group reviewed its business model over these debt securities and concluded that the return of investment shall be achieved by both collecting contractual cash flows and sale of these investments.

(b) Certain debt securities were reclassified to AC out of FVPL because their contractual cash flows demonstrate solely payments of principal and interest on the principal outstanding. The Group reviewed its business model over these debt securities and concluded these securities shall fulfil the business model of hold-to-collect.

(c) Certain capital instruments classified as AFS with principal written-down features or equity conversion features at the point of non-viability of issuers were reclassified as FVPL because their cash flows are not solely payments of principal and interest on the principal outstanding.

(d) Certain debt securities were reclassified out of HTM to FVPL because the Group reassessed its business model upon transition and concluded that the investments shall be managed on a fair value basis and by maximising cash flows through sales.

(e) Certain debt securities fulfil the business model of being managed on a fair value basis and by maximising cash flows through sale and were mandatorily classified as FVPL.

(f) Certain AFS securities were designated as financial assets at FVPL because the Group holds related derivatives at FVPL and these designations can eliminate or significantly reduce an accounting mismatch that would otherwise arise.

(g) Equity securities and fund are mandatorily measured at FVPL under HKFRS 9. As such, these investments are no longer required to be designated at FVPL.

(h) Certain equity securities were reclassified as FVPL from AFS because the Group manages these investments on a fair value basis and the return of investment shall be achieved by maximising return through sales.

(i) Certain debt securities investments were reclassified as AC out of AFS because these securities fulfil the cash flow characteristics test and shall be managed solely for collecting contractual cash flows.

(j) Certain HTM securities were reclassified as FVOCI as the Group reassessed its business model upon transition and concluded that the return on investment shall be achieved both by collection of contractual cash flows and sale of investments.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(i) Classification and measurement (continued)

Notes:

(k) Certain L&R debt securities investments were reclassified as FVOCI because their contractual cash flows demonstrate solely payments of principal and interest on the principal outstanding and are held within a business model of both collecting contractual cash flows and selling investments.

(l) Certain HTM securities were reclassified as AC. Since these debt securities were AFS securities which had previously been reclassified to HTM securities under HKAS 39, the change in carrying value upon transition is due to the remeasurement from initial recognition of the debt securities.

(m) The Group elected to present in other comprehensive income the changes in fair value of certain equity investments previously classified as AFS because these investments are held as long-term strategic investments.

(n) Under HKAS 39, the subordinated liabilities issued were measured at amortised cost and fair value hedge was applied to hedge the interest rate risk of the liabilities. Upon transition, the hedge accounting ceased and the subordinated liabilities were designated in its entirety as at FVPL to eliminate or significantly reduce an accounting mismatch between the liabilities and the hedging instruments that would otherwise arise.

The following table presents the financial impact resulted from the reclassification upon adoption of HKFRS 9.

			Assuming no reclassification			
	Carrying value as at 31 December 2018 HK$'m	Fair value as at 31 December 2018 HK$'m	Losses recognised in income statement HK$'m	Losses recognised in other comprehensive income HK$'m	Effective interest rate determined on the date of initial application	Interest income HK$'m
Reclassification from available-for-sale to amortised cost						
Debt instruments	19,889	19,306	N/A	(1,426)	N/A	N/A
Reclassification from FVPL to amortised cost						
Debt instruments	5,600	5,403	(400)	N/A	2.03% to 4.34%	256
Reclassification from FVPL to FVOCI						
Debt instruments	2,415	2,415	(100)	N/A	3.37% to 5.18%	142

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(ii) Impairment

The standard introduces a new forward-looking "expected-loss" impairment model that will require more timely recognition of expected credit losses. The impairment allowances for financial instruments that are subsequently measured at amortised cost, fair value through other comprehensive income (debt instruments), irrevocable loan commitments and financial guarantee contracts will be governed by this standard. Specifically, it requires entities to assess credit risk and estimate ECL with an unbiased and probability-weighted approach. Not only information about past events, but all available information including current conditions and forecast of future economic conditions shall be considered with discounting for time value of money. The Group will account for expected credit losses within the next 12 months as Stage 1 when those financial instruments are initially recognised; and 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 one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred and interest will then be accrued net of the impairment amount of the respective Stage 3 financial assets.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(ii) Impairment (continued)

For assets within the scope of the HKFRS 9 impairment model, the resulting impairment under HKFRS 9 will probably be more forward-looking than that under HKAS 39. Their impairment losses are generally expected to increase and more volatile. The following table illustrates the impact of the adoption of HKFRS 9's impairment requirements on the Group as at 1 January 2018.

Impairment allowances	At 31 December 2017 under HKAS 39 HK$'m	Re-measurement HK$'m	At 1 January 2018 under HKFRS 9 HK$'m
Cash and balances and placements with banks and other financial institutions	–	83	83
Advances and other accounts	4,106	852	4,958
Investment in securities – debt instruments			
– FVPL reclassified to FVOCI	–	3	3
– AFS, HTM and L&R reclassified to FVOCI	–	124	124
– FVPL reclassified to AC	–	2	2
– AFS and HTM reclassified to AC	45	15	60
Loan commitments and financial guarantee contracts	–	352	352
Others	5	9	14
Total	**4,156**	**1,440**	**5,596**

(iii) Hedge accounting

The requirements under HKFRS 9 related to hedge accounting would better align the accounting treatments with risk management activities and enable entities to better reflect these activities in their financial statements. It relaxes the requirements for assessing hedge effectiveness which may enable more risk management strategies to be eligible for hedge accounting. It also relaxes the rules on using non-derivative financial instruments as hedging instruments and allows greater flexibility on hedged items. Users of the financial statements will be provided with more relevant information about the effect of hedge accounting on the financial statements.

The Group has chosen to prospectively apply HKFRS 9 on transition. As HKFRS 9 does not change the general principles of accounting for effective hedges, applying the hedge accounting requirements of HKFRS 9 will not have a significant impact on the Group's financial statements.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(iv) Overall impact of adoption of HKFRS 9 on equity

The Group has taken an exemption in accordance with the transitional provision of HKFRS 9 not to restate comparative information for prior periods with respect to classification and measurement. The adoption of HKFRS 9 reduced the net assets after tax at 1 January 2018 by approximately HK$2.5 billion in aggregate, and the Group's total capital ratio decreased by approximately 10 basis points. The following table summarises the impact, net of tax, of transition to HKFRS 9 on the opening balances of reserves, retained earnings and non-controlling interests.

	Other comprehensive income and retained earnings HK$'m
Reserve for fair value changes	
Closing balance as at 31 December 2017	42
Reclassification of debt instruments from HTM to FVOCI	1
Reclassification of debt instruments from L&R to FVOCI	(1)
Reclassification of debt instruments from AFS to AC	508
Reclassification of debt instruments from FVPL(Trading) to FVOCI	4
Reclassification of debt instruments from FVPL(Designated) to FVOCI	149
Release upon reclassification of debt instruments from AFS to FVPL (Mandatory)	4
Release upon reclassification of debt instruments from AFS to FVPL (Designated)	358
Release upon reclassification of equity securities from AFS to FVPL (Mandatory)	(10)
Release upon reclassification of certain debt instruments from HTM to FVPL (Mandatory) [Note 1]	9
Release upon reclassification of certain debt instruments from HTM to AC [Note 1]	(8)
Recognition of ECL under HKFRS 9 for debt securities at FVOCI	127
Reversal of impairment loss previously recognised on AFS equity securities	(2,730)
Deferred tax in relation to the above	(170)
Share of non-controlling interests due to adoption of HKFRS 9	(57)
	(1,816)
Opening balance as at 1 January 2018	(1,774)
Regulatory reserve	
Closing balance as at 31 December 2017	10,224
Release to retained earnings upon adoption of HKFRS 9	(750)
Opening balance as at 1 January 2018	9,474

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

(iv) Overall impact of adoption of HKFRS 9 on equity (continued)

	Other comprehensive income and retained earnings HK$'m
Retained earnings	
Closing balance as at 31 December 2017	143,865
Reclassification of debt instruments from HTM to FVPL (Mandatory)	(4)
Reclassification of debt instruments from HTM to AC	(5)
Reclassification of debt instruments from FVPL (Trading) to AC	(35)
Reclassification of debt instruments from FVPL (Designated) to AC	(186)
Reclassification of subordinated liabilities from AC to FVPL (Designated)	(2,068)
Reclassification of debt instruments from FVPL (Trading) to FVOCI	(4)
Reclassification of debt instruments from FVPL (Designated) to FVOCI	(149)
Release upon reclassification of debt instruments from AFS to FVPL (Mandatory)	(4)
Release upon reclassification of debt instruments from AFS to FVPL (Designated)	(358)
Release upon reclassification of equity securities from AFS to FVPL (Mandatory)	10
Release upon reclassification of certain debt instruments from HTM to FVPL (Mandatory) [Note 1]	(9)
Release upon reclassification of certain debt instruments from HTM to AC [Note 1]	8
Recognition of ECL under HKFRS 9	(1,440)
Reversal of impairment loss previously recognised on AFS equity securities	2,730
Reversal of interest previously reduced under HKAS 39	111
Current tax in relation to the above	494
Deferred tax in relation to the above	190
Release from regulatory reserve upon adoption of HKFRS 9	750
Share of non-controlling interests due to adoption of HKFRS 9	163
	194
Opening balance as at 1 January 2018	144,059
Non-controlling interests	
Closing balance as at 31 December 2017	4,605
Share of non-controlling interests due to adoption of HKFRS 9	(106)
Opening balance at 1 January 2018	4,499

Note:
1. Certain debt securities that were originally AFS securities had been reclassified to HTM securities in prior years. Upon adoption of HKFRS 9, the original AFS reserve that was subject to amortisation was reversed to retained earnings directly.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(a) Standards, amendments and interpretation that are initially adopted for the financial year beginning on 1 January 2018 (continued)

- HKFRS 15, "Revenue from Contracts with Customers". HKFRS 15 applies a single model and specifies the accounting treatment for all revenue arising from contracts with customers. The new standard is based on the core principle that revenue is recognised to reflect the consideration expected to be entitled when control of promised good or service transfers to customer. It is also applicable to the recognition and measurement of gains or losses on the sale of some non-financial assets such as properties or equipment that are not an output of ordinary activities.

  The Group provides a wide range of financial services in exchange for fee or commission income. Except for a few services, such as safe deposit box service, of which revenue is recognised over time so as to depict the pattern of delivery of services, most of the commission income generated from the provision of financial services, such as security brokerage fee, credit card interchange fees and fees which are not an integral part of the effective yield, are recognised on a point-in-time basis, i.e. when the performance obligation is completed. Loan syndication fees are as before recognised as revenue when the related syndication arrangement has been completed and the Group has retained no part of the loan package for itself or has retained a part at the same effective interest rate as applicable to the other participants.

  The Group adopted HKFRS 15 by using the modified retrospective method of adoption. As HKFRS 15 does not change the general principles of accounting for revenue recognition, the application of this standard does not have a material impact on the Group's financial statements.

- HK(IFRIC) – Int 22, "Foreign Currency Transactions and Advance Consideration". The interpretation specifies that the exchange rate on the date of cash payment or receipt is used for transactions that involve advance consideration paid or received in a foreign currency. The application of this interpretation does 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 interpretation issued that are not yet mandatorily effective and have not been early adopted by the Group in 2018

Standards/ Amendments/ Interpretation	Content	Applicable for financial years beginning on/after	Currently relevant to the Group
HKAS 1 and HKAS 8 (Amendments)	Definition of Material	1 January 2020	Yes
HKAS 19 (2011) (Amendments)	Plan Amendment, Curtailment or Settlement	1 January 2019	No
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 28 (2011) (Amendments)	Long-term Interests in Associates and Joint Ventures	1 January 2019	Yes
HKFRS 3 (Amendments)	Definition of a Business	1 January 2020	Yes
HKFRS 16	Leases	1 January 2019	Yes
HKFRS 17	Insurance Contracts	1 January 2021	Yes
HK(IFRIC) – Int 23	Uncertainty over Income Tax Treatments	1 January 2019	Yes

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

- HKAS 1 and HKAS 8 (Amendments), "Definition of Material". The amendments clarify the definition of materiality of information and align the definition used across other accounting standards. The amendments are to be applied prospectively and early application is permitted. The application of these 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). A partial gain or loss is recognised when a transaction involves assets that do not constitute a business, even if these assets are housed in a subsidiary. The amendments are to be applied prospectively and early application is permitted. The application of these 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 interpretation issued that are not yet mandatorily effective and have not been early adopted by the Group in 2018 (continued)

- HKAS 28 (2011) (Amendments), "Long-term Interests in Associates and Joint Ventures". The amendments clarify that long-term interests such as preference shares or shareholder's loans, to which the equity method shall not be applied, are in the scope of both HKFRS 9 and HKAS 28 and explains that HKFRS 9 is applied independently before the allocation of losses under the equity method. The amendments are to be applied retrospectively and early application is permitted. The application of the amendments will not have a material impact on the Group's financial statements.

- HKFRS 3 (Amendments), "Definition of a Business". The amendments clarify the definition of a business, with the objective of assisting entities to determine whether a business combination transaction should be accounted for as a business combination or as an asset acquisition. The amendments are to be applied prospectively and early application is permitted. The application of this amendment will not have a material impact on the Group's financial statements.

- HKFRS 16, "Leases". HKFRS 16 supersedes the existing standard and interpretations related to leases. It applies a single control model to identify leases and distinguish between leases and service contracts. Significant changes to lessee accounting are introduced, with the distinction between operating and finance leases removed. Also, subject to practical expedients, lessees will account for all leases in a similar way as the current finance lease accounting under HKAS 17, i.e. the lessee will recognise and measure the corresponding "right-of-use" asset and lease liability at the inception of the lease by discounting the total future lease payment. Subsequently, the lessee will recognise interest expense through the unwinding of the lease liability, and the expense on the depreciation of the right-of-use asset, instead of recognising as rental expenses under operating leases. As a practical expedient, the lessee can elect not to apply this accounting model to short-term leases (i.e. where the lease term is 12 months or less) and to leases of low-value assets, in which case the rental expenses would continue to be recognised on a systematic basis over the lease term. There will be no significant changes to the lessor accounting requirements as compared with the current HKAS 17.

  The Group is considering to elect to use the modified retrospective approach for the adoption of HKFRS 16 and will recognise the cumulative effect of the initial application as an adjustment to the opening balances at 1 January 2019 with no restatement of the comparative information. As a reference, at 31 December 2018, the Group's future minimum lease payments under non-cancellable operating leases as shown in Note 45 amounted to approximately HK$1.4 billion, the majority of which are payable between 1 and 5 years after the reporting date. Upon the initial adoption of HKFRS 16, the opening balances of lease liabilities and the corresponding right-of-use assets are estimated to be adjusted by HK$1.7 billion, net of tax, as at 1 January 2019. The above overall financial impact is subject to change of assumptions, judgements and estimates to be finalised in the financial statements of 2019.

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

(b) Standards, amendments and interpretation issued that are not yet mandatorily effective and have not been early adopted by the Group in 2018 (continued)

- HKFRS 17, "Insurance Contracts". HKFRS 17 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 and HKFRS 15. The Group is considering the financial impact of the standard and the timing of its application.

- HK(IFRIC) – Int 23, "Uncertainty over Income Tax Treatments". The interpretation specifies how an entity should reflect and measure the effects of uncertainty in accounting for income taxes by determining how probable that a taxation authority will accept an uncertain tax treatment. The interpretation can either be applied on a fully retrospective basis or on a modified retrospective basis. Earlier application is permitted. The application of this interpretation will not have a material impact on the Group's financial statements.

(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.

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 2018.

(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 Company 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 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.

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) Transactions with non-controlling 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, 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 or significant influence, 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.

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 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.

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 through other comprehensive income.

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 equity 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 designated as hedging instrument and are effectively hedged, 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).

2. Significant accounting policies (continued)

2.5 Derivative financial instruments and hedge accounting (continued)

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.

(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 fixed rate financial liabilities, the carrying values of the financial liabilities are adjusted for changes in fair value that are attributable to the interest rate 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.

(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 Interest income and expense and fee and commission income and expense

Interest income and expense are recognised in the income statement for all financial assets and financial liabilities using the effective interest method.

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.

Once a financial asset or a group of similar financial assets has been written down as a result of an impairment loss, interest income is recognised on the written down value using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. Subsequent unwinding of the discount allowance is recognised as interest income.

2. Significant accounting policies (continued)

2.7 Interest income and expense and fee and commission income and expense (continued)

Fee and commission income and expenses that are not an integral part of the effective yield are recognised on an accrual basis ratably over the period when the related service is provided, such as administrative fee, asset management fee and custody services fee. Loan syndication fees are recognised as revenue when the related syndication arrangement has been completed and the Group has retained no part of the loan package for itself or has retained a part at the same effective interest rate as applicable to the other participants.

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 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 designated 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, 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.

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

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

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 and 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.

Policy prior to 1 January 2018

The Group classifies its financial assets into the following four categories: financial assets at fair value through profit or loss, loans and receivables, held-to-maturity securities and available-for-sale financial assets. The Management determines the classification of investments at initial recognition. The classification depends on the purpose for which the financial assets are held. All financial assets are recognised initially at fair value. Except for financial assets carried at fair value through profit or loss, 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 held for trading, and those designated at fair value through profit or loss at inception.

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 hedges.

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

Policy prior to 1 January 2018 (continued)

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

A financial asset, other than one held for trading, will be designated as a financial asset at fair value through profit or loss, if it meets one of the criteria set out below, and is so designated by the Management:

- 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; 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 assets containing one or more embedded derivative that significantly modifies the cash flow resulting from those financial assets.

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 financial instruments designated at fair value through profit or loss. The interest component is reported as part of interest income. Dividends on equity instruments of this category are also recognised in net trading gain/loss or net gain/loss on financial instruments designated at fair value through profit or loss when the Group's right to receive payment is established.

(2) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market, including placements with and advances to banks and other financial institutions, investment debt securities without an active market and loans and advances to customers. They arise when the Group provides money, goods or services directly to a debtor with no intention of trading the receivable. They are initially recorded 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.

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

Policy prior to 1 January 2018 (continued)

(3) Held-to-maturity

Financial assets classified as held-to-maturity are those traded in active markets, with fixed or determinable payments and fixed maturities that the Group's Management has both the positive intention and the ability to hold to maturity. Where the Group sold held-to-maturity assets (i) other than due to an isolated event beyond the Group's control, non-recurring and could not have been reasonably anticipated by the Group, such as a significant deterioration in the issuer's creditworthiness, significant change in statutory or regulatory requirement; or (ii) other than an insignificant amount of held-to-maturity assets, the entire category would be tainted and reclassified as available-for-sale. They are initially recorded 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.

(4) Available-for-sale

Financial assets classified as available-for-sale are those that are either designated as such or are not classified in any of the other categories. They are intended to be held for an indefinite period of time but may be sold in response to needs for liquidity or changes in interest rates, exchange rates or equity prices.

Available-for-sale financial assets are initially recorded at fair value plus any directly attributable transaction costs, and are subsequently measured at fair value. Unrealised gains and losses arising from changes in the fair value of investments 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 and discount is calculated using the effective interest method and is recognised in the income statement. Dividends on equity instruments classified as available-for-sale are recognised in other operating income when the Group's right to receive payment is established.

For a financial asset reclassified from the available-for-sale category, the fair value carrying amount at the date of reclassification becomes its new amortised cost and any previous gain or loss on that asset that has been recognised in other comprehensive income is amortised to profit or loss over the remaining life of the investment using the effective interest method. Any difference between the new amortised cost and the maturity amount is also amortised over the remaining life of the financial asset using the effective interest method. If the financial asset is subsequently determined to be impaired, the amount recorded in other comprehensive income is reclassified to profit or loss immediately.

2. Significant accounting policies (continued)

2.9 Financial liabilities

The Group classifies its financial liabilities under the following categories: trading liabilities, financial liabilities designated at fair value through profit or loss, deposits, debt securities and certificates of deposit in issue, subordinated liabilities, 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. Derivatives are also classified as held for trading unless they are designated as effective hedges. It is measured at fair value and any gains and losses from changes in fair value are recognised in the income statement.

(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. Financial liabilities so designated include certain certificates of deposit in issue and certain deposits received from customers that are embedded with derivatives. 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.

2. Significant accounting policies (continued)

2.9 Financial liabilities (continued)

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

Deposits and debt securities and certificates of deposit in issue, together with subordinated liabilities 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.

Policy prior to 1 January 2018

The Group classifies its financial liabilities under the following categories: trading liabilities, financial liabilities designated at fair value through profit or loss, deposits, debt securities and certificates of deposit in issue, subordinated liabilities, and other liabilities. All financial liabilities are classified at inception and recognised initially at fair value.

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, including own credit risks, are recognised in the income statement.

2.10 Financial guarantee contracts

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 and reported under "Other accounts and provisions" in the financial statements 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.

Policy prior to 1 January 2018

Financial guarantee contracts are initially recognised as financial liabilities and reported under "Other accounts and provisions" in the financial statements 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) the amount determined in accordance with HKAS 37 "Provisions, Contingent Liabilities and Contingent Assets" 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.

2. Significant accounting policies (continued)

2.11 Recognition and derecognition 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 (except investment securities without an active market) 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.

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 for the portion arising from the change of own credit risk in the case of liabilities designated at FVPL, if any.

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 economic best interest.

2. Significant accounting policies (continued)

2.12 Fair value measurement (continued)

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.

2.13 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.

2. Significant accounting policies (continued)

2.14 Impairment of financial assets (continued)

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.

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.

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 one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred and interest 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 (including a loan commitment and financial guarantee) 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 making this reassessment, the Group considers that a default event occurs when (i) the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising securities (if any is held); or (ii) the financial asset is 90 days past due. The Group considers 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.

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 on 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.

2. Significant accounting policies (continued)

2.14 Impairment of financial assets (continued)

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.

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.

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 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.

When a financial asset is uncollectible, it is written off against 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.

If, in a subsequent period, the amount of allowance for impairment losses decreases and the decrease can be related objectively to an event occurring after the impairment loss was recognised (such as an improvement in the debtor's credit rating), the previously recognised impairment loss to the extent of its decrease is reversed by adjusting the allowance account. The amount of the reversal is recognised in the income statement.

2. Significant accounting policies (continued)

2.14 Impairment of financial assets (continued)

Policy prior to 1 January 2018

The Group assesses as at the end of each reporting period whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred if, and only if, there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a "loss event") and that loss event (or events) has an impact on the reliably estimated future cash flows of the financial asset or group of financial assets. Objective evidence that a financial asset or group of financial assets may be impaired includes observable data that comes to the attention of the Group about the following probable loss events:

(i) significant financial difficulty of the issuer or obligor;

(ii) a breach of contract, such as a default or delinquency in interest or principal payment;

(iii) the Group granting to the borrower, for economic or legal reasons relating to the borrower's financial difficulty, a concession that the lender would not otherwise consider;

(iv) it becoming probable that the borrower will enter into bankruptcy or other financial reorganisation;

(v) the disappearance of an active market or downgrading below investment grade level for that financial asset because of financial difficulties; or

(vi) observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group, including:

- adverse changes in the payment status of borrowers in the group; or
- national or local economic conditions that correlate with defaults on the assets in the group.

(1) Assets carried at amortised cost

The Group first assesses whether objective evidence of impairment exists individually for financial assets. If the Group determines that no individually assessed impairment is provided, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognised are not included in a collective assessment of impairment.

2. Significant accounting policies (continued)

2.14 Impairment of financial assets (continued)

Policy prior to 1 January 2018 (continued)

(1) Assets carried at amortised cost (continued)

If there is objective evidence that an impairment loss on loans and receivables or held-to-maturity securities has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred), discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the income statement. If a loan or held-to-maturity security has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the Group may measure impairment on the basis of an instrument's fair value using an observable market price.

The calculation of the present value of the estimated future cash flows of a collateralised financial asset reflects the cash flows that may result from foreclosure less costs for obtaining and selling the collateral.

For the purposes of a collective assessment of impairment, financial assets are grouped on the basis of similar and relevant credit risk characteristics. Those characteristics are relevant to the estimation of future cash flows for groups of such assets by being indicative of the debtors' ability to pay all amounts due according to the contractual terms of the assets being evaluated.

Future cash flows in a group of financial assets that are collectively evaluated for impairment are estimated on the basis of the contractual cash flows of the assets in the group and historical loss experience for assets with credit risk characteristics similar to those in the group. Historical loss experience is adjusted on the basis of current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not exist currently.

When a loan is uncollectible, it is written off against the related allowance for impairment losses. Such loans are written off after all the necessary procedures have been completed and the amount of the loss has been determined. Subsequent recoveries of amounts previously written off decrease the amount of impairment losses in the income statement.

If, in a subsequent period, the amount of allowance for impairment losses decreases and the decrease can be related objectively to an event occurring after the impairment loss was recognised (such as an improvement in the debtor's credit rating), the previously recognised impairment loss to the extent of its decrease is reversed by adjusting the allowance account. The amount of the reversal is recognised in the income statement.

Loans whose terms have been renegotiated with substantial difference in the terms are no longer considered to be past due but are treated as new loans.

2. Significant accounting policies (continued)

2.14 Impairment of financial assets (continued)

Policy prior to 1 January 2018 (continued)

(2) Assets classified as available-for-sale

If evidence of impairment exists for available-for-sale financial assets, the accumulated losses, measured as the difference between the acquisition cost or amortised cost and the current fair value, less any impairment loss on that financial asset previously recognised in the income statement, is removed from equity and recognised in the income statement. In the case of equity investments classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is considered in determining whether the assets are impaired. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in the income statement, the impairment loss to the extent of its decrease is reversed through the income statement. With respect to equity instruments, further fair value changes are recognised in the reserve for fair value change of available-for-sale securities through other comprehensive income, impairment losses are not reversed through the income statement.

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.

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. Significant accounting policies (continued)

2.16 Investment properties

Properties 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. Land held under operating lease is classified and accounted for as investment property when the rest of the definition of investment property is met. The operating lease is accounted for as if it is a finance lease.

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 item is stated at cost less impairment and is included in the carrying amount of investment properties. Once the item begins to generate economic benefits, it is then measured 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 as a revaluation of premises under HKAS 16 "Property, Plant and Equipment". However, if a fair value gain reverses a previous revaluation loss or impairment loss, the gain is recognised in the income statement up to the amount previously debited.

2.17 Properties, plant and equipment

Properties 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 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.

2. Significant accounting policies (continued)

2.17 Properties, plant and equipment (continued)

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.

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

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

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 Leases

(1) Operating leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. The total payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease. Contingent rental payable is recognised as an expense in the accounting period in which it is incurred.

When an operating lease is terminated before the lease period has expired, any payment required to be made to the lessor by way of penalty is recognised as an expense in the period in which termination takes place. Rental income from operating leases is recognised on a straight-line basis over the lease term.

2. Significant accounting policies (continued)

2.18 Leases (continued)

(2) Finance leases

Leases of assets where lessee has obtained substantially all the risks and rewards of ownership are classified as finance leases. Government land leases in Hong Kong are classified as finance leases as the present value of the minimum lease payments (i.e. transaction price) of the land amounted to substantially all of the fair value of the land as if it were freehold.

Finance leases are capitalised at the commencement of the lease at the lower of the fair value of the leased asset and the present value of the minimum lease payments. Each lease payment is allocated between the liability and finance charges so as to achieve a constant periodic rate of interest on the remaining balance of the liability. The corresponding rental obligations, net of finance charges, are included in other liabilities. Investment properties acquired under finance leases are carried at their fair value.

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. Lease income is recognised over the term of the lease using the net investment method, which reflects a constant periodic rate of return.

2.19 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.

2. Significant accounting policies (continued)

2.19 Insurance and investment contracts (continued)

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

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.

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. Significant accounting policies (continued)

2.20 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.

2.21 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.

2.22 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. Significant accounting policies (continued)

2.23 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.

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. Significant accounting policies (continued)

2.24 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".

2.25 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.

2.26 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.

2.27 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.

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 of financial assets

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 are developed by leveraging on the parameters implemented under Basel II Internal Ratings-Based ("IRB") models and internal models, 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. Please refer to CRE of section 7 of the Group's Regulatory Disclosures for 2018 for a description of the Group's internal models;

- 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 similar risk and default 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, 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.

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 loans and advances and investment in securities as at 31 December 2018 are shown in Notes 25 and 26 respectively.

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

3.2 Fair values of derivative financial instruments

The fair values of derivative financial instruments that are not quoted in active markets are determined by using valuation techniques. Valuation techniques used include 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. 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 modeling techniques. Further details will be discussed in Note 5.

Carrying amounts of derivative financial instruments as at 31 December 2018 are shown in Note 24.

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% (2017: 10%) from the Management's estimate, the long term business fund liability would increase by approximately HK$163 million (2017: approximately HK$193 million), which accounts for 0.24% (2017: 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 (2017: 50 basis points) from the Management's estimates, the long term business fund liability would increase by approximately HK$1,189 million (2017: approximately HK$1,660 million). In this case, it is assumed there is no relief arising from reinsurance contracts held.

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 (continued)

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 2018, no provision for maintenance expenses was provided (2017: 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 31 basis points (2017: 30 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.

3.4 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.

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 ensures 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 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") assists the CE in fulfilling his responsibilities for the day-to-day management of risks. The CRO is 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. The CRO is also responsible for reviewing material risk exposures or transactions within his 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 responsible 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 subject 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.

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. The Risk Management Department ("RMD"), which is independent from the business units, is responsible for the day-to-day management of credit risks and has the primary responsibility for providing 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 retail exposures, residential mortgage loans, personal loans and credit cards. 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 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 and counterparty. The Group monitors changes to counterparty 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 divides 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 position. 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.

4. Financial risk management (continued)

4.1 Credit risk (continued)

Credit risk measurement and control (continued)

Debt securities and derivatives

For investments in debt securities and securitisation assets, the obligor ratings or external credit ratings, assessment of the underlying assets 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.

Expected Credit Loss ("ECL") Methodology

HKFRS 9 introduces a new impairment model that 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 and loan commitments are classified in one of the three stages.

Stage 1: if the financial instrument is not credit-impaired upon origination and the credit risk on the financial instrument has not increased significantly since initial recognition, the loss allowance is measured at an amount up to 12-month ECL;

Stage 2: if the financial instrument is not credit-impaired upon origination but the credit risk on the financial instrument has increased significantly since initial recognition, the loss allowance is measured at an amount equal to the lifetime ECL;

Stage 3: if the financial instrument is credit-impaired, with one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred, the loss allowance is also measured at an amount equal to the lifetime ECL.

The Group leverages the parameters implemented under Basel II Internal Ratings-Based ("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.

4. Financial risk management (continued)

4.1 Credit risk (continued)

Expected Credit Loss ("ECL") Methodology (continued)

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 macroeconomic factors in the major countries/regions the Group operates such as Gross Domestic Product growth, 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.

The probability 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 is assigned to the Baseline scenario to reflect the most likely outcome and a lower probability is assigned to the Good and Bad scenarios to reflect the less likely outcomes. The probabilities assigned are updated in each quarter.

The ECL methodology has been validated by independent Model Validation Unit and approved by the RMC. The Management is responsible to the ECL model application, if there is any required 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 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, etc.

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

As at 31 December 2018, 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$5,322 million (2017: HK$11,826 million). The Group had not sold or re-pledged such collateral (2017: Nil). These transactions are conducted under terms that are usual and customary to reverse repurchase and securities borrowing agreements.

4. Financial risk management (continued)

4.1 Credit risk (continued)

(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 Annex ("CSA") will be included to form part of the Schedule to the ISDA Master Agreement. Under a CSA, collateral is passed from one counterparty to another, as appropriate, to mitigate the credit exposures.

Advances and other accounts, contingent liabilities and commitments

The general types of collateral are disclosed on page 192. Advances and other accounts, contingent liabilities and commitments 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 201 to 202. The components and nature of contingent liabilities and commitments are disclosed in Note 43. 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 contingent liabilities and commitments, 13.37% (2017: 12.77%) were covered by collateral as at 31 December 2018.

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:

	2018 HK$'m	2017 HK$'m
Advances to customers		
Personal		
– Mortgages	**256,723**	245,951
– Credit cards	**15,640**	14,648
– Others	**82,256**	67,228
Corporate		
– Commercial loans	**846,649**	740,403
– Trade finance	**65,437**	78,196
	1,266,705	1,146,426
Trade bills	**17,361**	42,975
Advances to banks and other financial institutions	**3,822**	6,259
	1,287,888	1,195,660

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 are credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows have occurred. Credit-impaired advances are classified as Stage 3 and lifetime expected credit losses will be recognised.

The Group identifies the advances as credit-impaired if the exposure is past due for more than 90 days or the borrower is unlikely to pay in full for the credit obligations to the Group.

4. Financial risk management (continued)

4.1 Credit risk (continued)

(B) Advances and other accounts (continued)

Evidence that an advance 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 legal 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 advances.

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

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

	2018				2017
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m	Total HK$'m
Advances to customers					
Pass	**1,254,236**	**5,019**	**–**	**1,259,255**	1,140,711
Special mention	**1,934**	**3,133**	**–**	**5,067**	3,636
Substandard or below	**–**	**–**	**2,383**	**2,383**	2,079
	1,256,170	**8,152**	**2,383**	**1,266,705**	1,146,426
Trade bills					
Pass	**17,357**	**–**	**–**	**17,357**	42,975
Special mention	**–**	**–**	**–**	**–**	–
Substandard or below	**–**	**–**	**4**	**4**	–
	17,357	**–**	**4**	**17,361**	42,975
Advances to banks and other financial institutions					
Pass	**3,822**	**–**	**–**	**3,822**	6,259
Special mention	**–**	**–**	**–**	**–**	–
Substandard or below	**–**	**–**	**–**	**–**	–
	3,822	**–**	**–**	**3,822**	6,259
	1,277,349	**8,152**	**2,387**	**1,287,888**	1,195,660
Impairment allowances	**(3,740)**	**(546)**	**(1,130)**	**(5,416)**	(4,106)
	1,273,609	**7,606**	**1,257**	**1,282,472**	1,191,554

4. Financial risk management (continued)

4.1 Credit risk (continued)

(B) Advances and other accounts (continued)

Reconciliation of impairment allowances and gross amount for advances and other accounts is as follows:

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
Impairment allowances				
At 1 January 2018	3,689	651	618	4,958
Transfer to Stage 1	267	(253)	(14)	–
Transfer to Stage 2	(38)	53	(15)	–
Transfer to Stage 3	(7)	(240)	247	–
Changes arising from transfer of stage	(241)	293	815	867
Other changes (including new assets and derecognised assets)	74	43	194	311
Write-offs	–	–	(834)	(834)
Recoveries	–	–	120	120
Unwind of discount on impairment allowances	–	–	(1)	(1)
Exchange difference	(4)	(1)	–	(5)
At 31 December 2018	3,740	546	1,130	5,416
Charged to income statement (Note 13)				1,178

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
Gross amount				
At 1 January 2018	1,189,595	3,958	2,107	1,195,660
Transfer to Stage 1	1,477	(1,449)	(28)	–
Transfer to Stage 2	(4,868)	4,884	(16)	–
Transfer to Stage 3	(599)	(275)	874	–
New assets, further lending, derecognised assets and repayments	94,514	1,071	285	95,870
Write-offs	–	–	(834)	(834)
Exchange difference	(2,770)	(37)	(1)	(2,808)
At 31 December 2018	1,277,349	8,152	2,387	1,287,888

4. Financial risk management (continued)

4.1 Credit risk (continued)

(B) Advances and other accounts (continued)

	2017		
	Collectively assessed HK$'m	Individually assessed HK$'m	Total HK$'m
Impairment allowances			
At 1 January 2017, as previously reported	2,779	650	3,429
Effect of merger of entities under common control	43	29	72
At 1 January 2017, as restated	2,822	679	3,501
Charged/(credited) to income statement (Note 13)	1,117	(71)	1,046
Write-offs	(399)	(197)	(596)
Recoveries	58	73	131
Unwind of discount on impairment allowances	–	(3)	(3)
Exchange difference	17	10	27
At 31 December 2017	3,615	491	4,106

(a) Impaired advances

Impaired advances to customers are analysed as follows:

	2018 HK$'m	2017 HK$'m
Gross impaired advances to customers	**2,383**	1,371
Impairment allowances made in respect of such advances		
– Stage 3	**1,126**	N/A
– Individually assessed	**N/A**	491
Current market value of collateral held against the covered portion of such advances to customers	**2,988**	1,523
Covered portion of such advances to customers	**1,511**	1,083
Uncovered portion of such advances to customers	**872**	288

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

4. Financial risk management (continued)

4.1 Credit risk (continued)

(B) Advances and other accounts (continued)

(a) Impaired advances (continued)

As at 31 December 2018, gross impaired trade bills amounted to HK$4 million (2017: Nil), and there were no impaired advances to banks and other financial institutions (2017: Nil).

Classified or impaired advances to customers are analysed as follows:

	2018 HK$'m	2017 HK$'m
Gross classified or impaired advances to customers	**2,383**	2,079
Gross classified or impaired advances to customers as a percentage of gross advances to customers	**0.19%**	0.18%
Impairment allowances made in respect of such advances		
– Stages 1 to 3	**1,126**	N/A
– Collectively and individually assessed	**N/A**	540

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/individually assessed to be impaired.

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:

	2018		2017	
	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	**443**	**0.04%**	117	0.01%
– one year or less but over six months	**309**	**0.02%**	123	0.01%
– over one year	**310**	**0.02%**	313	0.03%
Advances overdue for over three months	**1,062**	**0.08%**	553	0.05%
Impairment allowances made in respect of such advances				
– Stage 3	**828**		N/A	
– Individually assessed	**N/A**		309	

4. Financial risk management (continued)

4.1 Credit risk (continued)

(B) Advances and other accounts (continued)

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

	2018 HK$'m	2017 HK$'m
Current market value of collateral held against the covered portion of such advances to customers	**849**	520
Covered portion of such advances to customers	**349**	289
Uncovered portion of such advances to customers	**713**	264

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 2018, gross trade bills overdue for more than three months amounted to HK$4 million (2017: Nil) and there were no advances to banks and other financial institutions overdue for more than three months (2017: Nil).

(c) Rescheduled advances

	2018		2017	
	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"	**280**	**0.02%**	238	0.02%

Rescheduled advances are those advances that have been restructured or renegotiated because of deterioration in the financial position of the borrower or of the inability of the borrower to meet the original repayment schedule. 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".

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.

	2018					
	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	126,328	20.51%	–	–	–	543
– Property investment	50,223	80.51%	37	117	–	44
– Financial concerns	21,239	0.91%	–	–	–	37
– Stockbrokers	1,171	95.73%	–	–	–	1
– Wholesale and retail trade	38,147	34.46%	21	127	3	179
– Manufacturing	51,093	10.57%	136	148	134	87
– Transport and transport equipment	66,256	27.37%	867	17	9	150
– Recreational activities	1,675	1.90%	–	–	–	2
– Information technology	18,006	1.27%	1	220	1	107
– Others	118,574	38.43%	9	166	7	269
Individuals						
– Loans for the purchase of flats in Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	11,150	99.80%	18	166	–	4
– Loans for purchase of other residential properties	243,963	99.92%	65	1,534	–	58
– Credit card advances	15,613	–	135	558	118	150
– Others	78,282	86.84%	60	634	52	397
Total loans for use in Hong Kong	841,720	56.20%	1,349	3,687	324	2,028
Trade finance	65,437	19.37%	206	232	194	124
Loans for use outside Hong Kong	359,548	8.78%	828	970	608	2,133
Gross advances to customers	1,266,705	40.84%	2,383	4,889	1,126	4,285

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)

	2017					
	Gross advances to customers HK$'m	% covered by collateral or other security	Classified or impaired HK$'m	Overdue HK$'m	Individually assessed impairment allowances HK$'m	Collectively assessed impairment allowances HK$'m
Loans for use in Hong Kong						
Industrial, commercial and financial						
– Property development	99,987	24.22%	–	5	–	336
– Property investment	53,581	78.47%	19	68	–	180
– Financial concerns	13,461	2.42%	–	–	–	68
– Stockbrokers	1,027	89.86%	–	1	–	3
– Wholesale and retail trade	34,931	38.23%	26	160	20	131
– Manufacturing	45,075	13.93%	32	25	4	159
– Transport and transport equipment	61,786	28.44%	1,062	27	44	213
– Recreational activities	2,040	1.47%	–	–	–	6
– Information technology	23,900	1.07%	–	–	–	79
– Others	100,966	41.99%	18	132	5	336
Individuals						
– Loans for the purchase of flats in Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	9,874	99.75%	12	147	–	6
– Loans for purchase of other residential properties	234,434	99.93%	75	1,520	1	128
– Credit card advances	14,620	–	39	549	–	124
– Others	63,356	80.57%	53	508	20	429
Total loans for use in Hong Kong	759,038	58.31%	1,336	3,142	94	2,198
Trade finance	78,196	14.13%	55	25	32	287
Loans for use outside Hong Kong	309,192	9.19%	688	1,003	365	1,130
Gross advances to customers	1,146,426	42.05%	2,079	4,170	491	3,615

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:

	2018		2017	
	New impairment allowances HK$'m	**Classified or impaired loans written off HK$'m**	New impairment allowances HK$'m	Classified or impaired loans written off HK$'m
Loans for use in Hong Kong				
Industrial, commercial and financial				
– Property development	**337**	**–**	80	–
Individuals				
– Loans for purchase of other residential properties	**27**	**–**	26	–

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

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

	2018 HK$'m	2017 HK$'m
Hong Kong	**1,008,102**	911,691
Mainland of China	**126,960**	135,990
Others	**131,643**	98,745
	1,266,705	1,146,426
Impairment allowances made in respect of the gross advances to customers – Stages 1 and 2		
Hong Kong	**2,798**	N/A
Mainland of China	**527**	N/A
Others	**960**	N/A
	4,285	N/A
Impairment allowances made in respect of the gross advances to customers – Collectively assessed		
Hong Kong	**N/A**	2,741
Mainland of China	**N/A**	453
Others	**N/A**	421
	N/A	3,615

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

	2018 HK$'m	2017 HK$'m
Hong Kong	**3,752**	3,061
Mainland of China	**257**	181
Others	**880**	928
	4,889	4,170
Impairment allowances made in respect of the overdue advances – Stage 3		
Hong Kong	**407**	N/A
Mainland of China	**84**	N/A
Others	**445**	N/A
	936	N/A
Impairment allowances made in respect of the overdue advances – Individually assessed		
Hong Kong	**N/A**	65
Mainland of China	**N/A**	53
Others	**N/A**	220
	N/A	338

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)

Classified or impaired advances

	2018 HK$'m	2017 HK$'m
Hong Kong	**1,485**	1,379
Mainland of China	**197**	111
Others	**701**	589
	2,383	2,079
Impairment allowances made in respect of the classified or impaired advances – Stage 3		
Hong Kong	**490**	N/A
Mainland of China	**107**	N/A
Others	**529**	N/A
	1,126	N/A
Impairment allowances made in respect of the classified or impaired advances – Individually assessed		
Hong Kong	**N/A**	113
Mainland of China	**N/A**	70
Others	**N/A**	308
	N/A	491

(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:

	2018 HK$'m	2017 HK$'m
Commercial properties	**–**	8
Industrial properties	**–**	1
Residential properties	**10**	21
	10	30

4. Financial risk management (continued)

4.1 Credit risk (continued)

(C) Repossessed assets (continued)

The estimated market value of repossessed assets held by the Group as at 31 December 2018 amounted to HK$23 million (2017: HK$77 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

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

The following tables present an analysis of balances and placements with banks and other financial institutions as at 31 December by rating agency designation and stage classification.

	2018				2017
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m	Total HK$'m
Central banks					
Aaa to A3	**153,697**	–	–	**153,697**	84,559
Lower than A3	**1,680**	–	–	**1,680**	6,674
Unrated	**14,781**	–	–	**14,781**	8,830
	170,158	–	–	**170,158**	100,063
Other banks and other financial institutions					
Aaa to A3	**226,755**	–	–	**226,755**	267,873
Lower than A3	**10,579**	–	–	**10,579**	40,997
Unrated	**2,079**	–	–	**2,079**	3,428
	239,413	–	–	**239,413**	312,298
	409,571	–	–	**409,571**	412,361
Impairment allowances	**(15)**	–	–	**(15)**	–
	409,556	–	–	**409,556**	412,361

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:

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
At 1 January 2018	83	–	–	83
Changes arising from transfer of stage	–	–	–	–
Other changes (including new assets and derecognised assets)	(70)	–	–	(70)
Exchange difference	2	–	–	2
At 31 December 2018	15	–	–	15
Credited to income statement (Note 13)				(70)

As at 31 December 2018, there were no overdue or impaired balances and placements with banks and other financial institutions (2017: Nil).

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.

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
Investment in securities at fair value through other comprehensive income				
Aaa	87,036	–	–	87,036
Aa1 to Aa3	148,944	–	–	148,944
A1 to A3	206,957	–	–	206,957
Lower than A3	28,482	–	–	28,482
Unrated	14,195	–	–	14,195
	485,614	–	–	485,614
Of which: impairment allowances	(140)	–	–	(140)
Investment in securities at amortised cost				
Aaa	55,745	–	–	55,745
Aa1 to Aa3	4,628	–	–	4,628
A1 to A3	29,833	–	–	29,833
Lower than A3	12,271	–	–	12,271
Unrated	6,257	–	–	6,257
	108,734	–	–	108,734
Impairment allowances	(29)	–	–	(29)
	108,705	–	–	108,705

	2018 HK$'m
Financial assets at fair value through profit or loss	
Aaa	3,846
Aa1 to Aa3	24,326
A1 to A3	17,538
Lower than A3	7,514
Unrated	1,850
	55,074

4. Financial risk management (continued)

4.1 Credit risk (continued)

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

	2017				
	Financial assets at fair value through profit or loss HK$'m	Available-for-sale securities HK$'m	Held-to-maturity securities HK$'m	Loans and receivables HK$'m	Total HK$'m
Aaa	18,003	169,826	16,909	–	204,738
Aa1 to Aa3	13,639	135,479	1,581	–	150,699
A1 to A3	29,692	205,403	20,933	499	256,527
Lower than A3	9,662	35,848	6,192	–	51,702
Unrated	2,593	15,145	4,962	–	22,700
	73,589	561,701	50,577	499	686,366
Impairment allowances		–	45	–	

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:

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
Investment in securities at fair value through other comprehensive income				
At 1 January 2018	127	–	–	127
Changes arising from transfer of stage	–	–	–	–
Other changes (including new assets and derecognised assets)	14	–	–	14
Exchange difference	(1)	–	–	(1)
At 31 December 2018	140	–	–	140
Charged to income statement (Note 13)				14
Investment in securities at amortised cost				
At 1 January 2018	17	–	45	62
Changes arising from transfer of stage	–	–	–	–
Other changes (including new assets and derecognised assets)	12	–	–	12
Write-offs	–	–	(45)	(45)
At 31 December 2018	29	–	–	29
Charged to income statement (Note 13)				12

4. Financial risk management (continued)

4.1 Credit risk (continued)

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

The gross impaired or overdue debt securities and certificates of deposit are analysed as follows:

	2018 HK$'m	2017 HK$'m
Impaired and overdue for over one year		
– Investment in securities at amortised cost	–	N/A
– Held-to-maturity securities	N/A	45
	–	45

(F) Loan commitments and financial guarantee contracts

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

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
Loan commitments and financial guarantee contracts				
Pass	603,513	2,900	–	606,413
Special mention	1,017	367	–	1,384
Substandard or below	–	–	91	91
	604,530	3,267	91	607,888

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:

	2018			
	Stage 1 HK$'m	Stage 2 HK$'m	Stage 3 HK$'m	Total HK$'m
At 1 January 2018	331	21	–	352
Transfer to Stage 1	14	(14)	–	–
Transfer to Stage 2	(1)	1	–	–
Transfer to Stage 3	(1)	–	1	–
Changes arising from transfer of stage	(12)	12	22	22
Other changes (including new assets and derecognised assets)	49	–	20	69
Exchange difference	(5)	–	–	(5)
At 31 December 2018	375	20	43	438
Charged to income statement (Note 13)				91

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 mainly responsible for managing market risk, 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 four levels, and are approved by the RMC, MC, CRO and the DCE in charge of the treasury business 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[1] 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	**2018**	**26.0**	**24.1**	**45.8**	**33.0**
	2017	28.3	27.1	80.9	49.7
VAR for foreign exchange risk	**2018**	**15.9**	**10.7**	**27.1**	**18.0**
	2017	13.1	12.5	54.1	31.2
VAR for interest rate risk in the trading book	**2018**	**13.0**	**12.9**	**43.0**	**26.4**
	2017	25.1	19.3	82.4	44.4
VAR for equity risk in the trading book	**2018**	**0.3**	**0.2**	**7.0**	**1.6**
	2017	2.1	0.7	5.9	2.6
VAR for commodity risk	**2018**	**9.6**	**0.8**	**9.7**	**3.1**
	2017	1.1	0.5	2.0	1.3

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.

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.

	2018							
	Equivalent in million of HK$							
	US Dollars	Pound Sterling	Japanese Yen	Euro	Renminbi	Australian Dollars	Other foreign currencies	Total foreign currencies
Spot assets	867,526	26,486	23,821	33,069	560,809	38,679	63,410	1,613,800
Spot liabilities	(879,874)	(16,358)	(7,125)	(17,729)	(320,961)	(23,991)	(63,990)	(1,330,028)
Forward purchases	1,121,467	22,996	54,990	55,338	454,667	14,107	74,958	1,798,523
Forward sales	(1,107,713)	(33,076)	(71,582)	(70,369)	(693,728)	(28,786)	(73,864)	(2,079,118)
Net options position	1,312	(9)	(66)	(217)	(696)	(33)	4	295
Net long/(short) position	2,718	39	38	92	91	(24)	518	3,472

	2017							
	Equivalent in million of HK$							
	US Dollars	Pound Sterling	Japanese Yen	Euro	Renminbi	Australian Dollars	Other foreign currencies	Total foreign currencies
Spot assets	850,639	23,799	90,147	52,557	365,422	42,746	47,941	1,473,251
Spot liabilities	(742,593)	(15,363)	(11,352)	(25,620)	(288,947)	(19,414)	(50,633)	(1,153,922)
Forward purchases	909,676	16,490	30,145	61,278	356,964	21,391	86,722	1,482,666
Forward sales	(1,014,314)	(25,073)	(108,992)	(88,054)	(433,565)	(44,640)	(83,140)	(1,797,778)
Net options position	(684)	6	(6)	(48)	44	(14)	10	(692)
Net long/(short) position	2,724	(141)	(58)	113	(82)	69	900	3,525

4. Financial risk management (continued)

4.2 Market risk (continued)

(B) Currency risk (continued)

	2018					
	Equivalent in million of HK$					
	US Dollars	Baht	Malaysian Ringgit	Philippine Peso	Other foreign currencies	Total foreign currencies
Net structural position	**28,122**	**2,301**	**2,769**	**1,608**	**1,812**	**36,612**

	2017					
	Equivalent in million of HK$					
	US Dollars	Baht	Malaysian Ringgit	Philippine Peso	Other foreign currencies	Total foreign currencies
Net structural position	3,531	2,350	2,651	–	1,015	9,547

(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:

- Repricing risk: mismatches in the maturity or repricing periods of assets and liabilities that may affect net interest income;
- 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;
- Yield curve risk: non-parallel shifts in the yield curve that may have an adverse impact on net interest income or economic value; 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.

4. Financial risk management (continued)

4.2 Market risk (continued)

(C) Interest rate risk (continued)

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 interest rate risk management. With the cooperation of the Asset and Liability Management Division of the Financial Management Department, Treasury, and Investment Management, 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.

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"), Greeks, net interest income sensitivity ratio ("NII"), economic value sensitivity ratio ("EV"), 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 EV 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 capital base. 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 2018, 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	
	2018 HK$'m	2017 HK$'m	**2018 HK$'m**	2017 HK$'m
100 basis point parallel up of yield curve				
Total	**1,416**	961	**(5,138)**	(6,750)
Of which:				
HK Dollar	**2,226**	2,326	**(358)**	(388)
US Dollar	**(382)**	(947)	**(3,022)**	(4,787)
Renminbi	**(336)**	(241)	**(1,441)**	(836)
100 basis point parallel down of yield curve				
Total	**(1,416)**	(961)	**5,138**	6,750
Of which:				
HK Dollar	**(2,226)**	(2,326)	**358**	388
US Dollar	**382**	947	**3,022**	4,787
Renminbi	**336**	241	**1,441**	836

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 2018. 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 reduction of reserves is decreased compared with 2017 because the duration of the debt securities portfolio in capital market is 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 2018. 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 increase of reserves is decreased compared with 2017 because the duration of the debt securities portfolio in capital market is 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.

	2018						
	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	Total HK$'m
Assets							
Cash and balances and placements with banks and other financial institutions	304,795	36,223	20,457	–	–	70,049	431,524
Financial assets at fair value through profit or loss	245,659	11,264	8,178	12,187	15,897	7,744	300,929
Derivative financial instruments	–	–	–	–	–	34,912	34,912
Hong Kong SAR Government certificates of indebtedness	–	–	–	–	–	156,300	156,300
Advances and other accounts	1,041,818	165,176	27,273	34,562	5,208	8,435	1,282,472
Investment in securities							
– At FVOCI	53,051	81,555	110,700	159,917	80,391	3,928	489,542
– At amortised cost	751	1,676	10,308	58,406	37,564	–	108,705
Interests in associates and joint ventures	–	–	–	–	–	483	483
Investment properties	–	–	–	–	–	19,684	19,684
Properties, plant and equipment	–	–	–	–	–	49,430	49,430
Other assets (including current and deferred tax assets)	7,491	–	–	–	–	71,431	78,922
Total assets	1,653,565	295,894	176,916	265,072	139,060	422,396	2,952,903
Liabilities							
Hong Kong SAR currency notes in circulation	–	–	–	–	–	156,300	156,300
Deposits and balances from banks and other financial institutions	356,105	6,178	118	460	–	13,946	376,807
Financial liabilities at fair value through profit or loss	3,274	8,820	1,761	1,160	520	–	15,535
Derivative financial instruments	–	–	–	–	–	30,880	30,880
Deposits from customers	1,321,385	235,761	166,442	5,187	–	164,582	1,893,357
Debt securities and certificates of deposit in issue	3,480	4,813	1,160	–	–	–	9,453
Other accounts and provisions (including current and deferred tax liabilities)	9,406	–	–	–	–	58,289	67,695
Insurance contract liabilities	–	–	–	–	–	104,723	104,723
Subordinated liabilities	–	–	–	13,246	–	–	13,246
Total liabilities	1,693,650	255,572	169,481	20,053	520	528,720	2,667,996
Interest sensitivity gap	(40,085)	40,322	7,435	245,019	138,540	(106,324)	284,907

4. Financial risk management (continued)

4.2 Market risk (continued)

(C) Interest rate risk (continued)

	2017						
	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	Total HK$'m
Assets							
Cash and balances and placements with banks and other financial institutions	344,533	37,363	21,864	–	–	22,844	426,604
Financial assets at fair value through profit or loss	10,940	9,239	17,242	13,824	29,203	12,746	93,194
Derivative financial instruments	–	–	–	–	–	33,543	33,543
Hong Kong SAR Government certificates of indebtedness	–	–	–	–	–	146,200	146,200
Advances and other accounts	954,709	139,053	55,031	28,574	6,374	7,813	1,191,554
Investment in securities							
– Available-for-sale securities	73,072	102,698	116,481	164,179	105,271	5,414	567,115
– Held-to-maturity securities	1,231	2,467	7,989	24,092	14,798	–	50,577
– Loans and receivables	–	499	–	–	–	–	499
Interests in associates and joint ventures	–	–	–	–	–	417	417
Investment properties	–	–	–	–	–	19,669	19,669
Properties, plant and equipment	–	–	–	–	–	47,268	47,268
Other assets (including deferred tax assets)	4,338	–	–	–	–	70,108	74,446
Total assets	1,388,823	291,319	218,607	230,669	155,646	366,022	2,651,086
Liabilities							
Hong Kong SAR currency notes in circulation	–	–	–	–	–	146,200	146,200
Deposits and balances from banks and other financial institutions	184,793	7,177	380	825	–	30,252	223,427
Financial liabilities at fair value through profit or loss	7,102	4,116	7,068	955	479	–	19,720
Derivative financial instruments	–	–	–	–	–	31,046	31,046
Deposits from customers	1,336,481	160,670	140,524	1,263	–	136,152	1,775,090
Debt securities and certificates of deposit in issue	7,091	1,971	12,579	–	–	–	21,641
Other accounts and provisions (including current and deferred tax liabilities)	13,703	–	–	–	–	49,427	63,130
Insurance contract liabilities	–	–	–	–	–	103,229	103,229
Subordinated liabilities	–	–	63	18,917	–	–	18,980
Total liabilities	1,549,170	173,934	160,614	21,960	479	496,306	2,402,463
Interest sensitivity gap	(160,347)	117,385	57,993	208,709	155,167	(130,284)	248,623

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 or stressed scenarios; and to survive with net positive cumulative cash flow in extreme scenarios, without requesting the HKMA to act as the lender of last resort.

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. RMD is responsible for overseeing the Group's liquidity risk. It cooperates with the Asset and Liability Management Division of the Financial Management Department, Treasury, 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 and tenors of funding and the use of funds to avoid excessive concentration of assets and liabilities and prevent triggering liquidity risk due to the break of funding strand when problems occurred in one concentrated funding source. 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 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 plans.

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.

4. Financial risk management (continued)

4.3 Liquidity risk (continued)

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 2018, 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$93,439 million (2017: HK$85,602 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 2018, 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 2018, the liquidity cushion (before haircut) of BOCHK was HK$447,175 million (2017: HK$420,770 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.

The LCR is calculated in accordance with the Banking (Liquidity) Rules effective from 1 January 2015. The Group, being classified as a category 1 authorised institution by the HKMA, is required to calculate the LCR on a consolidated basis. During the year of 2018, the Group is required to maintain a LCR not less than 90%.

The NSFR is calculated in accordance with the Banking (Liquidity) (Amendment) Rules 2017 effective from 1 January 2018. The Group, being classified as a category 1 authorised institution by the HKMA, is required to calculate NSFR on consolidated basis and maintain a NSFR not less than 100%.

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.

4. Financial risk management (continued)

4.3 Liquidity risk (continued)

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 policy, 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.

(A) Liquidity coverage ratio and net stable funding ratio

	2018	2017
Average value of liquidity coverage ratio		
– First quarter	**134.33%**	121.41%
– Second quarter	**146.39%**	123.88%
– Third quarter	**141.44%**	121.12%
– Fourth quarter	**160.23%**	135.64%

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.

	2018
Quarter-end value of net stable funding ratio	
– First quarter	**118.98%**
– Second quarter	**118.82%**
– Third quarter	**122.24%**
– Fourth quarter	**124.41%**

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.

The additional information of liquidity coverage ratio and net stable funding ratio disclosures is available under the section "Regulatory Disclosures" on BOCHK's website at www.bochk.com.

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.

	2018							
	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$'m	Total HK$'m
Assets								
Cash and balances and placements with banks and other financial institutions	299,464	75,380	36,223	20,457	–	–	–	431,524
Financial assets at fair value through profit or loss	–	243,201	8,448	8,495	15,956	16,323	8,506	300,929
Derivative financial instruments	11,303	3,282	4,025	5,909	6,965	3,428	–	34,912
Hong Kong SAR Government certificates of indebtedness	156,300	–	–	–	–	–	–	156,300
Advances and other accounts	178,403	53,549	51,928	158,754	578,964	259,523	1,351	1,282,472
Investment in securities								
– At FVOCI	–	44,818	52,143	115,304	192,058	81,110	4,109	489,542
– At amortised cost	–	508	1,921	10,493	57,984	37,292	507	108,705
Interests in associates and joint ventures	–	–	–	–	–	–	483	483
Investment properties	–	–	–	–	–	–	19,684	19,684
Properties, plant and equipment	–	–	–	–	–	–	49,430	49,430
Other assets (including current and deferred tax assets)	32,102	17,389	446	1,595	13,181	14,195	14	78,922
Total assets	677,572	438,127	155,134	321,007	865,108	411,871	84,084	2,952,903
Liabilities								
Hong Kong SAR currency notes in circulation	156,300	–	–	–	–	–	–	156,300
Deposits and balances from banks and other financial institutions	241,706	128,345	6,178	118	460	–	–	376,807
Financial liabilities at fair value through profit or loss	–	3,274	8,823	1,762	1,159	517	–	15,535
Derivative financial instruments	8,260	4,081	3,181	5,836	6,560	2,962	–	30,880
Deposits from customers	1,060,354	425,613	235,761	166,442	5,187	–	–	1,893,357
Debt securities and certificates of deposit in issue	–	3,480	4,813	1,160	–	–	–	9,453
Other accounts and provisions (including current and deferred tax liabilities)	39,028	18,436	1,892	1,276	7,056	7	–	67,695
Insurance contract liabilities	36,873	566	686	1,994	17,692	46,912	–	104,723
Subordinated liabilities	–	–	275	–	12,971	–	–	13,246
Total liabilities	1,542,521	583,795	261,609	178,588	51,085	50,398	–	2,667,996
Net liquidity gap	(864,949)	(145,668)	(106,475)	142,419	814,023	361,473	84,084	284,907

4. Financial risk management (continued)

4.3 Liquidity risk (continued)

(B) Maturity analysis (continued)

	2017							
	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$'m	Total HK$'m
Assets								
Cash and balances and placements with banks and other financial institutions	248,821	111,143	37,363	21,864	–	–	7,413	426,604
Financial assets at fair value through profit or loss	–	10,622	8,561	17,828	14,364	28,912	12,907	93,194
Derivative financial instruments	10,492	4,134	4,097	6,697	5,523	2,600	–	33,543
Hong Kong SAR Government certificates of indebtedness	146,200	–	–	–	–	–	–	146,200
Advances and other accounts	131,113	35,145	68,476	184,172	525,761	244,761	2,126	1,191,554
Investment in securities								
– Available-for-sale securities	–	61,106	72,443	121,513	199,007	107,428	5,618	567,115
– Held-to-maturity securities	–	1,312	2,616	8,162	23,830	14,657	–	50,577
– Loans and receivables	–	–	499	–	–	–	–	499
Interests in associates and joint ventures	–	–	–	–	–	–	417	417
Investment properties	–	–	–	–	–	–	19,669	19,669
Properties, plant and equipment	–	–	–	–	–	–	47,268	47,268
Other assets (including deferred tax assets)	28,492	18,185	777	1,183	9,472	16,300	37	74,446
Total assets	565,118	241,647	194,832	361,419	777,957	414,658	95,455	2,651,086
Liabilities								
Hong Kong SAR currency notes in circulation	146,200	–	–	–	–	–	–	146,200
Deposits and balances from banks and other financial institutions	173,065	41,044	8,113	380	825	–	–	223,427
Financial liabilities at fair value through profit or loss	–	7,102	4,118	7,070	954	476	–	19,720
Derivative financial instruments	6,668	5,600	5,033	6,800	4,636	2,309	–	31,046
Deposits from customers	1,117,254	355,379	160,670	140,524	1,263	–	–	1,775,090
Debt securities and certificates of deposit in issue	–	7,091	1,971	12,579	–	–	–	21,641
Other accounts and provisions (including current and deferred tax liabilities)	35,878	15,299	2,103	3,011	6,831	8	–	63,130
Insurance contract liabilities	35,707	418	890	3,781	14,214	48,219	–	103,229
Subordinated liabilities	–	–	422	16	18,542	–	–	18,980
Total liabilities	1,514,772	431,933	183,320	174,161	47,265	51,012	–	2,402,463
Net liquidity gap	(949,654)	(190,286)	11,512	187,258	730,692	363,646	95,455	248,623

4. Financial risk management (continued)

4.3 Liquidity risk (continued)

(B) Maturity analysis (continued)

The above maturity classifications have been prepared in accordance with relevant provisions under the Banking (Disclosure) Rules. The Group has reported assets such as advances and debt securities which have been overdue for not more than one month as "On demand". In the case of an asset that is repayable by different payments or instalments, only that portion of the asset that is actually overdue is reported as overdue. Any part of the asset that is not due is reported according to the residual maturity unless the repayment of the asset is in doubt in which case the amount is reported as "Indefinite". The above assets are stated after deduction of provisions, if any.

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.

	2018					
	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
Financial liabilities						
Hong Kong SAR currency notes in circulation	156,300	–	–	–	–	156,300
Deposits and balances from banks and other financial institutions	370,198	6,198	154	556	–	377,106
Financial liabilities at fair value through profit or loss	3,279	8,850	1,801	1,238	560	15,728
Deposits from customers	1,486,269	236,699	168,740	5,320	–	1,897,028
Debt securities and certificates of deposit in issue	3,485	4,837	1,179	–	–	9,501
Subordinated liabilities	–	353	353	13,064	–	13,770
Other financial liabilities	48,078	172	107	6	7	48,370
Total financial liabilities	2,067,609	257,109	172,334	20,184	567	2,517,803

	2017					
	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
Financial liabilities						
Hong Kong SAR currency notes in circulation	146,200	–	–	–	–	146,200
Deposits and balances from banks and other financial institutions	214,147	8,147	411	900	–	223,605
Financial liabilities at fair value through profit or loss	7,107	4,132	7,121	1,020	500	19,880
Deposits from customers	1,472,836	161,157	142,310	1,307	–	1,777,610
Debt securities and certificates of deposit in issue	7,096	1,976	12,962	–	–	22,034
Subordinated liabilities	–	542	558	21,209	–	22,309
Other financial liabilities	40,824	486	834	–	–	42,144
Total financial liabilities	1,888,210	176,440	164,196	24,436	500	2,253,782

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.

	2018					
	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
Derivative financial liabilities settled on a net basis	(8,983)	(884)	(2,338)	(5,061)	(1,002)	(18,268)
Derivative financial instruments settled on a gross basis						
Total inflow	792,296	383,269	643,870	133,033	4,683	1,957,151
Total outflow	(793,145)	(382,112)	(641,036)	(133,384)	(4,660)	(1,954,337)

	2017					
	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
Derivative financial liabilities settled on a net basis	(7,463)	(720)	(1,127)	(3,580)	(856)	(13,746)
Derivative financial instruments settled on a gross basis						
Total inflow	635,704	462,071	492,297	125,606	5,181	1,720,859
Total outflow	(636,212)	(462,229)	(491,628)	(125,756)	(5,192)	(1,721,017)

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 2018 that the Group commits to extend credit to customers and other facilities amounted to HK$545,794 million (2017: HK$569,658 million). Those loan commitments can be drawn within one year.

Financial guarantee contracts

Financial guarantees and other financial facilities of the Group as at 31 December 2018 amounting to HK$62,094 million (2017: HK$66,800 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 and reinsurance arrangements.

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 the 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 liabilities. Such concentrations may arise from a single insurance contract or through a small number of related contracts, and relate to circumstances where significant 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 liabilities, 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. The results of such studies are 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 changed 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 3.72% in 2018 (2017: 0% to 3.57%).

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	
		2018 HK$'m	2017 HK$'m
Worsening of mortality and morbidity	10%	**(136)**	(129)
Lowering of interest rate	50 basis points	**(993)**	(1,158)

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 0.10% 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 and adjusts the capital mix where appropriate to maintain an optimal balance among risk, return and capital adequacy.

4. Financial risk management (continued)

4.5 Capital management (continued)

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. The ALCO monitors the Group's capital adequacy. The Group has complied with all the statutory capital requirements of the HKMA for the reported periods in respect of banking operation as further elaborated below.

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 which include the credit exposures of overseas subsidiaries and branches 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 2018. 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.

(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 and the list of subsidiaries is set out in "Appendix – Subsidiaries of the Company".

4. Financial risk management (continued)

4.5 Capital management (continued)

(A) Basis of regulatory consolidation (continued)

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	2018		2017	
	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	**506**	**464**	506	464
China Bridge (Malaysia) Sdn. Bhd.	**38**	**31**	37	31
Bank of China (Hong Kong) Nominees Limited	**–**	**–**	–	–
Bank of China (Hong Kong) Trustees Limited	**15**	**15**	15	15
BOCHK Information Technology (Shenzhen) Co., Ltd.	**377**	**242**	355	238
BOCHK Information Technology Services (Shenzhen) Co., Ltd.	**377**	**336**	366	312
Che Hsing (Nominees) Limited	**1**	**1**	1	1
Po Sang Financial Investment Services Company Limited	**364**	**346**	363	346
Po Sang Securities and Futures Limited	**657**	**553**	990	511
Sin Chiao Enterprises Corporation, Limited	**6**	**6**	7	7
Sin Hua Trustee Limited	**7**	**6**	4	4
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.	**–**	**–**	–	–

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 2018 (2017: 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 2018 (2017: 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:

	2018	2017
CET1 capital ratio	**17.48%**	16.52%
Tier 1 capital ratio	**19.76%**	16.52%
Total capital ratio	**23.10%**	20.39%

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:

	2018 HK$'m	2017 HK$'m
CET1 capital: instruments and reserves		
Directly issued qualifying CET1 capital instruments	**43,043**	43,043
Retained earnings	**153,501**	142,208
Disclosed reserves	**45,367**	43,673
CET1 capital before regulatory adjustments	**241,911**	228,924
CET1 capital: regulatory deductions		
Valuation adjustments	**(9)**	(12)
Deferred tax assets (net of associated deferred tax liabilities)	**(82)**	(51)
Gains and losses due to changes in own credit risk on fair valued liabilities	**141**	(69)
Cumulative fair value gains arising from the revaluation of land and buildings (own-use and investment properties)	**(51,263)**	(48,556)
Regulatory reserve for general banking risks	**(10,496)**	(10,224)
Total regulatory deductions to CET1 capital	**(61,709)**	(58,912)
CET1 capital	**180,202**	170,012
AT1 capital: instruments		
Qualifying AT1 capital instruments classified as equity under applicable accounting standards	**23,476**	–
AT1 capital	**23,476**	–
Tier 1 capital	**203,678**	170,012

4. Financial risk management (continued)

4.5 Capital management (continued)

(B) Capital ratio (continued)

	2018 HK$'m	2017 HK$'m
Tier 2 capital: instruments and provisions		
Capital instruments subject to phase-out arrangements from Tier 2 capital	**5,010**	11,576
Collective provisions and regulatory reserve for general banking risks eligible for inclusion in Tier 2 capital	**6,315**	6,390
Tier 2 capital before regulatory deductions	**11,325**	17,966
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	**23,068**	21,850
Total regulatory adjustments to Tier 2 capital	**23,068**	21,850
Tier 2 capital	**34,393**	39,816
Total regulatory capital	**238,071**	209,828

The capital buffer ratios are analysed as follows:

	2018	2017
Capital conservation buffer ratio	**1.875%**	1.250%
Higher loss absorbency ratio	**1.125%**	0.750%
Countercyclical capital buffer ratio	**1.418%**	0.934%

The additional information of capital ratio disclosures is available under the section "Regulatory Disclosures" on BOCHK's website at www.bochk.com.

(C) Leverage ratio

The leverage ratio is analysed as follows:

	2018 HK$'m	2017 HK$'m
Tier 1 capital	**203,678**	170,012
Leverage ratio exposure	**2,733,653**	2,461,068
Leverage ratio	**7.45%**	6.91%

The additional information of leverage ratio disclosures is available under the section "Regulatory Disclosures" on BOCHK's website at www.bochk.com.

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, certain exchange-traded derivative contracts and precious metals.

– 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 precious metals and properties with insignificant adjustments 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 investment, 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. 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 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 the relative size of each of the individual instruments in 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.

Financial liabilities designated at fair value through profit or loss

This class of instruments includes certain deposits received from customers that are embedded with derivatives. The plain vanilla contracts are valued in the similar way described in previous debt securities section. The fair value of structured deposits is derived from the fair value of the underlying deposit by using discounted cash flow analysis taking the Group's own credit risk into account, and the fair value of the embedded derivatives determined as described in the paragraph above on derivatives.

Subordinated liabilities

Fair value for subordinated notes is based on market prices or broker/dealer price quotations.

5. Fair values of assets and liabilities (continued)

5.1 Financial instruments measured at fair value (continued)

(A) Fair value hierarchy

	2018			
	Level 1 HK$'m	Level 2 HK$'m	Level 3 HK$'m	Total HK$'m
Financial assets				
Trading assets (Note 23)				
– Debt securities and certificates of deposit	334	31,783	–	32,117
– Equity securities	2	–	–	2
– Fund	3	–	–	3
– Other debt instruments	–	4,634	–	4,634
Other financial assets mandatorily classified at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	–	17,877	1,909	19,786
– Equity securities	1,010	–	–	1,010
– Fund	3,477	2,337	915	6,729
Financial assets designated at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	691	2,480	–	3,171
– Other debt instruments	–	233,477	–	233,477
Derivative financial instruments (Note 24)	11,356	23,549	7	34,912
Investment in securities at FVOCI (Note 26)				
– Debt securities and certificates of deposit	68,013	415,983	1,618	485,614
– Equity securities	2,599	185	1,144	3,928
Financial liabilities				
Financial liabilities at fair value through profit or loss (Note 32)				
– Trading liabilities	–	13,336	–	13,336
– Financial liabilities designated at fair value through profit or loss	–	2,199	–	2,199
Derivative financial instruments (Note 24)	8,417	22,463	–	30,880
Subordinated liabilities (Note 38)				
– Subordinated notes	–	13,246	–	13,246

5. Fair values of assets and liabilities (continued)

5.1 Financial instruments measured at fair value (continued)

(A) Fair value hierarchy (continued)

	2017			
	Level 1 HK$'m	Level 2 HK$'m	Level 3 HK$'m	Total HK$'m
Financial assets				
Trading assets (Note 23)				
– Debt securities and certificates of deposit	1,947	41,978	–	43,925
– Equity securities	203	–	–	203
– Other debt instruments	–	6,859	–	6,859
Financial assets designated at fair value through profit or loss (Note 23)				
– Debt securities and certificates of deposit	–	26,552	3,112	29,664
– Equity securities	3,481	–	–	3,481
– Fund	6,969	1,580	513	9,062
Derivative financial instruments (Note 24)	10,510	23,033	–	33,543
Available-for-sale securities (Note 26)				
– Debt securities and certificates of deposit	111,552	449,139	1,010	561,701
– Equity securities	4,468	134	812	5,414
Financial liabilities				
Financial liabilities at fair value through profit or loss (Note 32)				
– Trading liabilities	–	16,936	–	16,936
– Financial liabilities designated at fair value through profit or loss	–	2,784	–	2,784
Derivative financial instruments (Note 24)	6,703	24,343	–	31,046

There were no financial asset and liability transfers between level 1 and level 2 for the Group during the year (2017: Nil).

5. Fair values of assets and liabilities (continued)

5.1 Financial instruments measured at fair value (continued)

(B) Reconciliation of level 3 items

	2018				
	Financial assets				
	Other financial assets mandatorily classified at FVPL			Investment in securities at FVOCI	
	Debt securities and certificates of deposit HK$'m	Fund HK$'m	Derivative financial instruments HK$'m	Debt securities and certificates of deposit HK$'m	Equity securities HK$'m
At 1 January 2018, after adoption of HKFRS 9	1,982	513	–	1,674	812
Gains/(losses)					
– Income statement					
– Net trading gain	–	–	7	–	–
– Net (loss)/gain on other financial instruments at fair value through profit or loss	(73)	37	–	–	–
– Other comprehensive income					
– Change in fair value	–	–	–	(56)	296
Additions	–	489	–	–	36
Disposals, redemptions and maturity	–	(124)	–	–	–
Transfer out of level 3	–	–	–	–	–
Reclassification	–	–	–	–	–
At 31 December 2018	1,909	915	7	1,618	1,144
Total unrealised gains/(losses) for the year included in income statement for financial assets held as at 31 December 2018					
– Net trading gain	–	–	7	–	–
– Net (loss)/gain on other financial instruments at fair value through profit or loss	(73)	37	–	–	–
	(73)	37	7	–	–

5. Fair values of assets and liabilities (continued)

5.1 Financial instruments measured at fair value (continued)

(B) Reconciliation of level 3 items (continued)

	2017				
	Financial assets				
	Trading assets	Financial assets designated at fair value through profit or loss		Available-for-sale securities	
	Debt securities and certificates of deposit HK$'m	Debt securities and certificates of deposit HK$'m	Fund HK$'m	Debt securities and certificates of deposit HK$'m	Equity securities HK$'m
At 1 January 2017, as previously reported	162	2,878	–	1,735	718
Effect of merger of entities under common control	–	–	–	–	1
At 1 January 2017, as restated	162	2,878	–	1,735	719
Gains					
– Income statement					
– Net trading gain	–	–	–	–	–
– Net gain on other financial instruments at fair value through profit or loss	–	234	43	–	–
– Other comprehensive income					
– Change in fair value	–	–	–	157	88
Additions	–	–	470	–	5
Disposals, redemptions and maturity	(157)	–	–	(287)	–
Transfer out of level 3	(5)	–	–	(238)	–
Reclassification	–	–	–	(357)	–
At 31 December 2017	–	3,112	513	1,010	812
Total unrealised gains for the year included in income statement for financial assets held as at 31 December 2017					
– Net trading gain	–	–	–	–	–
– Net gain on other financial instruments at fair value through profit or loss	–	234	43	–	–
	–	234	43	–	–

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 2018 and 2017, financial instruments categorised as level 3 are mainly comprised of debt securities and certificates of deposit, fund, unlisted equity shares and certain OTC derivative contracts.

Certain debt securities and certificates of deposit were transferred out of level 3 during 2017 due to change of valuation observability. For certain illiquid debt securities and certificates of deposit 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. The Group has established internal control procedures to control the Group's exposure to such financial instruments.

The fair values of unlisted FVOCI/available-for-sale equity shares are determined with reference to multiples of comparable listed companies, such as average of the price/earning ratios of comparables, or net asset value, if appropriate comparables are not available. The fair value is positively correlated to the price/earning ratios of appropriate comparables or net asset values. Had the net asset value of the underlying equity investments increased/decreased by 5%, the Group's other comprehensive income would have increased/decreased by HK$57 million (2017: HK$41 million).

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. Besides, a discounted cash flow model is used for certain securities at amortised cost based on a current yield curve appropriate for the remaining term to maturity.

Held-to-maturity securities

The fair value of held-to-maturity securities 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.

Loans and receivables

A discounted cash flow model is used based on a current yield curve appropriate for the remaining term to maturity.

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.

Subordinated liabilities

Fair value for subordinated notes is based on market prices or broker/dealer price quotations. The subordinated loan is on floating rate terms, bears interest at prevailing market interest rates and its carrying value approximates fair value.

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.

	2018		2017	
	Carrying value HK$'m	**Fair value HK$'m**	Carrying value HK$'m	Fair value HK$'m
Financial assets				
Investment in securities at amortised cost (Note 26)	**108,705**	**107,561**	N/A	N/A
Held-to-maturity securities (Note 26)	**N/A**	**N/A**	50,577	50,998
Loans and receivables (Note 26)	**N/A**	**N/A**	499	498
Financial liabilities				
Debt securities and certificates of deposit in issue (Note 34)	**9,453**	**9,454**	21,641	21,578
Subordinated liabilities (Note 38) – Subordinated notes	**N/A**	**N/A**	18,917	20,985

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

	2018			
	Level 1 HK$'m	**Level 2 HK$'m**	**Level 3 HK$'m**	**Total HK$'m**
Financial assets				
Investment in securities at amortised cost	**2,475**	**104,296**	**790**	**107,561**
Financial liabilities				
Debt securities and certificates of deposit in issue	**–**	**9,454**	**–**	**9,454**

	2017			
	Level 1 HK$'m	Level 2 HK$'m	Level 3 HK$'m	Total HK$'m
Financial assets				
Held-to-maturity securities	991	49,653	354	50,998
Loans and receivables	–	498	–	498
Financial liabilities				
Debt securities and certificates of deposit in issue	–	21,578	–	21,578
Subordinated liabilities – Subordinated notes	–	20,985	–	20,985

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 entire 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.

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% (2017: 2%) per year	The higher the depreciation rate, the lower the fair value.
		Premium on specialised nature of the property	+15% (2017: +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	-6% (2017: -11%)	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.

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

	2018			
	Level 1 HK$'m	Level 2 HK$'m	Level 3 HK$'m	Total HK$'m
Non-financial assets				
Investment properties (Note 28)	–	368	19,316	19,684
Properties, plant and equipment (Note 29)				
– Premises	–	1,041	45,349	46,390
Other assets (Note 30)				
– Precious metals	3,012	3,590	–	6,602

	2017			
	Level 1 HK$'m	Level 2 HK$'m	Level 3 HK$'m	Total HK$'m
Non-financial assets				
Investment properties (Note 28)	–	359	19,310	19,669
Properties, plant and equipment (Note 29)				
– Premises	–	1,215	43,114	44,329
Other assets (Note 30)				
– Precious metals	5,501	790	–	6,291

There were no non-financial asset transfers between level 1 and level 2 for the Group during the year (2017: Nil).

5. Fair values of assets and liabilities (continued)

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

(B) Reconciliation of level 3 items

	2018	
	Non-financial assets	
		Properties, plant and equipment
	Investment properties HK$'m	Premises HK$'m
At 1 January 2018	19,310	43,114
Gains		
– Income statement		
– Net gain from fair value adjustments on investment properties	881	–
– Net gain from revaluation of premises	–	21
– Other comprehensive income		
– Revaluation of premises	–	2,068
Depreciation	–	(1,065)
Additions	13	90
Disposals	–	–
Transfer into level 3	–	234
Transfer out of level 3	–	–
Reclassification	(888)	888
Exchange difference	–	(1)
At 31 December 2018	19,316	45,349
Total unrealised gains for the year included in income statement for non-financial assets held as at 31 December 2018		
– Net gain from fair value adjustments on investment properties	881	–
– Net gain from revaluation of premises	–	21
	881	21

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)

	2017	
	Non-financial assets	
		Properties, plant and equipment
	Investment properties HK$'m	Premises HK$'m
At 1 January 2017	17,365	41,698
Gains		
– Income statement		
– Net gain from fair value adjustments on investment properties	1,133	–
– Net gain from revaluation of premises	–	4
– Other comprehensive income		
– Revaluation of premises	–	1,999
Depreciation	–	(999)
Additions	10	102
Disposals	–	(1)
Transfer into level 3	500	857
Transfer out of level 3	–	(251)
Reclassification	302	(302)
Exchange difference	–	7
At 31 December 2017	19,310	43,114
Total unrealised gains for the year included in income statement for non-financial assets held as at 31 December 2017		
– Net gain from fair value adjustments on investment properties	1,133	–
– Net gain from revaluation of premises	–	4
	1,133	4

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.

6. Net interest income

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Interest income		
Advances to customers, due from banks and other financial institutions	**42,661**	35,592
Investment in securities and financial assets at fair value through profit or loss	**18,701**	13,270
Others	**374**	215
	61,736	49,077
Interest expense		
Deposits from customers, due to banks and other financial institutions	**(20,279)**	(12,653)
Debt securities and certificates of deposit in issue	**(517)**	(289)
Subordinated liabilities	**(992)**	(932)
Others	**(554)**	(385)
	(22,342)	(14,259)
Net interest income	**39,394**	34,818

Included within interest income are HK$46,414 million and HK$11,434 million, before hedging effect, for financial assets measured at amortised cost and at fair value through other comprehensive income respectively (2017: HK$47,285 million that are not measured at fair value through profit or loss).

Included within interest expense are HK$21,103 million (2017: HK$14,586 million), before hedging effect, for financial liabilities that are not measured at fair value through profit or loss.

7. Net fee and commission income

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Fee and commission income		
Credit card business	**3,441**	3,202
Securities brokerage	**2,769**	2,625
Loan commissions	**2,613**	3,608
Insurance	**1,546**	1,326
Funds distribution	**929**	985
Bills commissions	**738**	816
Payment services	**679**	649
Trust and custody services	**633**	555
Currency exchange	**590**	433
Safe deposit box	**285**	291
Others	**1,290**	1,010
	15,513	15,500
Fee and commission expense		
Credit card business	**(2,545)**	(2,327)
Insurance	**(344)**	(311)
Securities brokerage	**(323)**	(312)
Others	**(994)**	(949)
	(4,206)	(3,899)
Net fee and commission income	**11,307**	11,601
Of which arise from:		
Financial assets or financial liabilities not at fair value through profit or loss		
– Fee and commission income	**3,123**	3,913
– Fee and commission expense	**(23)**	(50)
	3,100	3,863
Trust and other fiduciary activities		
– Fee and commission income	**818**	739
– Fee and commission expense	**(27)**	(23)
	791	716

8. Net trading gain

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net gain from:		
Foreign exchange and foreign exchange products	**2,704**	197
Interest rate instruments and items under fair value hedge	**50**	741
Commodities	**184**	205
Equity and credit derivative instruments	**140**	225
	3,078	1,368

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

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net loss on other financial instruments mandatorily classified at fair value through profit or loss	**(1,839)**	N/A
Net gain on financial instruments designated at fair value through profit or loss	**557**	2,181
	(1,282)	2,181

10. Net gain on other financial assets

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net gain on disposal/redemption of investment in securities at FVOCI	**26**	N/A
Net loss on disposal/redemption of investment in securities at amortised cost	**(4)**	N/A
Net gain on available-for-sale securities	**N/A**	1,107
Net gain on held-to-maturity securities	**N/A**	26
Others	**(3)**	30
	19	1,163

Gain on disposal of investment in securities at amortised cost due to credit deterioration amounted to HK$27 million.

11. Other operating income

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Dividend income		
– From investment in securities at FVOCI derecognised during the year	**22**	N/A
– From investment in securities at FVOCI held at the end of the year	**191**	N/A
– From available-for-sale securities	**N/A**	177
Gross rental income from investment properties	**654**	594
Less: Outgoings in respect of investment properties	**(73)**	(100)
Others	**187**	260
	981	931

Included in the "Outgoings in respect of investment properties" is HK$1 million (2017: HK$1 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

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Gross insurance benefits and claims and movement in liabilities		
Claims, benefits and surrenders paid	**(18,292)**	(11,624)
Movement in liabilities	**(2,944)**	(14,257)
	(21,236)	(25,881)
Reinsurers' share of benefits and claims and movement in liabilities		
Reinsurers' share of claims, benefits and surrenders paid	**6,867**	5,392
Reinsurers' share of movement in liabilities	**1,160**	2,768
	8,027	8,160
Net insurance benefits and claims and movement in liabilities	**(13,209)**	(17,721)

13. Net charge of impairment allowances

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net (charge)/reversal of impairment allowances on:		
Advances and other accounts	**(1,178)**	(1,046)
Balances and placements with banks and other financial institutions	**70**	–
Investment in securities		
– At FVOCI	**(14)**	N/A
– At amortised cost	**(12)**	N/A
– Held-to-maturity securities	**N/A**	–
	(26)	–
Loan commitments and financial guarantee contracts	**(91)**	–
Others	**(12)**	(9)
Net charge of impairment allowances	**(1,237)**	(1,055)

14. Operating expenses

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Staff costs (including directors' emoluments)		
– Salaries and other costs	**8,158**	7,457
– Pension cost	**469**	444
	8,627	7,901
Premises and equipment expenses (excluding depreciation)		
– Rental of premises	**770**	710
– Information technology	**631**	551
– Others	**458**	460
	1,859	1,721
Depreciation (Note 29)	**2,063**	1,951
Auditor's remuneration		
– Audit services	**28**	28
– Non-audit services	**20**	9
Other operating expenses	**2,583**	2,238
	15,180	13,848

Contingent rent included in the "Rental of premises" amounted to HK$51 million during the year (2017: HK$16 million).

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

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net gain from fair value adjustments on investment properties (Note 28)	**906**	1,197

16. Net gain/(loss) from disposal/revaluation of properties, plant and equipment

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Net loss from disposal of equipment, fixtures and fittings	**(6)**	(15)
Net gain/(loss) from revaluation of premises (Note 29)	**24**	(10)
	18	(25)

17. Taxation

Taxation in the income statement represents:

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Current tax		
Hong Kong profits tax		
– Current year taxation	**5,630**	5,507
– Over-provision in prior years	**(65)**	(82)
	5,565	5,425
Overseas taxation		
– Current year taxation	**783**	889
– Over-provision in prior years	**(27)**	–
	6,321	6,314
Deferred tax		
Origination and reversal of temporary differences and unused tax credits (Note 36)	**83**	(246)
	6,404	6,068

Hong Kong profits tax has been provided at the rate of 16.5% (2017: 16.5%) on the estimated assessable profits arising in Hong Kong during the year. Taxation on overseas profits 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:

	2018 HK$'m	2017 HK$'m
CONTINUING OPERATIONS		
Profit before taxation	**38,988**	35,375
Calculated at a taxation rate of 16.5% (2017: 16.5%)	**6,433**	5,837
Effect of different taxation rates in other countries/regions	**123**	93
Income not subject to taxation	**(691)**	(460)
Expenses not deductible for taxation purposes	**335**	262
Tax losses not recognised	**–**	2
Over-provision in prior years	**(92)**	(82)
Foreign withholding tax	**296**	416
Taxation charge	**6,404**	6,068
Effective tax rate	**16.4%**	17.2%

18. Dividends

	2018		2017	
	Per share HK$	**Total HK$'m**	Per share HK$	Total HK$'m
Interim dividend paid	**0.545**	**5,762**	0.545	5,762
Special dividend paid	**–**	**–**	0.095	1,005
Proposed final dividend	**0.923**	**9,759**	0.758	8,014
	1.468	**15,521**	1.398	14,781

At a meeting held on 28 August 2018, the Board declared an interim dividend of HK$0.545 per ordinary share for the first half of 2018 amounting to approximately HK$5,762 million.

At a meeting held on 29 March 2019, the Board proposed to recommend to the Annual General Meeting on 16 May 2019 a final dividend of HK$0.923 per ordinary share for the year ended 31 December 2018 amounting to approximately HK$9,759 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 2019.

19. Earnings per share

The calculation of basic earnings per share for the year ended 31 December 2018 is based on the consolidated profit for the year and profit from continuing operations attributable to equity holders of the Company of approximately HK$32,000 million and HK$32,000 million (2017: HK$31,163 million and HK$28,574 million) respectively and on the ordinary shares in issue of 10,572,780,266 shares (2017: 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 2018 (2017: 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 participates in the BOC-Prudential Easy Choice MPF Scheme, of which the trustee is BOCI-Prudential Trustee and the investment manager is BOCI-Prudential Manager, which are related parties of the Company.

The Group's total contributions made to the ORSO schemes for the year ended 31 December 2018 amounted to approximately HK$343 million (2017: approximately HK$337 million), after a deduction of forfeited contributions of approximately HK$10 million (2017: approximately HK$10 million). For the MPF Scheme, the Group contributed approximately HK$93 million (2017: approximately HK$83 million) for the year ended 31 December 2018.

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:

	2018			
	Directors' fee HK$'000	Basic salaries, allowances and benefits in kind HK$'000	Bonus HK$'000	Total HK$'000
Executive Directors				
GAO Yingxin (Chief Executive)	–	6,530	4,018	10,548
LI Jiuzhong	–	4,846	2,490	7,336
	–	11,376	6,508	17,884
Non-executive Directors				
CHEN Siqing	–	–	–	–
LIU Liange Note 1	–	–	–	–
LIN Jingzhen Note 1	–	–	–	–
CHENG Eva*	500	–	–	500
CHOI Koon Shum*	592	–	–	592
KOH Beng Seng*	642	–	–	642
TUNG Savio Wai-Hok*	692	–	–	692
REN Deqi Note 2	–	–	–	–
LIU Qiang Note 1, 2	–	–	–	–
	2,426	–	–	2,426
	2,426	11,376	6,508	20,310

Note 1: Appointed during the year.
Note 2: Resigned during the year.

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

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

(i) Directors' emoluments (continued)

	2017			
	Directors' fee HK$'000	Basic salaries, allowances and benefits in kind HK$'000	Bonus HK$'000	Total HK$'000
Executive Directors				
YUE Yi (Chief Executive)	–	7,140	4,166	11,306
LI Jiuzhong	–	4,664	2,394	7,058
	–	11,804	6,560	18,364
Non-executive Directors				
CHEN Siqing	–	–	–	–
GAO Yingxin	–	–	–	–
CHENG Eva*	500	–	–	500
CHOI Koon Shum*	588	–	–	588
KOH Beng Seng*	650	–	–	650
TUNG Savio Wai-Hok*	712	–	–	712
REN Deqi	–	–	–	–
TIAN Guoli	–	–	–	–
XU Luode	–	–	–	–
	2,450	–	–	2,450
	2,450	11,804	6,560	20,814

* Independent Non-executive Directors

There were no directors waived emoluments for the year ended 31 December 2018 (2017: 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 two (2017: two) directors whose emoluments are reflected in the analysis presented above. The emoluments payable to the remaining three (2017: three) individuals during the year are as follows:

	2018 HK$'m	2017 HK$'m
Basic salaries and allowances	**12**	11
Bonus	**9**	9
Contributions to pension schemes	**1**	1
	22	21

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

	Number of individuals	
	2018	2017
HK$6,500,001 to HK$7,000,000	**1**	2
HK$7,000,001 to HK$7,500,000	**1**	1
HK$7,500,001 to HK$8,000,000	**1**	–

(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	
	2018	2017
HK$0 to HK$500,000	**2**	–
HK$500,001 to HK$1,000,000	**1**	–
HK$4,500,001 to HK$5,000,000	**–**	1
HK$5,000,001 to HK$5,500,000	**2**	2
HK$5,500,001 to HK$6,000,000	**1**	1
HK$6,500,001 to HK$7,000,000	**–**	1
HK$7,000,001 to HK$7,500,000	**2**	1
HK$10,500,001 to HK$11,000,000	**1**	–
HK$11,000,001 to HK$11,500,000	**–**	1

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

(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.

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

	2018		2017	
	Senior Management HK$'m	**Key Personnel HK$'m**	Senior Management HK$'m	Key Personnel HK$'m
Fixed remuneration				
Cash-based	**36**	**133**	38	64
Of which: deferred	**–**	**–**	–	–
Variable remuneration				
Cash-based	**16**	**81**	17	45
Of which: deferred	***5***	***21***	*5*	*14*
Total remuneration	**52**	**214**	55	109
Number of employees				
Fixed remuneration	**11**	**52**	9	25
Variable remuneration	**11**	**52**	9	24

(ii) Special payments

There were no guaranteed bonuses, sign-on awards and severance payments to Senior Management and Key Personnel for the year ended 31 December 2018 (2017: Nil).

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

	2018				
	Total amount of outstanding deferred remuneration HK$'m	Of which: Total amount of outstanding deferred and retained remuneration exposed to ex post explicit and/or implicit adjustment HK$'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	33	33	–	–	(12)
Total	43	43	–	–	(17)

	2017				
	Total amount of outstanding deferred remuneration HK$'m	Of which: Total amount of outstanding deferred and retained remuneration exposed to ex post explicit and/or implicit adjustment HK$'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	–	–	(4)
Key Personnel					
Cash	24	24	–	–	(8)
Total	34	34	–	–	(12)

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

	2018 HK$'m	2017 HK$'m
Cash	**21,968**	14,243
Balances with central banks	**157,889**	88,886
Placements with central banks maturing within one month	**9,572**	9,691
Placements with central banks maturing between one and twelve months	**2,697**	1,486
	170,158	100,063
Balances with other banks and other financial institutions	**119,611**	153,105
Placements with other banks and other financial institutions maturing within one month	**65,810**	101,452
Placements with other banks and other financial institutions maturing between one and twelve months	**53,992**	57,741
	239,413	312,298
	431,539	426,604
Impairment allowances		
– Stage 1	**(15)**	N/A
– Stage 2	**–**	N/A
– Stage 3	**–**	N/A
	431,524	426,604

23. Financial assets at fair value through profit or loss

	2018 HK$'m	2017 HK$'m
Securities		
Trading assets		
– Treasury bills	**16,301**	17,780
– Certificates of deposit	**623**	1,483
– Other debt securities	**15,193**	24,662
	32,117	43,925
– Equity securities	**2**	203
– Fund	**3**	–
	32,122	44,128
Other financial assets mandatorily classified at fair value through profit or loss		
– Certificates of deposit	**2**	N/A
– Other debt securities	**19,784**	N/A
	19,786	N/A
– Equity securities	**1,010**	N/A
– Fund	**6,729**	N/A
	27,525	N/A
Financial assets designated at fair value through profit or loss		
– Certificates of deposit	**–**	159
– Other debt securities	**3,171**	29,505
	3,171	29,664
– Equity securities	**–**	3,481
– Fund	**–**	9,062
	3,171	42,207
Total securities	**62,818**	86,335
Other debt instruments		
Trading assets	**4,634**	6,859
Financial assets designated at fair value through profit or loss	**233,477**	–
Total other debt instruments	**238,111**	6,859
	300,929	93,194

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

Total securities are analysed by place of listing as follows:

	2018 HK$'m	2017 HK$'m
Debt securities and certificates of deposit		
– Listed in Hong Kong	**13,556**	18,203
– Listed outside Hong Kong	**14,436**	17,870
– Unlisted	**27,082**	37,516
	55,074	73,589
Equity securities		
– Listed in Hong Kong	**468**	2,578
– Listed outside Hong Kong	**544**	1,106
	1,012	3,684
Fund		
– Listed in Hong Kong	**339**	–
– Unlisted	**6,393**	9,062
	6,732	9,062
Total securities	**62,818**	86,335

Total securities are analysed by type of issuer as follows:

	2018 HK$'m	2017 HK$'m
Sovereigns	**26,397**	28,929
Public sector entities	**1,720**	703
Banks and other financial institutions	**26,385**	39,844
Corporate entities	**8,316**	16,859
Total securities	**62,818**	86,335

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:

	2018		
	Contract/ notional amounts HK$'m	Fair values	
		Assets HK$'m	Liabilities HK$'m
Exchange rate contracts			
Spot, forwards and futures	**363,070**	**12,711**	**(8,901)**
Swaps	**1,721,302**	**12,373**	**(12,143)**
Options	**29,715**	**158**	**(64)**
	2,114,087	**25,242**	**(21,108)**
Interest rate contracts			
Futures	**20,242**	**1**	**(39)**
Swaps	**1,047,515**	**9,312**	**(8,428)**
Options	**1,566**	**1**	**(1)**
	1,069,323	**9,314**	**(8,468)**
Commodity contracts	**28,782**	**239**	**(1,184)**
Equity contracts	**2,998**	**117**	**(119)**
Credit derivative contracts	**392**	**–**	**(1)**
	3,215,582	**34,912**	**(30,880)**

	2017		
	Contract/ notional amounts HK$'m	Fair values	
		Assets HK$'m	Liabilities HK$'m
Exchange rate contracts			
Spot, forwards and futures	354,350	12,043	(9,238)
Swaps	1,460,316	13,923	(15,641)
Options	59,734	138	(107)
	1,874,400	26,104	(24,986)
Interest rate contracts			
Futures	17,306	8	(1)
Swaps	932,611	6,788	(5,405)
	949,917	6,796	(5,406)
Commodity contracts	28,001	559	(570)
Equity contracts	6,655	78	(81)
Credit derivative contracts	586	6	(3)
	2,859,559	33,543	(31,046)

24. Derivative financial instruments and hedge accounting (continued)

(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.

The table below summarises the contract/notional amounts of the hedging instruments as at 31 December 2018 by remaining contractual maturity.

	2018					
	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	235	78	10,808	70,258	34,845	116,224

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

	2018			
	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	116,224	2,038	(477)	612

The amounts relating to hedged items are as follows:

	2018		
	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 and certificates of deposit	115,598	(2,233)	(273)

24. Derivative financial instruments and hedge accounting (continued)

(b) Hedge accounting (continued)

Fair value hedges (continued)

Hedge ineffectiveness recognised is as follows:

	2018 HK$'m
Net trading gain	**339**

The fair values of derivative financial instruments designated as hedging instruments as at 31 December 2017 are as follows:

	2017	
	Assets HK$'m	Liabilities HK$'m
Fair value hedges	2,339	(555)

Gains or losses on fair value hedges reflected in net trading gain for the year are as follows:

	2017	
	Hedged assets HK$'m	Hedged liabilities HK$'m
Net gain/(loss)		
– Hedging instruments	591	(464)
– Hedged items	(271)	563
	320	99

25. Advances and other accounts

	2018 HK$'m	2017 HK$'m
Personal loans and advances	**354,619**	327,827
Corporate loans and advances	**912,086**	818,599
Advances to customers	**1,266,705**	1,146,426
Impairment allowances		
– Stage 1	**(3,739)**	N/A
– Stage 2	**(546)**	N/A
– Stage 3	**(1,126)**	N/A
– Collectively assessed	**N/A**	(3,615)
– Individually assessed	**N/A**	(491)
	1,261,294	1,142,320
Trade bills	**17,361**	42,975
Impairment allowances		
– Stage 1	**(1)**	N/A
– Stage 2	**–**	N/A
– Stage 3	**(4)**	N/A
	17,356	42,975
Advances to banks and other financial institutions	**3,822**	6,259
	1,282,472	1,191,554

As at 31 December 2018, advances to customers included accrued interest of HK$2,336 million (2017: HK$1,729 million).

26. Investment in securities

	2018 HK$'m	2017 HK$'m
Investment in securities at fair value through other comprehensive income		
– Treasury bills	**122,462**	N/A
– Certificates of deposit	**34,849**	N/A
– Other debt securities	**328,303**	N/A
	485,614	N/A
– Equity securities	**3,928**	N/A
	489,542	N/A
Investment in securities at amortised cost		
– Certificates of deposit	**18**	N/A
– Other debt securities	**108,716**	N/A
	108,734	N/A
– Impairment allowances		
Stage 1	**(29)**	N/A
Stage 2	**–**	N/A
Stage 3	**–**	N/A
	108,705	N/A
Available-for-sale securities at fair value		
– Treasury bills	**N/A**	180,160
– Certificates of deposit	**N/A**	26,762
– Other debt securities	**N/A**	354,779
	N/A	561,701
– Equity securities	**N/A**	5,414
	N/A	567,115
Held-to-maturity securities at amortised cost		
– Certificates of deposit	**N/A**	18
– Other debt securities	**N/A**	50,604
	N/A	50,622
– Impairment allowances	**N/A**	(45)
	N/A	50,577
Loans and receivables at amortised cost		
– Certificates of deposit	**N/A**	–
– Other debt securities	**N/A**	499
	N/A	499
	598,247	618,191

26. Investment in securities (continued)

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

	2018 HK$'m	2017 HK$'m
Debt securities and certificates of deposit		
– Listed in Hong Kong	**87,137**	80,808
– Listed outside Hong Kong	**242,128**	210,804
– Unlisted	**265,054**	321,165
	594,319	612,777
Equity securities		
– Listed in Hong Kong	**2,599**	4,468
– Listed outside Hong Kong	**185**	134
– Unlisted	**1,144**	812
	3,928	5,414
	598,247	618,191

	2018		2017	
	Carrying value HK$'m	Market value HK$'m	Carrying value HK$'m	Market value HK$'m
Listed securities at amortised cost				
– Listed in Hong Kong	**19,249**	**19,077**	N/A	N/A
– Listed outside Hong Kong	**54,225**	**54,009**	N/A	N/A
	73,474	**73,086**	N/A	N/A
Listed held-to-maturity securities				
– Listed in Hong Kong	**N/A**	**N/A**	10,355	10,662
– Listed outside Hong Kong	**N/A**	**N/A**	19,646	19,781
	N/A	**N/A**	30,001	30,443

26. Investment in securities (continued)

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

	2018 HK$'m	2017 HK$'m
Sovereigns	**184,540**	234,032
Public sector entities	**44,984**	45,374
Banks and other financial institutions	**208,060**	213,826
Corporate entities	**160,663**	124,959
	598,247	618,191

The movements in investment in securities are summarised as follows:

	2018	
	At fair value through other comprehensive income HK$'m	At amortised cost HK$'m
At 1 January 2018, after adoption of HKFRS 9	**542,706**	**76,230**
Additions	**727,971**	**46,371**
Disposals, redemptions and maturity	**(772,469)**	**(13,674)**
Amortisation	**1,357**	**239**
Change in fair value/fair value hedge adjustment	**(3,674)**	**(26)**
Net charge of impairment allowances	**–**	**(12)**
Reclassification	**–**	**–**
Exchange difference	**(6,349)**	**(423)**
At 31 December 2018	**489,542**	**108,705**

26. Investment in securities (continued)

	2017		
	Available-for-sale securities HK$'m	Held-to-maturity securities HK$'m	Loans and receivables HK$'m
At 1 January 2017, as previously reported	531,847	60,868	935
Effect of merger of entities under common control	1	22	–
At 1 January 2017, as restated	531,848	60,890	935
Additions	541,193	4,915	3,864
Disposals, redemptions and maturity	(511,733)	(22,845)	(4,320)
Amortisation	65	(76)	20
Change in fair value	1,663	–	–
Reclassification	(6,097)	6,097	–
Exchange difference	10,176	1,596	–
At 31 December 2017	567,115	50,577	499

In 2017, the Group reclassified certain debt securities with fair value of HK$6,097 million out of available-for-sale category into held-to-maturity category during the year. The Group had the intention and ability to hold these reclassified debt securities until maturity at the date of reclassification.

In 2018, the Group has designated certain equity securities, which previously classified as available-for-sale, 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 sold certain equity securities at fair value through other comprehensive income with fair value of HK$3,149 million during the year. These sales were made because of portfolio rebalancing.

27. Interests in associates and joint ventures

	2018 HK$'m	2017 HK$'m
At 1 January	**417**	319
Share of results	**103**	132
Share of tax	**(33)**	(32)
Dividend received	**(4)**	(2)
At 31 December	**483**	417

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
Associates:				
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
Joint Ventures:				
Joint Electronic Teller Services Limited	Hong Kong	HK$10,026,000	19.96%	Operation of a private inter-bank message switching network in respect of ATM services
Golden Harvest (Cayman) Limited	Cayman Islands	US$100	49%	Investment holding

FutureX Innovation Limited became an associate of the Group on 31 July 2018.

	Associates		Joint ventures	
	2018 HK$'m	2017 HK$'m	2018 HK$'m	2017 HK$'m
Interests in associates/joint ventures	**421**	350	**62**	67
Share of profit/total comprehensive income for the year of associates/joint ventures	**71**	94	**(1)**	6

28. Investment properties

	2018 HK$'m	2017 HK$'m
At 1 January	**19,669**	18,227
Additions	**13**	13
Disposals	**–**	(2)
Fair value gains (Note 15)	**906**	1,197
Reclassification (to)/from properties, plant and equipment (Note 29)	**(904)**	234
At 31 December	**19,684**	19,669

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

	2018 HK$'m	2017 HK$'m
Held in Hong Kong		
On long-term lease (over 50 years)	**4,691**	4,526
On medium-term lease (10 to 50 years)	**14,635**	14,835
Held outside Hong Kong		
On long-term lease (over 50 years)	**86**	77
On medium-term lease (10 to 50 years)	**244**	203
On short-term lease (less than 10 years)	**28**	28
	19,684	19,669

As at 31 December 2018, investment properties were included in the balance sheet at valuation carried out at 31 December 2018 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	Total HK$'m
Net book value at 1 January 2018, as previously reported	**44,329**	**2,932**	**47,261**
Effect of merger of entities under common control	**–**	**7**	**7**
Net book value at 1 January 2018, as restated	**44,329**	**2,939**	**47,268**
Additions	**94**	**1,080**	**1,174**
Disposals	**(4)**	**(8)**	**(12)**
Revaluation	**2,160**	**–**	**2,160**
Depreciation for the year (Note 14)	**(1,092)**	**(971)**	**(2,063)**
Reclassification from investment properties (Note 28)	**904**	**–**	**904**
Exchange difference	**(1)**	**–**	**(1)**
Net book value at 31 December 2018	**46,390**	**3,040**	**49,430**
At 31 December 2018			
Cost or valuation	**46,390**	**10,495**	**56,885**
Accumulated depreciation and impairment	**–**	**(7,455)**	**(7,455)**
Net book value at 31 December 2018	**46,390**	**3,040**	**49,430**
The analysis of cost or valuation of the above assets is as follows:			
At 31 December 2018			
At cost	**–**	**10,495**	**10,495**
At valuation	**46,390**	**–**	**46,390**
	46,390	**10,495**	**56,885**
Net book value at 1 January 2017, as previously reported	43,357	2,455	45,812
Effect of merger of entities under common control	–	6	6
Net book value at 1 January 2017, as restated	43,357	2,461	45,818
Additions	112	1,411	1,523
Disposals	(8)	(20)	(28)
Revaluation	2,119	–	2,119
Depreciation for the year (Note 14)	(1,024)	(927)	(1,951)
Reclassification to investment properties (Note 28)	(234)	–	(234)
Exchange difference	7	14	21
Net book value at 31 December 2017	44,329	2,939	47,268
At 31 December 2017			
Cost or valuation	44,329	9,616	53,945
Accumulated depreciation and impairment	–	(6,677)	(6,677)
Net book value at 31 December 2017	44,329	2,939	47,268
The analysis of cost or valuation of the above assets is as follows:			
At 31 December 2017			
At cost	–	9,616	9,616
At valuation	44,329	–	44,329
	44,329	9,616	53,945

29. Properties, plant and equipment (continued)

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

	2018 HK$'m	2017 HK$'m
Held in Hong Kong		
On long-term lease (over 50 years)	**13,774**	13,734
On medium-term lease (10 to 50 years)	**32,267**	30,221
Held outside Hong Kong		
On long-term lease (over 50 years)	**6**	5
On medium-term lease (10 to 50 years)	**266**	290
On short-term lease (less than 10 years)	**77**	79
	46,390	44,329

As at 31 December 2018, premises were included in the balance sheet at valuation carried out at 31 December 2018 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:

	2018 HK$'m	2017 HK$'m
Increase/(decrease) in valuation credited/(charged) to income statement (Note 16)	**24**	(10)
Increase in valuation credited to other comprehensive income	**2,136**	2,129
	2,160	2,119

As at 31 December 2018, 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$8,598 million (2017: HK$7,295 million).

30. Other assets

	2018 HK$'m	2017 HK$'m
Repossessed assets	**10**	30
Precious metals	**6,602**	6,291
Reinsurance assets	**45,898**	43,717
Accounts receivable and prepayments	**26,077**	24,350
	78,587	74,388

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

	2018 HK$'m	2017 HK$'m
Trading liabilities		
– Short positions in Exchange Fund Bills and Notes	**13,336**	16,936
Financial liabilities designated at fair value through profit or loss		
– Structured deposits (Note 33)	**2,199**	2,784
	15,535	19,720

The carrying amount of financial liabilities designated at fair value through profit or loss as at 31 December 2018 was less than the amount that the Group would be contractually required to pay at maturity to the holders by HK$7 million (2017: HK$3 million).

33. Deposits from customers

	2018 HK$'m	2017 HK$'m
Current, savings and other deposit accounts (per balance sheet)	**1,893,357**	1,775,090
Structured deposits reported as financial liabilities at fair value through profit or loss (Note 32)	**2,199**	2,784
	1,895,556	1,777,874
Analysed by:		
Demand deposits and current accounts		
– Corporate	**144,985**	145,029
– Personal	**62,812**	58,808
	207,797	203,837
Savings deposits		
– Corporate	**336,333**	372,909
– Personal	**516,006**	540,283
	852,339	913,192
Time, call and notice deposits		
– Corporate	**487,433**	409,151
– Personal	**347,987**	251,694
	835,420	660,845
	1,895,556	1,777,874

34. Debt securities and certificates of deposit in issue

	2018 HK$'m	2017 HK$'m
Debt securities, at amortised cost	**9,453**	21,641

35. Other accounts and provisions

	2018 HK$'m	2017 HK$'m
Other accounts payable	**58,982**	53,088
Impairment allowances on loan commitments and financial guarantee contracts		
– Stage 1	**375**	N/A
– Stage 2	**20**	N/A
– Stage 3	**43**	N/A
	59,420	53,088

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:

	2018				
	Accelerated tax depreciation HK$'m	**Property revaluation HK$'m**	**Impairment allowances HK$'m**	**Others HK$'m**	**Total HK$'m**
At 1 January 2018, as previously reported	**693**	**6,649**	**(549)**	**(1,147)**	**5,646**
Effect of adoption of HKFRS 9	**–**	**–**	**(190)**	**170**	**(20)**
At 1 January 2018, after adoption of HKFRS 9	**693**	**6,649**	**(739)**	**(977)**	**5,626**
Charged to income statement (Note 17)	**13**	**44**	**15**	**11**	**83**
Charged/(credited) to other comprehensive income	**–**	**298**	**–**	**(519)**	**(221)**
Release upon disposal of equity instruments at fair value through other comprehensive income	**–**	**–**	**–**	**7**	**7**
At 31 December 2018	**706**	**6,991**	**(724)**	**(1,478)**	**5,495**

	2017				
	Accelerated tax depreciation HK$'m	Property revaluation HK$'m	Impairment allowances HK$'m	Others HK$'m	Total HK$'m
At 1 January 2017	611	6,467	(426)	(1,139)	5,513
Charged/(credited) to income statement (Note 17)	82	(116)	(123)	(89)	(246)
Charged to other comprehensive income	–	298	–	81	379
At 31 December 2017	693	6,649	(549)	(1,147)	5,646

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:

	2018 HK$'m	2017 HK$'m
Deferred tax assets	**(270)**	(58)
Deferred tax liabilities	**5,765**	5,704
	5,495	5,646

	2018 HK$'m	2017 HK$'m
Deferred tax assets to be recovered after more than twelve months	**(60)**	(38)
Deferred tax liabilities to be settled after more than twelve months	**7,011**	6,794
	6,951	6,756

As at 31 December 2018, the Group has not recognised deferred tax assets in respect of tax losses amounting to HK$23 million (2017: HK$25 million). Of the amount, HK$9 million (2017: HK$9 million) for the Group has no expiry date and HK$14 million (2017: HK$16 million) for the Group is scheduled to expire within six years under the current tax legislation in different countries/regions.

37. Insurance contract liabilities

	2018 HK$'m	2017 HK$'m
At 1 January	**103,229**	86,534
Benefits paid	**(17,479)**	(10,815)
Claims incurred and movement in liabilities	**18,973**	27,510
At 31 December	**104,723**	103,229

The insurance contract liabilities that are covered by reinsurance arrangements amounted to HK$37,940 million (2017: HK$38,074 million) and the associated reinsurance assets of HK$45,898 million (2017: HK$43,717 million) are included in "Other assets" (Note 30).

38. Subordinated liabilities

	2018 HK$'m	2017 HK$'m
Subordinated notes		
– designated at fair value through profit or loss	**13,246**	N/A
– at amortised cost with fair value hedge adjustment	**N/A**	18,917
Subordinated loan		
– at amortised cost	**–**	63
	13,246	18,980

In 2010, BOCHK issued listed subordinated notes with an aggregate amount of USD2,500 million, interest rate at 5.55% per annum payable semi-annually, due February 2020. In September 2018, USD877 million in principal amount of subordinated notes were purchased and redeemed by BOCHK and cancelled pursuant to the terms and conditions of the notes. USD1,623 million of the aggregate principal amount of subordinated notes remain outstanding. Amounts qualified as Tier 2 capital instruments for regulatory purposes are shown in Note 4.5(B). The carrying amount of subordinated notes designated at fair value through profit or loss as at 31 December 2018 was more than the amount that the Group would be contractually required to pay at maturity to the holders by HK$260 million (2017: N/A).

The subordinated loan was from BOC, the intermediate holding company, with interest rate at 12-month LIBOR plus 1.50% per annum payable annually. It has been fully repaid during the year.

39. Discontinued operations

On 22 December 2016, BOCHK (as seller) entered into a sale and purchase agreement with Xiamen International Investment Limited and the Committee of Jimei Schools (each as a buyer) in relation to the disposal of a total of 2,114,773 ordinary shares of Chiyu. The completion of the disposal was conditional upon the satisfaction of all the conditions precedent set out in the sale and purchase agreement.

All the conditions precedent set out in the sale and purchase agreement were satisfied, and completion of the disposal took place on 27 March 2017 in accordance with the terms and conditions of the sale and purchase agreement. Upon completion, Chiyu ceased to be a subsidiary of BOCHK.

39. Discontinued operations (continued)

The results of discontinued operations for the year are as follows:

DISCONTINUED OPERATIONS	2018 HK$'m	2017 HK$'m
Interest income	–	268
Interest expense	–	(75)
Net interest income	–	193
Fee and commission income	–	39
Fee and commission expense	–	–
Net fee and commission income	–	39
Net trading gain	–	2
Net gain on other financial instruments at fair value through profit or loss	–	1
Net operating income before impairment allowances	–	235
Net charge of impairment allowances	–	(7)
Net operating income	–	228
Operating expenses	–	(87)
Operating profit	–	141
Taxation	–	(22)
Profit after taxation	–	119
Gain on disposal of discontinued operations	–	2,504
Profit from discontinued operations	–	2,623
Profit attributable to:		
Equity holders of the Company	–	2,589
Non-controlling interests	–	34
	–	2,623
	HK$	HK$
Earnings per share		
Basic and diluted		
– profit from discontinued operations	–	0.2449

39. Discontinued operations (continued)

The net cash flows incurred by discontinued operations are as follows:

	2018 HK$'m	2017 HK$'m
Operating activities	–	2,000
Investing activities	–	(3)
Financing activities	–	–
Net cash inflow incurred by discontinued operations	–	1,997

The gain on disposal of discontinued operations is analysed as follows:

	2017 HK$'m
Total consideration	7,685
Net assets disposed	(7,044)
Non-controlling interests	2,078
Cumulative translation reserve and reserve for fair value changes of available-for-sale securities reclassified to income statement	(48)
Transaction costs incurred in connection with the disposal	(167)
Gain on disposal of discontinued operations	2,504

39. Discontinued operations (continued)

The net assets of discontinued operations at the date of disposal are as follows:

	At the date of disposal HK$'m
Cash and balances and placements with banks and other financial institutions	8,244
Financial assets at fair value through profit or loss	351
Derivative financial instruments	95
Advances and other accounts	31,411
Investment in securities	14,541
Investment properties	204
Properties, plant and equipment	1,537
Deferred tax assets	63
Other assets	582
Deposits and balances from banks and other financial institutions	(2,765)
Derivative financial instruments	(8)
Deposits from customers	(46,277)
Other accounts and provisions	(725)
Current tax liabilities	(45)
Deferred tax liabilities	(164)
Net assets disposed	7,044

39. Discontinued operations (continued)

The net cash inflow from disposal of discontinued operations is analysed as follows:

	2017 HK$'m
Total consideration received, satisfied by cash	7,685
Transaction costs incurred in connection with the disposal	(167)
Cash and cash equivalents disposed	(6,708)
Net cash inflow from disposal of discontinued operations	810

40. Share capital

	2018 HK$'m	2017 HK$'m
Issued and fully paid:		
10,572,780,266 ordinary shares	**52,864**	52,864

41. Other equity instruments

	2018 HK$'m	2017 HK$'m
Undated non-cumulative subordinated Additional Tier 1 capital securities	**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.

42. Notes to consolidated cash flow statement

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

	2018 HK$'m	2017 HK$'m
Operating profit		
– from continuing operations	**37,994**	34,103
– from discontinued operations	**–**	141
	37,994	34,244
Depreciation	**2,063**	1,951
Net charge of impairment allowances	**1,237**	1,062
Unwind of discount on impairment allowances	**(1)**	(3)
Advances written off net of recoveries	**(714)**	(465)
Investment in securities written off	**(45)**	–
Change in subordinated liabilities	**521**	498
Change in balances and placements with banks and other financial institutions with original maturity over three months	**7,103**	21,878
Change in financial assets at fair value through profit or loss	**29,801**	(24,597)
Change in derivative financial instruments	**(1,535)**	12,530
Change in advances and other accounts	**(92,117)**	(183,091)
Change in investment in securities	**11,053**	(28,687)
Change in other assets	**(4,220)**	(3,397)
Change in deposits and balances from banks and other financial institutions	**153,380**	24,995
Change in financial liabilities at fair value through profit or loss	**(4,185)**	6,349
Change in deposits from customers	**118,267**	252,023
Change in debt securities and certificates of deposit in issue	**(12,188)**	20,520
Change in other accounts and provisions	**5,894**	364
Change in insurance contract liabilities	**1,494**	16,695
Effect of changes in exchange rates	**20,095**	(15,936)
Operating cash inflow before taxation	**273,897**	136,933
Cash flows from operating activities included		
– interest received	**59,305**	48,444
– interest paid	**19,896**	12,613
– dividend received	**213**	177

42. Notes to consolidated cash flow statement (continued)

(b) Reconciliation of liabilities arising from financing activities

	2018 HK$'m	2017 HK$'m
Subordinated liabilities		
At 1 January, as previously reported	**18,980**	19,093
Effect of adoption of HKFRS 9	**2,068**	N/A
At 1 January, after adoption of HKFRS 9	**21,048**	19,093
Cash flows:		
Payment for redemption/repayment of subordinated liabilities	**(7,211)**	(16)
Interest paid for subordinated liabilities	**(1,087)**	(595)
	(8,298)	(611)
Non-cash changes:		
Change in fair value of own credit risk credited to other comprehensive income	**(25)**	N/A
Exchange difference	**59**	145
Other changes	**462**	353
At 31 December	**13,246**	18,980

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

	2018 HK$'m	2017 HK$'m
Cash and balances and placements with banks and other financial institutions with original maturity within three months	**378,703**	366,665
Treasury bills, certificates of deposit and other debt instruments with original maturity within three months		
– financial assets at fair value through profit or loss	**239,020**	1,000
– investment in securities	**7,024**	13,257
	624,747	380,922

43. 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.

	2018 HK$'m	2017 HK$'m
Direct credit substitutes	**6,533**	8,414
Transaction-related contingencies	**29,292**	30,092
Trade-related contingencies	**26,269**	28,294
Commitments that are unconditionally cancellable without prior notice	**404,337**	397,100
Other commitments with an original maturity of		
– up to one year	**10,189**	17,976
– over one year	**131,268**	154,582
	607,888	636,458
Credit risk-weighted amount	**68,508**	74,844

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.

44. Capital commitments

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

	2018 HK$'m	2017 HK$'m
Authorised and contracted for but not provided for	**215**	146
Authorised but not contracted for	**35**	3
	250	149

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

45. Operating lease commitments

(a) As lessee

The Group has commitments to make the following future minimum lease payments under non-cancellable operating leases:

	2018 HK$'m	2017 HK$'m
Land and buildings		
– Not later than one year	**641**	607
– Later than one year but not later than five years	**739**	634
– Later than five years	**48**	14
	1,428	1,255

Certain non-cancellable operating leases included in the table above, in the event that there is such special conditions stipulated thereto, were subject to renegotiation and rent adjustment with reference to market rates prevailing at specified agreed dates or according to the special conditions as stipulated in the leases.

(b) As lessor

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

	2018 HK$'m	2017 HK$'m
Land and buildings		
– Not later than one year	**540**	543
– Later than one year but not later than five years	**415**	502
	955	1,045

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.

46. 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.

47. 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.

Several products/businesses have been reclassified among operating segments in accordance with the latest management model of the Group. Comparative amounts have been restated to conform with current year presentation.

47. 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
Year ended 31 December 2018								
CONTINUING OPERATIONS								
Net interest income/(expense)								
– External	1,362	15,735	17,074	3,055	2,168	39,394	–	39,394
– Inter-segment	10,030	(2,664)	(6,105)	(31)	(1,230)	–	–	–
	11,392	13,071	10,969	3,024	938	39,394	–	39,394
Net fee and commission income/(expense)	6,846	3,364	995	(667)	1,140	11,678	(371)	11,307
Net insurance premium income	–	–	–	14,142	–	14,142	(19)	14,123
Net trading gain/(loss)	784	1,438	740	(244)	302	3,020	58	3,078
Net gain/(loss) on other financial instruments at fair value through profit or loss	10	–	512	(1,811)	(1)	(1,290)	8	(1,282)
Net (loss)/gain on other financial assets	–	(3)	4	18	–	19	–	19
Other operating income	48	2	16	155	2,075	2,296	(1,315)	981
Total operating income	19,080	17,872	13,236	14,617	4,454	69,259	(1,639)	67,620
Net insurance benefits and claims and movement in liabilities	–	–	–	(13,209)	–	(13,209)	–	(13,209)
Net operating income before impairment allowances	19,080	17,872	13,236	1,408	4,454	56,050	(1,639)	54,411
Net charge of impairment allowances	(123)	(784)	(3)	(5)	(322)	(1,237)	–	(1,237)
Net operating income	18,957	17,088	13,233	1,403	4,132	54,813	(1,639)	53,174
Operating expenses	(8,756)	(3,001)	(1,350)	(465)	(3,247)	(16,819)	1,639	(15,180)
Operating profit	10,201	14,087	11,883	938	885	37,994	–	37,994
Net gain from disposal of/fair value adjustments on investment properties	–	–	–	–	906	906	–	906
Net (loss)/gain from disposal/revaluation of properties, plant and equipment	(4)	–	–	(1)	23	18	–	18
Share of profits less losses after tax of associates and joint ventures	72	–	1	–	(3)	70	–	70
Profit before taxation	10,269	14,087	11,884	937	1,811	38,988	–	38,988
At 31 December 2018								
ASSETS								
Segment assets	378,547	887,367	1,439,655	132,417	137,581	2,975,567	(23,147)	2,952,420
Interests in associates and joint ventures	422	–	1	–	60	483	–	483
	378,969	887,367	1,439,656	132,417	137,641	2,976,050	(23,147)	2,952,903
LIABILITIES								
Segment liabilities	1,038,673	839,457	616,617	124,085	72,311	2,691,143	(23,147)	2,667,996
Year ended 31 December 2018								
CONTINUING OPERATIONS								
Other information								
Capital expenditure	26	–	5	10	1,146	1,187	–	1,187
Depreciation	564	140	115	16	1,228	2,063	–	2,063
Amortisation of securities	–	–	1,502	114	(20)	1,596	–	1,596

47. 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
Year ended 31 December 2017								
CONTINUING OPERATIONS								
Net interest income/(expense)								
– External	3,243	12,366	15,385	2,687	1,137	34,818	–	34,818
– Inter-segment	6,467	(635)	(4,906)	(31)	(895)	–	–	–
	9,710	11,731	10,479	2,656	242	34,818	–	34,818
Net fee and commission income/(expense)	6,340	4,264	853	(658)	1,159	11,958	(357)	11,601
Net insurance premium income	–	–	–	14,683	–	14,683	(18)	14,665
Net trading gain/(loss)	876	1,270	(1,182)	100	223	1,287	81	1,368
Net gain/(loss) on other financial instruments at fair value through profit or loss	9	–	(3)	2,168	–	2,174	7	2,181
Net gain on other financial assets	–	30	698	435	–	1,163	–	1,163
Other operating income	82	8	37	165	2,017	2,309	(1,378)	931
Total operating income	17,017	17,303	10,882	19,549	3,641	68,392	(1,665)	66,727
Net insurance benefits and claims and movement in liabilities	–	–	–	(17,721)	–	(17,721)	–	(17,721)
Net operating income before impairment allowances	17,017	17,303	10,882	1,828	3,641	50,671	(1,665)	49,006
Net charge of impairment allowances	(754)	(73)	–	–	(228)	(1,055)	–	(1,055)
Net operating income	16,263	17,230	10,882	1,828	3,413	49,616	(1,665)	47,951
Operating expenses	(7,949)	(2,834)	(1,358)	(427)	(2,945)	(15,513)	1,665	(13,848)
Operating profit	8,314	14,396	9,524	1,401	468	34,103	–	34,103
Net gain from disposal of/fair value adjustments on investment properties	–	–	–	–	1,197	1,197	–	1,197
Net loss from disposal/revaluation of properties, plant and equipment	(5)	(4)	(1)	–	(15)	(25)	–	(25)
Share of profits less losses after tax of associates and joint ventures	94	–	2	–	4	100	–	100
Profit before taxation	8,403	14,392	9,525	1,401	1,654	35,375	–	35,375
At 31 December 2017								
ASSETS								
Segment assets	355,060	832,946	1,213,510	130,597	130,831	2,662,944	(12,275)	2,650,669
Interests in associates and joint ventures	350	–	2	–	65	417	–	417
	355,410	832,946	1,213,512	130,597	130,896	2,663,361	(12,275)	2,651,086
LIABILITIES								
Segment liabilities	957,439	810,020	457,289	121,752	68,238	2,414,738	(12,275)	2,402,463
Year ended 31 December 2017								
CONTINUING OPERATIONS								
Other information								
Capital expenditure	27	–	4	32	1,473	1,536	–	1,536
Depreciation	522	147	97	18	1,167	1,951	–	1,951
Amortisation of securities	–	–	36	(20)	(7)	9	–	9

48. Offsetting financial instruments

The following tables present details of the Group's financial instruments subject to offsetting, enforceable master netting arrangements and similar agreements.

	2018					
	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	
Assets						
Derivative financial instruments	34,827	–	34,827	(19,855)	(3,299)	11,673
Reverse repurchase agreements	2,764	–	2,764	(2,764)	–	–
Securities borrowing agreements	2,200	–	2,200	(2,200)	–	–
Other assets	13,384	(9,213)	4,171	–	–	4,171
	53,175	(9,213)	43,962	(24,819)	(3,299)	15,844

	2018					
	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	
Liabilities						
Derivative financial instruments	30,662	–	30,662	(19,855)	(2,165)	8,642
Repurchase agreements	25,617	–	25,617	(25,617)	–	–
Other liabilities	9,907	(9,213)	694	–	–	694
	66,186	(9,213)	56,973	(45,472)	(2,165)	9,336

48. Offsetting financial instruments (continued)

	2017					
	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	
Assets						
Derivative financial instruments	33,458	–	33,458	(23,094)	(4,427)	5,937
Reverse repurchase agreements	9,012	–	9,012	(9,012)	–	–
Securities borrowing agreements	2,503	–	2,503	(2,503)	–	–
Other assets	17,432	(10,545)	6,887	–	–	6,887
	62,405	(10,545)	51,860	(34,609)	(4,427)	12,824

	2017					
	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	
Liabilities						
Derivative financial instruments	30,963	–	30,963	(23,094)	(676)	7,193
Repurchase agreements	14,477	–	14,477	(14,477)	–	–
Other liabilities	11,265	(10,545)	720	–	–	720
	56,705	(10,545)	46,160	(37,571)	(676)	7,913

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.

49. Assets pledged as security

As at 31 December 2018, the liabilities of the Group amounting to HK$11,891 million (2017: HK$11,111 million) were secured by assets deposited with central depositories to facilitate settlement operations. In addition, the liabilities of the Group amounting to HK$65,617 million (2017: HK$14,477 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$78,230 million (2017: HK$26,002 million) mainly included in "Financial assets at fair value through profit or loss" and "Investment in securities".

50. 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.

	2018		2017	
	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	**26,079**	**25,617**	14,767	14,477

51. 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:

	2018 HK$'m	2017 HK$'m
Aggregate amount of relevant transactions outstanding at year end	**–**	5
Maximum aggregate amount of relevant transactions outstanding during the year	**–**	877

52. 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.

52. Significant related party transactions (continued)

(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 2018, the related aggregate amounts due from and to BOC of the Group were HK$158,881 million (2017: HK$186,565 million) and HK$137,562 million (2017: HK$60,385 million) respectively. The aggregate amounts of income and expenses of the Group arising from these transactions with BOC for the year ended 31 December 2018 were HK$2,878 million (2017: HK$2,320 million) and HK$581 million (2017: HK$459 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.

The transactions with BOC disclosed in Note 57 also constitute connected transactions as defined in Chapter 14A of the Listing Rules and announcement had been made by the Group on 6 November 2017 and 29 December 2017.

Transactions with other 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;
- rendering of foreign exchange, remittance and investment related services;
- provision of fiduciary activities; and
- purchase of utilities, transport, telecommunication and postage services.

52. Significant related party transactions (continued)

(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:

	2018 HK$'m	2017 HK$'m
Income statement items		
Associates		
– Fee and commission expenses	**11**	36
– Other operating expenses	**82**	72
Other related parties		
– Fee and commission income	**11**	10
Balance sheet item		
Associates		
– Other accounts and provisions	**7**	4

The related party transactions in respect of the fee and commission expenses and other operating expenses arising from associates above constitute connected transactions as defined in Chapter 14A of the Listing Rules and the required disclosures are provided in "Connected transactions" on pages 312 to 313.

(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:

	2018 HK$'m	2017 HK$'m
Salaries and other short-term employee benefits	**45**	48

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 are shown as follows:

	2018				
			Non-bank private sector		
	Banks HK$'m	Official sector HK$'m	Non-bank financial institutions HK$'m	Non-financial private sector HK$'m	Total HK$'m
Mainland of China	**333,781**	**362,253**	**22,430**	**143,578**	**862,042**
Hong Kong	**8,084**	**–**	**37,312**	**315,370**	**360,766**

	2017				
			Non-bank private sector		
	Banks HK$'m	Official sector HK$'m	Non-bank financial institutions HK$'m	Non-financial private sector HK$'m	Total HK$'m
Mainland of China	401,249	95,744	25,940	142,557	665,490
Hong Kong	11,186	–	19,529	311,584	342,299

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.

		2018		
	Items in the HKMA return	On-balance sheet exposure HK$'m	Off-balance sheet exposure HK$'m	Total exposure HK$'m
Central government, central government-owned entities and their subsidiaries and joint ventures	1	292,682	37,793	330,475
Local governments, local government-owned entities and their subsidiaries and joint ventures	2	60,506	13,060	73,566
PRC nationals residing in Mainland or other entities incorporated in Mainland and their subsidiaries and joint ventures	3	93,286	18,961	112,247
Other entities of central government not reported in item 1 above	4	27,618	630	28,248
Other entities of local governments not reported in item 2 above	5	88	–	88
PRC nationals residing outside Mainland or entities incorporated outside Mainland where the credit is granted for use in Mainland	6	70,926	8,677	79,603
Other counterparties where the exposures are considered to be non-bank Mainland exposures	7	2,214	379	2,593
Total	8	547,320	79,500	626,820
Total assets after provision	9	2,752,643		
On-balance sheet exposures as percentage of total assets	10	19.88%		

54. Non-bank Mainland exposures (continued)

	Items in the HKMA return	2017 On-balance sheet exposure HK$'m	2017 Off-balance sheet exposure HK$'m	2017 Total exposure HK$'m
Central government, central government-owned entities and their subsidiaries and joint ventures	1	277,878	46,003	323,881
Local governments, local government-owned entities and their subsidiaries and joint ventures	2	67,154	11,268	78,422
PRC nationals residing in Mainland or other entities incorporated in Mainland and their subsidiaries and joint ventures	3	53,490	11,078	64,568
Other entities of central government not reported in item 1 above	4	29,972	1,029	31,001
Other entities of local governments not reported in item 2 above	5	–	–	–
PRC nationals residing outside Mainland or entities incorporated outside Mainland where the credit is granted for use in Mainland	6	75,825	21,261	97,086
Other counterparties where the exposures are considered to be non-bank Mainland exposures	7	2,624	828	3,452
Total	8	506,943	91,467	598,410
Total assets after provision	9	2,445,769		
On-balance sheet exposures as percentage of total assets	10	20.73%		

55. Balance sheet and statement of changes in equity

(a) Balance sheet

As at 31 December	2018 HK$'m	2017 HK$'m
ASSETS		
Bank balances with a subsidiary	**1,861**	1,798
Investment in securities	**2,123**	2,886
Investment in subsidiaries	**55,322**	55,322
Amounts due from a subsidiary	**6,026**	3,831
Other assets	**1**	1
Total assets	**65,333**	63,838
LIABILITIES		
Amounts due to a subsidiary	**2**	3
Total liabilities	**2**	3
EQUITY		
Share capital	**52,864**	52,864
Reserves	**12,467**	10,971
Total equity	**65,331**	63,835
Total liabilities and equity	**65,333**	63,838

Approved by the Board of Directors on 29 March 2019 and signed on behalf of the Board by:

CHEN Siqing
Director

GAO Yingxin
Director

55. Balance sheet and statement of changes in equity (continued)

(b) Statement of changes in equity

		Reserves		
	Share capital HK$'m	Reserve for fair value changes/ Reserve for fair value changes of available-for-sale securities HK$'m	Retained earnings HK$'m	Total equity HK$'m
At 1 January 2017	52,864	1,276	7,201	61,341
Profit for the year	–	–	15,515	15,515
Other comprehensive income:				
Available-for-sale securities	–	354	–	354
Total comprehensive income	–	354	15,515	15,869
Dividends	–	–	(13,375)	(13,375)
At 31 December 2017	52,864	1,630	9,341	63,835
At 1 January 2018, as previously reported	**52,864**	**1,630**	**9,341**	**63,835**
Effect of adoption of HKFRS 9	**–**	**(2,730)**	**2,730**	**–**
At 1 January 2018, after adoption of HKFRS 9	**52,864**	**(1,100)**	**12,071**	**63,835**
Profit for the year	**–**	**–**	**16,035**	**16,035**
Other comprehensive income:				
Equity instruments at fair value through other comprehensive income	**–**	**(763)**	**–**	**(763)**
Total comprehensive income	**–**	**(763)**	**16,035**	**15,272**
Dividends	**–**	**–**	**(13,776)**	**(13,776)**
At 31 December 2018	**52,864**	**(1,863)**	**14,330**	**65,331**

56. Principal subsidiaries

The particulars of all direct and indirect subsidiaries of the Company are set out in "Appendix – Subsidiaries of the Company". The following is a list of principal subsidiaries as at 31 December 2018:

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$480,000,000	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

	2018	2017
Proportion of ownership interests and voting rights held by non-controlling interests	**49%**	49%

	2018 HK$'m	2017 HK$'m
Profit attributable to non-controlling interests	**420**	586
Accumulated non-controlling interests	**4,083**	4,334
Summarised financial information:		
– total assets	**132,417**	130,597
– total liabilities	**124,085**	121,752
– profit for the year	**857**	1,196
– total comprehensive income for the year	**(182)**	1,492

57. Application of merger accounting

On 29 January 2018, the Philippines Business and the Vietnam Business were transferred from BOC to BOCHK for a total consideration of HK$853 million and HK$1,315 million in cash respectively. The Philippines Business, the Vietnam Business and BOCHK are all under the common control of BOC before and after the combination. The Group has applied the merger accounting method in accordance with the Accounting Guideline 5 "Merger Accounting for Common Control Combinations" issued by the HKICPA in the preparation of financial statements. The comparative amounts have been restated accordingly as if the Philippines Business and the Vietnam Business had always been carried out by the Group.

The statements of the adjustments to the consolidated equity as at 31 December are as follows:

	2018			
	Before combination HK$'m	Entities under common control HK$'m	Adjustment HK$'m	After combination HK$'m
Share capital	52,864	1,062	(1,062)	52,864
Merger reserve	–	–	(1,106)	(1,106)
Retained earnings and other reserves	205,033	279	–	205,312
	257,897	1,341	(2,168)	257,070
Other equity instruments	23,476	–	–	23,476
Non-controlling interests	4,361	–	–	4,361
	285,734	1,341	(2,168)	284,907

	2017			
	Before combination HK$'m	Entities under common control HK$'m	Adjustment HK$'m	After combination HK$'m
Share capital	52,864	1,062	(1,062)	52,864
Merger reserve	–	–	1,062	1,062
Retained earnings and other reserves	189,875	217	–	190,092
	242,739	1,279	–	244,018
Non-controlling interests	4,605	–	–	4,605
	247,344	1,279	–	248,623

58. 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.

59. Comparative amounts

In respect of the transfer of the Philippines Business and the Vietnam Business from BOC on 29 January 2018 as explained in Note 57, the Group has applied merger accounting method for the business combination under common control. Comparative amounts in the financial statements have been restated as if the Philippines Business and the Vietnam Business had always been carried out by the Group.

60. Events after the balance sheet date

As stated in the Company's announcement dated 28 December 2018, all of the conditions precedent set out in the Agreement entered into between BOCHK and BOC were satisfied or, as appropriate, waived and completion of the transfer of the Branch Interests in Bank of China Limited, Vientiane Branch in Laos took place on 21 January 2019 pursuant to the terms and conditions of the Agreement. Upon completion, BOC Vientiane Branch became a branch owned by BOCHK, and all the Branch Interests were held by BOCHK, pursuant to the terms and conditions of the Agreement.

61. Approval of financial statements

The financial statements were approved and authorised for issue by the Board of Directors on 29 March 2019.