FinTech Innovation

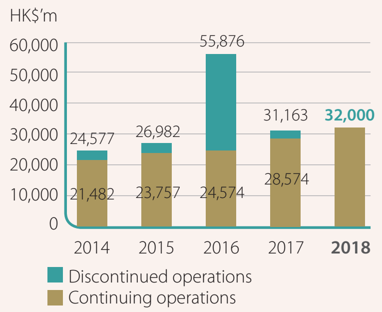
Management Discussion and Analysis

Following the completion of the acquisition of the Vietnam Business and Philippines Business of BOC on 29 January 2018, the Group has applied the merger accounting method for the combination of entities under common control in the preparation of its financial statements. The comparative information for 2017 has been restated accordingly. The above transactions are collectively referred as the "acquisitions" in this Management Discussion and Analysis.

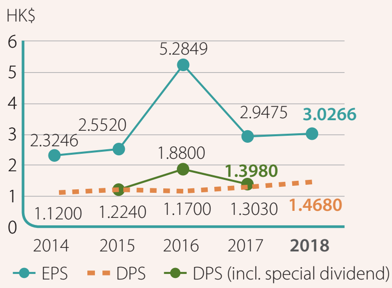
Financial Performance and Conditions at a Glance

The following table is a summary of the Group's key financial results for 2018 in comparison with the previous four years. The average value of liquidity coverage ratio and net stable funding ratio are reported on a quarterly basis.

Profit Attributable to Equity Holders[1]



Earnings Per Share ("EPS")[1] and Dividend Per Share ("DPS")



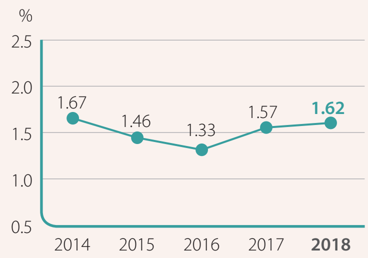
Profit attributable to equity holders

- The profit attributable to equity holders increased by 2.7% year-on-year to HK$32,000 million, or a growth of 12.0% compared with the profit attributable to equity holders from continuing operations in 2017.

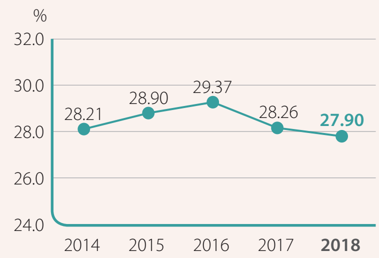
Solid returns to shareholders

- Return on average shareholders' equity[2] ("ROE") was 12.83%. On a continuing operations basis, it was up 0.73 percentage points year-on-year.
- Return on average total assets[2] ("ROA") was 1.16%. On a continuing operations basis, it was up 0.01 percentage point year-on-year.
- EPS was HK$3.0266. Dividend per share was HK$1.4680.

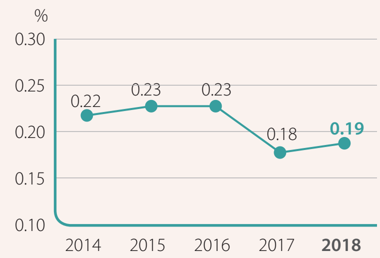
Net Interest Margin ("NIM")[1,3]



Cost to Income Ratio[1,3]



Classified or Impaired Loan Ratio[1,3,4]



as at 31 December

Proactive assets and liabilities management, resulting in improvement to net interest margin ("NIM")

- NIM was 1.62%, up 5 basis points year-on-year. If the funding income or cost of foreign currency swap contracts[5] were included, NIM would have been 1.63%, up 19 basis points, as a result of the Group's capturing of the opportunity from a rise in market interest rates and the proactive management of its assets and liabilities.

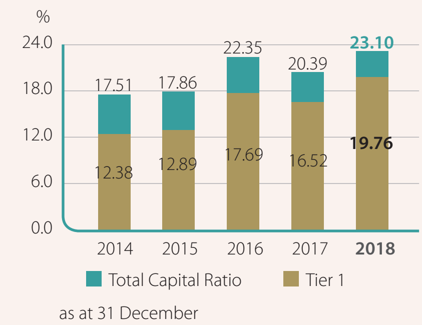
Flexible deployment of resources, leading to better operational efficiency

- The Group's cost to income ratio was 27.90%, down 0.36 percentage points year-on-year, maintaining cost efficiency at a solid level relative to industry peers.

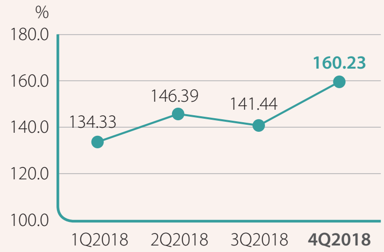
Prudent risk management, maintaining benign asset quality

- The Group's classified or impaired loan ratio was 0.19%, well below the market average level.

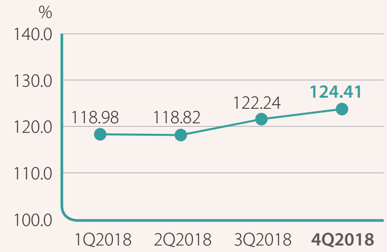
Capital Ratio



Average Value of Liquidity Coverage Ratio



Quarter-end Value of Net Stable Funding Ratio



Enhanced capital strength to support business growth

- The Group's total capital ratio stood at 23.10%. Tier 1 capital ratio was 19.76%, up 3.24 percentage points from that at the end of 2017. The Group's tier 1 capital was replenished via the issuance of additional tier 1 capital securities during the year.

Sound liquidity position

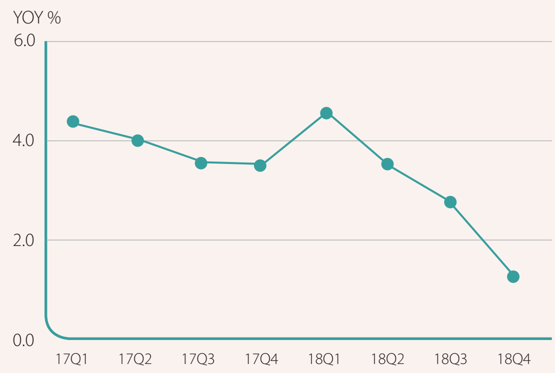
- The average value of liquidity coverage ratio and the quarter-end value of net stable funding ratio exceeded regulatory requirements in each of the four quarters of 2018.

1. The Group has applied the merger accounting method for the combination of entities under common control in the preparation of its financial statements in 2018. The comparative information for 2017 has been restated accordingly. However, financial information prior to 2017 has not been restated as the difference before and after restatement is insignificant.
2. Return on average shareholders' equity and return on average total assets as defined in "Financial Highlights".
3. Financial information is from continuing operations and excludes assets held for sale and liabilities associated with assets held for sale.
4. Classified or impaired loans represent advances that are either classified as "substandard", "doubtful" or "loss" under the Group's classification of loan quality, or classified as Stage 3.
5. Foreign exchange swap contracts are normally used for the Group's liquidity management and funding activities. In foreign exchange swap contracts, the Group exchanges one currency (original currency) for another (swapped currency) at the spot exchange rate (spot transaction) and commits to reverse the spot transaction by exchanging the same currency pair at a future maturity date at a predetermined rate (forward transaction). In this way, surplus funds in the original currency are swapped into another currency for liquidity and funding purposes with minimal foreign exchange risk. The exchange difference (funding income or cost) between the spot and forward contracts is recognised as a foreign exchange gain or loss (as included in "net trading gain"), while the corresponding interest differential between the surplus funds in the original currency and swapped currency is reflected in net interest income.

Economic Background and Operating Environment

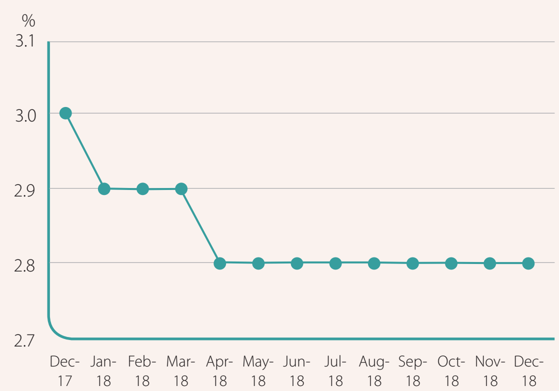
In 2018, the global economy maintained a growth trend, but the growth momentum slowed somewhat. There was increased uncertainty, including rising trade protectionism, repeated interest rate hikes by the US Federal Reserve and a reduction in its balance sheet, diverging growth among emerging economies and heightened political risks in certain countries. The US economy maintained relatively strong growth, supported by the implementation of tax reform and the relaxation of federal regulations. Eurozone economic growth slowed further, with the European Central Bank maintaining an ultra-loose monetary policy amid somewhat intensifying political disputes in some countries. In Southeast Asia, meanwhile, the regional economy maintained stable growth on the back of robust foreign and infrastructure investment and strong government spending and household consumption. The Chinese mainland economy continued to grow steadily, recording a growth rate of 6.6% for 2018.

Hong Kong Real GDP Growth Rate



Source: HKSAR Census and Statistics Department

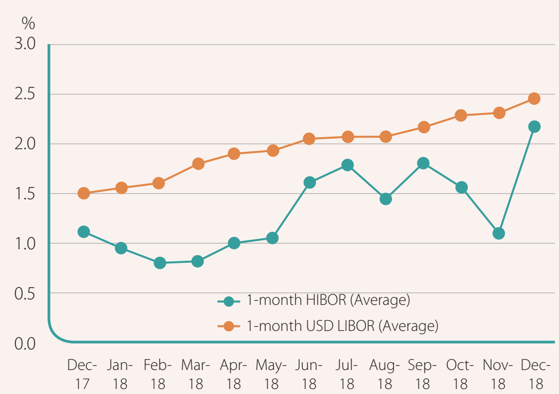
Hong Kong Unemployment Rate



Source: HKSAR Census and Statistics Department

The Hong Kong economy, after hitting its highest growth rate for six years in 2017, saw growth slowing down consecutively in each quarter of 2018. In general, however, it was supported by positive factors including moderate global economic growth, a recovering tourism sector, full employment and the HKSAR government's expansionary fiscal policy. In 2018, Hong Kong achieved real GDP growth of 3.0%.

HIBOR and USD LIBOR



Source: Bloomberg

The average 1-month HIBOR and 1-month LIBOR rose from 0.55% and 1.11% respectively in 2017 to 1.34% and 2.02% respectively in 2018. The yield curve continued to flatten, as evidenced by the narrowing of the interest spread between the 2-year US Treasury yield and its 10-year counterpart from 52 basis points at the end of 2017 to 20 basis points at the end of 2018. In addition, banks in Hong Kong raised the prime lending rate in September, representing the first rate hike in 12 years.

Management Discussion and Analysis

Although global financial markets experienced heightened volatility in 2018, the average daily turnover of the Hong Kong stock market recorded a notable increase over the previous year and IPO activity remained robust. This was underpinned by positive stock market performance at the start of the year, a change in the Listing Rules by The Stock Exchange of Hong Kong Limited and strong capital inflows from the Chinese mainland. However, the Hong Kong stock market experienced a correction in the second half of the year amid intensifying trade conflict and the normalisation of monetary policies in advanced economies. The Hang Seng Index declined by 13.6% over the year.

Private residential property prices in Hong Kong reached a new high during the first seven months of 2018. However, the residential property market entered into a correction phase from August onwards, with transaction volumes decreasing because of growing uncertainty in economic prospects, the normalisation of HKD interest rates and volatility in financial markets. At the same time, the HKSAR government continued to implement demand management measures while the HKMA maintained prudent supervisory measures on mortgage loans, which helped banks to strengthen the risk management of their mortgage businesses.

Offshore RMB business in Hong Kong maintained steady growth in 2018. A series of measures was introduced by the PRC to promote capital account liberalisation and RMB internationalisation. These included the removal of limits on the foreign ownership of Chinese mainland banks and asset management companies, and the relaxation of the same with regard to securities houses, fund management firms, futures companies and life insurers. The scale of mutual connectivity was further expanded, with the daily quota of the Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect increasing fourfold. At the same time, China's A shares was included in the MSCI index and Chinese bonds are to be included in the Bloomberg Barclays Global Aggregate Index. As a result of these measures, new business opportunities opened up for the financial industry in Hong Kong, further promoting the healthy development of offshore RMB markets.

In 2018, Hong Kong's banking industry faced a number of challenges in its operating environment, including looming trade protectionism, changes in global monetary policies, the normalisation of HKD interest rates, continuously diverging performance of emerging economies, rising geopolitical risks and intensifying market competition. However, banks in Hong Kong also gained fresh impetus from the enormous demand for financial services arising from the steady progress in the implementation of the Belt and Road Initiative and the building of Guangdong-Hong Kong-Macao Greater Bay Area, and the further development of two-way capital market access between the Chinese mainland and Hong Kong.

Consolidated Financial Review

The comparative information for 2017 has been restated following the Group's application of the merger accounting method in the preparation of its financial statements as a result of its acquisitions.

Financial Highlights

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
FROM CONTINUING OPERATIONS			
Net operating income before impairment allowances	**54,411**	49,006	11.0
Operating expenses	**(15,180)**	(13,848)	9.6
Operating profit before impairment allowances	**39,231**	35,158	11.6
Operating profit after impairment allowances	**37,994**	34,103	11.4
Profit before taxation	**38,988**	35,375	10.2
Profit attributable to equity holders of the Company	**32,000**	31,163	2.7
– from continuing operations	**32,000**	28,574	12.0
– from discontinued operations	**–**	2,589	(100.0)

In 2018, the Group's profit attributable to equity holders amounted to HK$32,000 million, an increase of HK$837 million, or 2.7%, year-on-year. It increased by 12.0% compared with the profit attributable to equity holders from continuing operations in the previous year. Net operating income before impairment allowances was HK$54,411 million, an increase of HK$5,405 million, or 11.0%, year-on-year. Net interest income rose, benefitting from rising market interest rates and the positive results of the Group's proactive management of its assets and liabilities. The net trading gain of the banking business also increased, owing to rising foreign exchange income. Net fee and commission income decreased year-on-year, primarily due to lower loan commissions, which partially offset the above-mentioned income growth. Operating expenses increased as a result of the Group's ongoing investment in supporting its long-term business expansion. Net charge of impairment allowances increased year-on-year while the net gain from fair-value adjustments on investment properties decreased on a year-on-year basis.

Second Half Performance

In the second half of 2018, the Group's net operating income before impairment allowances decreased by HK$703 million, or 2.6%, compared to the first half of 2018. A rise in net interest margin and growth in average interest-earning assets resulted in an increase in net interest income, which was offset by a decrease in net fee and commission income and in the net trading gain of the banking business. Moreover, operating expenses and net charge of impairment allowances increased from the first half of the year, while net gain from fair-value adjustments on investment properties decreased. As a result, the Group's profit attributable to equity holders decreased by HK$3,056 million or 17.4%, on a half-on-half basis.

Income Statement Analysis

The following income statement analysis is based on the Group's continuing operations. The comparative information has been restated to conform to the current year's presentation.

Net Interest Income and Net Interest Margin

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Interest income	**61,736**	49,077	25.8
Interest expense	**(22,342)**	(14,259)	56.7
Net interest income	**39,394**	34,818	13.1
Average interest-earning assets	**2,434,966**	2,222,258	9.6
Net interest spread	**1.44%**	1.44%	
Net interest margin	**1.62%**	1.57%	
Net interest margin (adjusted)*	**1.63%**	1.44%	

* Including the funding income or cost of foreign currency swap contracts.

Net interest income amounted to HK$39,394 million in 2018, an increase of HK$4,576 million, or 13.1%, year-on-year. This increase was driven by the improvement in net interest margin and growth in average interest-earning assets.

Average interest-earning assets expanded by HK$212,708 million, or 9.6%, year-on-year. An increase in deposits from customers supported an increase in advances to customers and debt securities investments.

Net interest margin was 1.62%. If the funding income or cost of foreign currency swap contracts# were included, net interest margin would have been 1.63%, up 19 basis points year-on-year. Market interest rates rose and the Group proactively managed its assets and liabilities, which led to the widening of its loan and deposit spread. This, together with an improvement in the average yield of its debt securities investments and other debt instruments, resulted in a widening of the Group's net interest margin. However, the rise in market interest rates prompted customers in favour of time deposits, resulting in a lower proportion of current accounts and savings deposits, which partially offset the positive impact described above.

Foreign exchange swap contracts are normally used for the Group's liquidity management and funding activities. In foreign exchange swap contracts, the Group exchanges one currency (original currency) for another (swapped currency) at the spot exchange rate (spot transaction) and commits to reverse the spot transaction by exchanging the same currency pair at a future maturity date at a predetermined rate (forward transaction). In this way, surplus funds in the original currency are swapped into another currency for liquidity and funding purposes with minimal foreign exchange risk. The exchange difference (funding income or cost) between the spot and forward contracts is recognised as a foreign exchange gain or loss (as included in "net trading gain"), while the corresponding interest differential between the surplus funds in the original currency and swapped currency is reflected in net interest income.

The table below summarises the average balances and average interest rates of individual categories of assets and liabilities:

	2018		(Restated) 2017	
ASSETS	**Average balance HK$'m**	**Average yield %**	Average balance HK$'m	Average yield %
Balances and placements with banks and other financial institutions	**414,900**	**1.90**	442,157	2.17
Debt securities investments and other debt instruments	**783,128**	**2.39**	669,950	1.98
Advances to customers	**1,219,376**	**2.85**	1,093,445	2.38
Other interest-earning assets	**17,562**	**2.13**	16,706	1.29
Total interest-earning assets	**2,434,966**	**2.54**	2,222,258	2.21
Non interest-earning assets[1]	**379,452**	**–**	348,958	–
Total assets	**2,814,418**	**2.19**	2,571,216	1.91

LIABILITIES	**Average balance HK$'m**	**Average rate %**	Average balance HK$'m	Average rate %
Deposits and balances from banks and other financial institutions	**226,141**	**1.10**	226,067	0.92
Current, savings and time deposits	**1,724,063**	**1.03**	1,562,583	0.68
Subordinated liabilities	**18,237**	**5.44**	19,312	4.82
Other interest-bearing liabilities	**55,080**	**1.95**	47,781	1.41
Total interest-bearing liabilities	**2,023,521**	**1.10**	1,855,743	0.77
Shareholders' funds[2] and other non interest-bearing deposits and liabilities[1]	**790,897**	**–**	715,473	–
Total liabilities	**2,814,418**	**0.79**	2,571,216	0.55

1. Including assets held for sale and liabilities associated with assets held for sale respectively.
2. Shareholders' funds represent capital and reserves attributable to equity holders of the Company.

Second Half Performance

In the second half of the year, net interest income recorded a half-on-half increase of HK$2,414 million, or 13.1%. Net interest margin was 1.70%, up 17 basis points. If the funding income or cost of foreign currency swap contracts were included, net interest margin would have been up 14 basis points to 1.70%. This was mainly attributable to a rise in market interest rates, the widening of the Group's loan and deposit spread, and the improvement in the average yield of its debt securities investments and other debt instruments.

Net Fee and Commission Income

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Credit card business	**3,441**	3,202	7.5
Securities brokerage	**2,769**	2,625	5.5
Loan commissions	**2,613**	3,608	(27.6)
Insurance	**1,546**	1,326	16.6
Funds distribution	**929**	985	(5.7)
Bills commissions	**738**	816	(9.6)
Payment services	**679**	649	4.6
Trust and custody services	**633**	555	14.1
Currency exchange	**590**	433	36.3
Safe deposit box	**285**	291	(2.1)
Others	**1,290**	1,010	27.7
Fee and commission income	**15,513**	15,500	0.1
Fee and commission expense	**(4,206)**	(3,899)	7.9
Net fee and commission income	**11,307**	11,601	(2.5)

In 2018, the Group's net fee and commission income amounted to HK$11,307 million, down HK$294 million or 2.5%, year-on-year. This decrease was primarily due to a 27.6% year-on-year drop in loan commissions. The Group captured opportunities arising from improved investor sentiment in the market in the first half of the year by meeting customers' differentiated needs through enriched product and service offerings via various channels, and by focusing on delivering promotional campaigns to mid- to high-end and cross-border customers. As a result, commission income from the securities brokerage and insurance businesses grew by 5.5% and 16.6% respectively. The Group also leveraged its diversified business platforms to grasp market opportunities, recording satisfactory growth in a number of areas. Income from the Group's credit card business rose by 7.5%, with the business volumes of its cardholder spending and merchant acquiring businesses rising 9.8% and 10.5% year-on-year respectively, driven by recovery in local retail sales and addition in the number of new merchants acquired. The Group's currency exchange business achieved an increase in income of 36.3%, as the Group captured opportunities arising from demand for banknote services in the Chinese mainland, Hong Kong and Southeast Asia, growing its market share and business volume. The Group's trust and custody business continued to expand its assets under management ("AUM"), resulting in a year-on-year increase of 14.1% in related income. Commission income from payment services also rose by 4.6%. Meanwhile, commission income from bills, funds distribution and safe deposit box business decreased. Fee and commission expenses were up 7.9% year-on-year, mainly due to higher credit card related expenses.

Second Half Performance

In the second half of 2018, net fee and commission income decreased by HK$1,641 million, or 25.3%, compared with the first half. This was attributable to lower fee and commission income from the Group's securities brokerage, insurance and funds distribution businesses amid subdued investor sentiment in the market during the second half of the year. Moreover, commission income from loans, bills, credit card business and safe deposit box business also fell. Meanwhile, currency exchange, payment services and trust and custody services maintained growth momentum, with a continuous rise in related income. The decrease in fee and commission expenses was due to lower securities brokerage, insurance and credit card related expenses.

Net Trading Gain

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Foreign exchange and foreign exchange products	**2,704**	197	1272.6
Interest rate instruments and items under fair value hedge	**50**	741	(93.3)
Commodities	**184**	205	(10.2)
Equity and credit derivative instruments	**140**	225	(37.8)
Total net trading gain	**3,078**	1,368	125.0

Net trading gain amounted to HK$3,078 million, an increase of HK$1,710 million, or 125.0%, year-on-year. Net trading gain from foreign exchange and foreign exchange products increased by HK$2,507 million, which was primarily attributable to a net gain from foreign currency swap contracts in 2018 (as compared with a net loss in the previous year), as well as an increase in currency exchange income from customer transactions. Net trading gain from interest rate instruments and items under fair value hedge decreased by HK$691 million, primarily due to the lower mark-to-market gains of certain debt securities investments and interest rate instruments caused by interest rate movements. The decrease in net trading gain from equity and credit derivative instruments was mainly due to decreased income from equity-linked products. Net trading gain from commodities declined, due to a lower trading gain from bullion transactions. If the funding income or cost of foreign currency swap contracts were excluded, net trading gain would have decreased by 31.4% year-on-year.

Second Half Performance

In the second half of 2018, net trading gain decreased by HK$1,010 million, or 49.4%, half-on-half. This was primarily due to a net loss from foreign currency swap contracts in the second half of 2018 (as compared with a net gain in the first half), lower currency exchange income from customer transactions, and a decrease in mark-to-market gains from certain debt securities investments and interest rate instruments caused by interest rate movements, all of which was partially offset by an increased gain from commodities. If the funding income or cost of foreign currency swap contracts were excluded, net trading gain would have decreased by 41.0%.

Net (Loss)/Gain on Other Financial Instruments at Fair Value through Profit or Loss

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Net (loss)/gain on other financial instruments at fair value through profit or loss	**(1,282)**	2,181	N/A

The Group recorded a net loss of HK$1,282 million on other financial instruments at fair value through profit or loss in 2018, compared to a net gain of HK$2,181 million in 2017. This change was mainly attributable to a loss in the equity securities and bond fund investments of BOC Life, as well as the mark-to-market loss of debt securities investments caused by market interest rate movements. The mark-to-market changes of debt securities investments mentioned above were offset by changes in policy reserves, as reflected in changes in net insurance benefits and claims and movement in liabilities, which were also attributable to the movement of market interest rates.

Second Half Performance

A net loss of HK$100 million was recorded in the second half of the year, which was HK$1,082 million lower than the net loss recorded in the first half. This change was mainly attributable to the lower mark-to-market loss of the debt securities investments of BOC Life in the second half of the year.

Operating Expenses

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Staff costs	**8,627**	7,901	9.2
Premises and equipment expenses (excluding depreciation)	**1,859**	1,721	8.0
Depreciation	**2,063**	1,951	5.7
Other operating expenses	**2,631**	2,275	15.6
Total operating expenses	**15,180**	13,848	9.6

	At 31 December 2018	(Restated) At 31 December 2017	Change (%)
Staff headcount measured in full-time equivalents*	**14,046**	13,212	6.3

* The comparative information of staff headcount measured in full-time equivalents as at 31 December 2017 has been restated to enable analysis on a comparable basis.

Total operating expenses increased by HK$1,332 million, or 9.6%, year-on-year, as a result of the Group's ongoing investment in human resources, the optimisation of its business systems and platforms, the acceleration of fintech innovations and the promotion of digital development, all of which aim to enhance the Group's overall service capabilities and support long-term business growth. The cost to income ratio was 27.90%, down 0.36 percentage points year-on-year, with the Group maintaining cost efficiency at a solid level relative to industry peers.

Staff costs increased by 9.2% year-on-year, reflecting annual salary increment, increased headcount and higher performance-related remuneration.

Premises and equipment expenses were up 8.0%, due to higher rental costs for computer software and patent expenses from the enhancement of business systems and platforms, and an increase in rental costs for the operating network.

Depreciation rose by 5.7%, as depreciation charges on information technology infrastructure and premises increased year-on-year.

Other operating expenses rose by 15.6%, mainly due to a rise in communication expenses, which was in line with increased business volume, and donations. Meanwhile, there was a lower base for comparison resulting from the reversal of certain expenses in 2017.

Second Half Performance

Compared with the first half of 2018, total operating expenses increased by HK$1,180 million, or 16.9%, half-on-half. The increase was due to higher staff costs, business promotional expenses, rental costs of the operating network and donations.

Net Charge of Impairment Allowances on Advances and Other Accounts

HK$'m, except percentages	2018	(Restated) 2017	Change (%)
Stage 1	**167**	N/A	N/A
Stage 2	**(336)**	N/A	N/A
Stage 3	**(1,009)**	N/A	N/A
Individually assessed	**N/A**	71	N/A
Collectively assessed	**N/A**	(1,117)	N/A
Total net charge of impairment allowances on advances and other accounts	**(1,178)**	(1,046)	12.6

Total Loan Impairment Allowance as a Percentage of Gross Advances to Customers

	At 31 December 2018	(Restated) At 31 December 2017
Total loan impairment allowance as a percentage of gross advances to customers	**0.43%**	0.36%

From 1 January 2018 onwards, the Group has adopted Hong Kong Financial Reporting Standard 9 ("HKFRS 9"), "Financial Instruments". Under this new standard, the recognition and measurement of impairment differs from that under Hong Kong Accounting Standard 39 ("HKAS 39"), "Financial Instruments: Recognition and Measurement". Changes in the impairment of the Group's financial assets in the comparative periods of 2017 remain in accordance with HKAS 39. Comparative information has not been restated.

Under HKFRS 9, the Group's net charge of impairment allowances on advances and other accounts amounted to HK$1,178 million in 2018. Impairment allowances at Stage 1 recorded a net reversal of HK$167 million, mainly reflecting the impact from the upgrading of certain customers, which offset the impact of the net charge of impairment allowances arising from loan growth and the updating of parameter values in the expected credit losses assessment model to take into consideration changes in economic outlook during the year. Impairment allowances at Stage 2 recorded a net charge of HK$336 million, as the result of the updating of parameter values in the expected credit losses assessment model. The net charge of impairment allowances at Stage 3 amounted to HK$1,009 million, mainly relating to the downgrading of certain corporate advances and advances in the personal loan portfolio. As at 31 December 2018, total loan impairment allowance as a percentage of gross advances to customers was 0.43%, maintaining benign asset quality.

In 2017, the Group's net charge of impairment allowances on advances and other accounts was HK$1,046 million. There was a net reversal of individually assessed impairment allowances of HK$71 million, mainly caused by the loan repayments of certain corporate customers. The net charge of collectively assessed impairment allowances amounted to HK$1,117 million, which was attributable to a growth in advances to customers and to the Group's prudent and stable approach to increasing impairment allowances for a certain loan portfolio. At the end of 2017, total loan impairment allowances as a percentage of gross advances to customers was 0.36%.

Second Half Performance

Compared with the first half of 2018, the Group's net charge of impairment allowances on advances and other accounts increased by HK$650 million, half-on-half, mainly reflecting the impact from the updating of parameter values in the expected credit losses assessment model to take into consideration changes in economic outlook.

Analysis on Assets and Liabilities

The table below summarises the Group's asset composition. The comparative figures as of 31 December 2017 have been restated to conform to the current year's presentation. Please refer to Note 24 to the Financial Statements for the contract/notional amounts and fair values of the Group's derivative financial instruments. Please refer to Note 43 to the Financial Statements for the contractual amounts of each significant class of contingent liability and commitment and the aggregate credit risk-weighted amounts of the Group.

Asset Composition

	At 31 December 2018		(Restated) At 31 December 2017		
HK$'m, except percentages	**Amount**	**% of total**	Amount	% of total	Change (%)
Cash and balances and placements with banks and other financial institutions	**431,524**	**14.6**	426,604	16.1	1.2
Hong Kong SAR Government certificates of indebtedness	**156,300**	**5.3**	146,200	5.5	6.9
Securities investments and other debt instruments[1]	**899,176**	**30.5**	711,385	26.8	26.4
Advances and other accounts	**1,282,472**	**43.4**	1,191,554	45.0	7.6
Fixed assets and investment properties	**69,114**	**2.3**	66,937	2.5	3.3
Other assets[2]	**114,317**	**3.9**	108,406	4.1	5.5
Total assets	**2,952,903**	**100.0**	2,651,086	100.0	11.4

1. Securities investments and other debt instruments comprise investment in securities and financial assets at fair value through profit or loss.
2. Other assets comprise derivative financial instruments, interests in associates and joint ventures, current tax assets and deferred tax assets.

Adhering to the principle of stable, long-term and sustainable development, the Group continued to optimise the management of its assets and liabilities. The total assets of the Group amounted to HK$2,952,903 million, an increase of HK$301,817 million, or 11.4%, compared with the end of 2017. Key changes in the Group's total assets include the following:

- Securities investments and other debt instruments increased by HK$187,791 million, or 26.4%, as the Group increased investments in high-quality corporate bonds and other debt instruments;
- Advances and other accounts rose by HK$90,918 million, or 7.6%, with advances to customers growing by HK$120,279 million, or 10.5%, and trade bills decreasing by HK$25,614 million, or 59.6%.

Advances to Customers

HK$'m, except percentages	At 31 December 2018 Amount	At 31 December 2018 % of total	(Restated) At 31 December 2017 Amount	(Restated) At 31 December 2017 % of total	Change (%)
Loans for use in Hong Kong	**841,720**	**66.4**	759,038	66.2	10.9
Industrial, commercial and financial	**492,712**	**38.9**	436,754	38.1	12.8
Individuals	**349,008**	**27.5**	322,284	28.1	8.3
Trade finance	**65,437**	**5.2**	78,196	6.8	(16.3)
Loans for use outside Hong Kong	**359,548**	**28.4**	309,192	27.0	16.3
Total advances to customers	**1,266,705**	**100.0**	1,146,426	100.0	10.5

In 2018, the Group continued to implement BOC Group's development strategy and captured opportunities arising from the Belt and Road Initiative, enterprises' "Going Global" efforts, the development of the Guangdong-Hong Kong-Macao Greater Bay Area and in Southeast Asia. It strengthened its collaboration with BOC in order to provide a diversified range of financial services to mainland and Hong Kong "Going Global" enterprises as well as to corporates in Southeast Asia. At the same time, the Group also continued to improve its services to commercial customers in Hong Kong by helping them to establish a convenient and effective financial service platform. It remained the top mandated arranger in the Hong Kong and Macao syndicated loan market for the 14th consecutive year. It also maintained its leading market position in the residential mortgage and reverse mortgage businesses. The Group adhered to a prudent credit strategy in order to maintain benign asset quality. In 2018, advances to customers grew by HK$120,279 million, or 10.5%, to HK$1,266,705 million, outperforming market growth.

Loans for use in Hong Kong increased by HK$82,682 million or 10.9%.

- Lending to the industrial, commercial and financial sectors increased by HK$55,958 million or 12.8%, reflecting growth in property development, financial concerns, manufacturing, transport and transport equipment, as well as wholesale and retail trade.

- Lending to individuals increased by HK$26,724 million or 8.3%. Residential mortgage loans (excluding those under government-sponsored home purchasing schemes) grew by 4.1% while other individuals loans increased by 23.6%, mainly driven by an increase in property refinancing and personal loans for investment purposes.

Trade finance decreased by HK$12,759 million or 16.3%. Loans for use outside Hong Kong increased HK$50,356 million or 16.3%, mainly driven by growth in loans for use in the Chinese mainland and Southeast Asia.

Loan Quality

HK$'m, except percentages	At 31 December 2018	(Restated) At 31 December 2017
Advances to customers	**1,266,705**	1,146,426
Classified or impaired loan ratio	**0.19%**	0.18%
Total loan impairment allowance	**5,411**	4,106
Total loan impairment allowance as a percentage of gross advances to customers	**0.43%**	0.36%
Residential mortgage loans[1] – delinquency and rescheduled loan ratio[2]	**0.01%**	0.01%
Card advances – delinquency ratio[2]	**0.19%**	0.21%

	2018	2017
Card advances – charge-off ratio[3]	**1.40%**	1.51%

1. Residential mortgage loans exclude those under the Home Ownership Scheme and other government-sponsored home purchasing schemes.
2. The delinquency ratio is the ratio of the total amount of overdue advances (more than three months) to total outstanding advances.
3. The charge-off ratio is the ratio of total write-offs made during the year to average card receivables during the year.

The Group adhered to prudent risk management principles and maintained benign asset quality for the year. The classified or impaired loan ratio was 0.19% as at 31 December 2018, up 0.01 percentage point from the end of last year. This was attributable to an increase in classified or impaired advances to customers of HK$304 million to HK$2,383 million, following the downgrading of certain corporate advances.

The credit quality of the Group's residential mortgage loans and card advances remained robust. The combined delinquency and rescheduled loan ratio of residential mortgage loans was 0.01% as at 31 December 2018. The charge-off ratio of card advances was 1.40%, down 0.11 percentage points year-on-year.

Deposits from Customers*

HK$'m, except percentages	At 31 December 2018 Amount	At 31 December 2018 % of total	(Restated) At 31 December 2017 Amount	(Restated) At 31 December 2017 % of total	Change (%)
Demand deposits and current accounts	**207,797**	**11.0**	203,837	11.5	1.9
Savings deposits	**852,339**	**45.0**	913,192	51.3	(6.7)
Time, call and notice deposits	**833,221**	**43.9**	658,061	37.0	26.6
	1,893,357	**99.9**	1,775,090	99.8	6.7
Structured deposits	**2,199**	**0.1**	2,784	0.2	(21.0)
Total deposits from customers	**1,895,556**	**100.0**	1,777,874	100.0	6.6

* Including structured deposits

The Group continued to implement a number of strategic measures to grow deposits in 2018, including the launch of featured products to targeted customer groups and the maintenance of demand and savings deposits through payroll services, wealth management and integrated payment solutions to customers. Through its cash management, settlement and custody businesses, as well as its role serving as the main receiving bank for IPOs, it strengthened business relationships with large corporates, sovereign and institutional customers. At the end of 2018, total deposits from customers amounted to HK$1,895,556 million, an increase of HK$117,682 million or 6.6% from the end of last year. Demand deposits and current accounts increased by 1.9%. Savings deposits decreased by 6.7%. Time, call and notice deposits were up 26.6%.

Capital and Reserves Attributable to Equity Holders of the Company

HK$'m, except percentages	At 31 December 2018	(Restated) At 31 December 2017	Change (%)
Share capital	**52,864**	52,864	–
Premises revaluation reserve	**38,527**	36,689	5.0
Reserve for fair value changes/Reserve for fair value changes of available-for-sale securities	**(4,116)**	42	N/A
Reserve for own credit risk	**5**	–	N/A
Regulatory reserve	**10,496**	10,224	2.7
Translation reserve	**(853)**	(728)	(17.2)
Merger reserve	**–**	1,062	(100.0)
Retained earnings	**160,147**	143,865	11.3
Reserves	**204,206**	191,154	6.8
Capital and reserves attributable to equity holders of the Company	**257,070**	244,018	5.3

Capital and reserves attributable to equity holders of the Company amounted to HK$257,070 million as at 31 December 2018, an increase of HK$13,052 million, or 5.3%, from the end of 2017. Retained earnings rose by 11.3%, mainly reflecting the profit achieved in 2018 following the distribution of dividends. The premises revaluation reserve increased by 5.0%, following an increase in the valuation of the Group's premises in 2018. The reserve for fair value changes/reserve for fair value changes of available-for-sale securities recorded a deficit, as compared to a gain in the previous year, mainly due to a decline in the valuation of equity securities. The regulatory reserve rose by 2.7%, mainly driven by growth in advances to customers. The merger reserve arose owing to the Group's application of the merger accounting method in relation to its combination with BOC's Vietnam Business and Philippines Business.

Capital Ratio

HK$'m, except percentages	At 31 December 2018	At 31 December 2017
Consolidated capital after deductions		
Common Equity Tier 1 capital	**180,202**	170,012
Additional Tier 1 capital	**23,476**	–
Tier 1 capital	**203,678**	170,012
Tier 2 capital	**34,393**	39,816
Total capital	**238,071**	209,828
Total risk-weighted assets	**1,030,815**	1,029,152
Common Equity Tier 1 capital ratio	**17.48%**	16.52%
Tier 1 capital ratio	**19.76%**	16.52%
Total capital ratio	**23.10%**	20.39%

In the course of formulating its internal capital ratio targets, the Group not only takes into consideration regulatory requirements, but also adopts the internal capital adequacy assessment process and stress testing necessary to assess the Bank's capital requirement for Pillar II. This allows it to determine the most appropriate capital level to ensure that the Group has adequate capital strength to withstand any future unexpected loss arising from a drastic change in the economic environment. At the same time, the Group will also take into account its development strategy and risk appetite, as well as its short- and long-term capital requirements (including support from capital replenishment solutions), with the ultimate aim of ensuring the long-term stability of its capital level. During the year, the Group optimised its capital structure by completing the issuance of Additional Tier 1 ("AT1") capital securities amounting to US$3 billion as well as a tender offer and redemption of its subordinated notes amounting to US$877 million. The issuance of the AT1 capital securities was awarded Best Hong Kong Deal in *FinanceAsia*'s Achievement Awards 2018, and 2018 Best Bank Capital Bond by *The Asset*. The Group attaches a high degree of importance to the need for capital accumulation and remains committed to strengthening internal capital generation to support its sustainable business development.

As at 31 December 2018, the common equity tier 1 ("CET1") capital ratio was 17.48% and tier 1 capital ratio was 19.76%, up 0.96 and 3.24 percentage points respectively from the end of 2017. Total capital ratio was 23.10%. Profits net of dividends for 2018 increased CET1 capital by 6.0%. Tier 1 capital increased by 19.8%, mainly as a result of replenishment from the issuance of AT1 capital securities during the year. The Group remains committed to balancing growth in risk-weighted assets ("RWAs") with enhancement in returns, with total RWAs rising only 0.2% in 2018.

The Group has established a long-term capital plan to optimise its capital structure and control the growth of its RWAs, so as to meet more stringent regulatory requirements and support better planning for the major strategic initiatives of the Group.

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%

	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%**

The Group's liquidity position remained sound, with the average value of liquidity coverage ratio and the quarter-end value of net stable funding ratio exceeding the regulatory requirement for all four quarters of 2018.

Business Review

In 2018, the Group adhered to its strategy of "Building a Top-class, Full-service and Internationalised Regional Bank". It seized market opportunities for development, leveraged its competitive advantages and steadily pushed forward its key business priorities. Its core businesses realised satisfactory growth, with major financial indicators remaining at solid levels. During the year, the Group optimised its integrated regional business model and promoted the integration of its Southeast Asian entities, which led to increased regional synergies. It remained committed to developing the local market in Hong Kong, upgrading its product and service levels and strengthening the construction of its diversified business platforms, resulting in continuous refinement to its business structure. Through deepened collaboration with BOC Group, the Group actively expanded its cross-border businesses and pushed forward the development of the Guangdong-Hong Kong-Macao Greater Bay Area with the aim of becoming the first-choice bank in the Greater Bay Area. It also stepped up innovation in financial technology ("fintech"), strengthened O2O integration and upgraded the customer experience with intelligent products and services in order to become a customer-centric digital bank. It accelerated the pace of innovations and rapidly refined its systems and mechanisms so as to further enhance its innovative capacity.

Business Segment Performance

Profit before Taxation by Business Segment

HK$'m, except percentages	2018	% of total	2017	(Restated) % of total	Change (%)
FROM CONTINUING OPERATIONS					
Personal Banking	**10,269**	**26.3**	8,403	23.7	22.2
Corporate Banking	**14,087**	**36.1**	14,392	40.7	(2.1)
Treasury	**11,884**	**30.5**	9,525	26.9	24.8
Insurance	**937**	**2.4**	1,401	4.0	(33.1)
Others	**1,811**	**4.7**	1,654	4.7	9.5
Total profit before taxation	**38,988**	**100.0**	35,375	100.0	10.2

Note: For additional segmental information, see Note 47 to the Financial Statements.

Personal Banking

Financial Results

Personal Banking achieved a profit before tax of HK$10,269 million in 2018, an increase of HK$1,866 million or 22.2% year-on-year, mainly driven by an increase in net interest income and net fee and commission income, and a lower net charge of impairment allowances.

Net interest income increased by 17.3%. This was mainly driven by an increase in the average balance of deposits and loans along with an improvement in the deposit spread. Net fee and commission income increased by 8.0%, which was attributable to the Group achieving satisfactory performance in its insurance and securities brokerage business, including growth in commission income. Operating expenses rose by 10.2%, mainly due to an increase in staff costs and business-related expenses. The net charge of impairment allowances decreased, owing to the Group having taken a prudent approach on impairment allowances for a certain loan portfolio in 2017, thus resulting in a higher base for comparison.

Business operations

Providing exclusive and customised services to mid- to high-end customers

Striving to be customer-centric at all times, the Group catered for customers' various needs and behaviours by providing exclusive and customised services to mid- to high-end customers. As part of its efforts to enrich its services and customer experience across different channels, the Group strengthened the internet and mobile banking platforms for its securities, funds and other investment trading services during the year so as to enhance customer convenience. In addition, the Group provided customers with differentiated and privileged services at its high-end wealth management centre. The Group also enriched its value-added services, including hosting the Worldwide Wealth Management Expo 2018, in order to deepen customer relationships and enhance brand image. In 2018, the Group further refined its customer structure with the number of mid- to high-end customers growing by 17.5% from the end of 2017.

The Group's private banking business maintained satisfactory growth, acquiring high-net-worth clients from Hong Kong, the Chinese mainland and overseas. It optimised its open platform for private banking and enhanced the development of exclusive private banking products. It strengthened its private banking team and actively participated in the development of the private banking industry by supporting the Pilot Apprenticeship Programme for Private Wealth Management, that was held specifically for university students and was jointly organised by the HKMA and the Private Wealth Management Association, to provide training to wealth management talent. The number of private banking clients grew by 27.3% from the end of 2017 and the AUM also grew satisfactorily.

Addressing livelihood banking needs

With the largest retail branch network in Hong Kong, the Group stepped up the enhancement of its products and services so as to develop comprehensive financial service capabilities to facilitate general livelihood needs. To support the measures for improving people's livelihood promoted by the HKSAR government, the Group offered to receive applications relating to the retirement annuities scheme through more than a hundred of its branches. The Group continued to work alongside the Hong Kong Mortgage Corporation Limited in refining the Reverse Mortgage Programme with the launch of the Reverse Fixed-Rate Mortgage Scheme, thus making the Group the largest service provider of the Reverse Mortgage Programme in Hong Kong. It also introduced service packages for deposits, life insurance and payroll accounts with the theme of "My First hassle-free banking experience", in order to cultivate younger customers' awareness of the importance of sensible saving and consumption habits. It continued to support the Child Development Fund organised by Labour and Welfare Bureau of the HKSAR government by opening personal savings deposit accounts for participants of the fund with waiver on minimum deposit balance. The Group also actively promoted the development of inclusive finance with the launch of a free service, EPS EasyCash for Senior Citizens, which offers easy and convenient means of cash withdrawal to senior citizens. This service has been gradually expanded to major regions in Hong Kong. The Group also provided members of New Home Association with complimentary banking services, so as to meet the financial needs of new immigrants and facilitate their integration into the Hong Kong community.

Proactively supporting the development of local small enterprises

The Group strengthened its cooperation with foreign chambers of commerce and professional associations in order to proactively support the development of local small enterprises. It provided customers with BOC "Small Business Loans" unsecured loans, corporate tax loans, and one-stop business financial packages, coupled with Faster Payment System ("FPS"), WeChat Pay and other innovative mobile payment tools, thus fulfilling customers' full range of financial needs. Supporting the HKMA's call to encourage overseas enterprises to conduct business in Hong Kong, the Group provided targeted companies with services such as a 24-hour overseas company servicing hotline, an online chat service and various overseas company account opening packages, with the aim of solving account opening challenges. In addition, the Group launched BoC Bill, an integrated payment collection service for SMEs which covers various types of online and offline payment tools, in order to help merchants to cope better in their daily operations. The total number of business integrated accounts for small enterprises increased by 15.7%. During the year, BOCHK received the SME Partner Awards of Excellence 2018 in Retail and Business Integrated Services, organised by *Hong Kong Economic Journal*.

Promoting integrated development and collaboration in the Greater Bay Area to expand featured cross-border services

The Group actively participated in the building and development of the Belt and Road and the Guangdong-Hong Kong-Macao Greater Bay Area. To assist in building the Greater Bay Area into a high-quality lifestyle destination, it enhanced self-services by providing branch network in Hong Kong International Airport, Hong Kong West Kowloon Rail Station (the terminus of the Guangdong-Shenzhen-Hong Kong Express Rail Link) and the Hong Kong-Zhuhai-Macao Bridge. To address the needs of residents in Guangdong, Hong Kong and Macao for financial services, including payment, wealth management and financing, the Group accelerated the development of cross-border banking products and services through mutual brand recognition, BOC Dual Currency Card, BoC Pay mobile App and an RMB cross-border direct remittance service. All of these initiatives were made to promote the Greater Bay Area as a high-quality lifestyle destination that is ideal for living, working and travelling. The total number of BOC Dual Currency Card in issue reached 208,000 and number of cross-border customers increased by 22.6%. During the year, the Group was honoured with the Sing Tao Excellent Services Brand Award – Cross-border Banking Services Award by *Sing Tao Daily*.

Steady growth in deposit and loan business with an increase in fee and commission income

In line with trends in market interest rates, the Group devoted efforts to acquiring deposits in different currencies and optimising deposit tenors. At the same time, the Group grew its current account and savings deposit businesses via payroll services, wealth management and integrated payment solutions through collaboration between the personal and corporate banking segments. As at the end of 2018, total personal deposits grew by 8.9% compared to the end of the previous year. Regarding its loan business, the Group further uplifted the brand image of BOCHK Mortgage Expert and set up seven mortgage centres with experienced mortgage specialists to provide one-stop professional mortgage services. It maintained second position in the market in terms of the total number of new residential mortgage loans and captured the largest market share in the reverse mortgage market. To cope with market volatility and uncertainty, the Group enriched its range of investment and insurance products by providing annuity plans and integrating the concepts of retirement planning and wealth inheritance into its life insurance business, thus providing all-round protection solutions to customers. To cater for the rapid growth in customers' demand for online transactions, the Group accelerated the development and application of digital services with the launch of a securities trading platform for US stocks and fund distribution service in mobile banking. These initiatives, coupled with the full coverage of an integrated insurance mechanism in all branches, helped enhance customers' investment experience and further expanded the Group's source for fee and commission income.

Promoting digital innovation to foster the advancement of green banking

Embracing the "New Era of Smart Banking" advocated by the HKMA, the Group stepped up innovation in fintech and dedicated efforts to enhancing the financial ecosystem in Hong Kong. During the year, it pushed forward digital applications in its branches and enhanced its iService offering by providing an all-weather video banking service to customers. It steadily pushed forward the development of its next-generation smart branches by setting up the Science Park Banking Services Centre, featuring a new process of customer service. In line with the FPS introduced by the HKMA, the Group offered customers with 24/7 real-time interbank and payment services. To enhance banking service experience, it launched finger-vein authentication to provide high security authentication without the need for password login. The Group also encouraged the development of green banking through the digitalisation of business processes and the increased promotion of paperless operations, leading to larger-scale implementation of the green banking concept.

Advancing regional development in Southeast Asia

The Group continued to enhance the regional development of its Southeast Asian entities. Based on the characteristics of different countries, the Group implemented matrix management and differentiated development strategies. Segment by segment, it deployed its business development strategy to its Southeast Asian entities and continued to refine its business organisation structure. It pushed forward its regional product management in an orderly manner and enhanced regional risk management. During the year, the Group also enhanced its capability for serving mid- to high-end customers with the setup of a wealth management model in BOC Malaysia to offer exclusive and all-round financial services solutions, including a variety of funds, insurance, bonds and other wealth management products. The Group successfully expanded its personal banking service network to Thailand, Malaysia, Vietnam, the Philippines, Indonesia, Cambodia and Brunei and further accelerated the integration progress of its Southeast Asian entities.

Innovation in credit card business

Although Hong Kong retail consumption growth slowed down in the second half of 2018, new impetus for retail spending emerged from the development of the Guangdong-Hong Kong-Macao Greater Bay Area, the penetration of mobile payment and e-wallet services, which boosted the Group's cross-border business development, popularity of mobile payments and expansion of the younger customer segment. The Group continuously optimised the BOC Dual Currency Card to meet customer needs in transportation and payments in the Greater Bay Area. In August 2018, the Group launched BoC Pay, the first mobile App introduced by a Hong Kong bank to meet EMV international standards. BoC Bill, an integrated collection service for merchants, was launched in December 2018, making it the first integrated collection platform in Hong Kong that enables merchants to handle QR code payments. During the year, the Group maintained its leadership in the UnionPay card issuing and cardholder spending business in Hong Kong.

Corporate Banking

Financial Results

Corporate Banking achieved a profit before tax of HK$14,087 million, a decrease of HK$305 million or 2.1% year-on-year. Net interest income and net trading gain increased. The increase was, however, offset by a drop in net fee and commission income and a rise in the net charge of impairment allowances.

Net interest income increased by 11.4%, owing to an increase in the average balance of loans and deposits, coupled with improvement in the deposit spread. Net fee and commission income decreased by 21.1%, mainly due to a decrease in loan commissions, which was partially offset by an increase in commission income from trust and payment services. Net trading gain increased by 13.2%, owing to growth in currency exchange income from customer transactions. The net charge of impairment allowances amounted to HK$784 million, as compared to a net charge of HK$73 million in 2017, mainly reflecting the impact from loan growth and the downgrading of certain corporate advances.

Business operations

Continuous expansion of customer base and enhancement of integrated service capabilities

The Group remained committed to expanding its customer base and deepening relationship with its corporate clients. For targeted customer groups, including BOC's global strategic clients and large corporates from Hong Kong, Southeast Asia and other overseas countries, it provided exclusive, customised and integrated financial solutions to meet client demand for sophisticated financial services. By providing comprehensive services, the Group was able to attract more potential customers from different industries, thus enhancing its synergistic service capabilities and creating an excellent customer experience. The Group reinforced its competitive edge and promoted the development of its commercial banking and investment banking business. It remained the top mandated arranger in the Hong Kong and Macao syndicated loan market for the 14th consecutive year with a total loan arrangement volume of US$9.6 billion, representing a market share of 8.0%, and successfully underwrote a number of bond issues with significant market influence. Moreover, the total amount of funds raised from IPOs in which the Group served as the main receiving bank reached HK$235.5 billion, representing a market share of 82.9% and retaining its market leadership for the eighth consecutive year. At the same time, it entered into a number of service contracts with the HKSAR government through bidding process, and continued to establish relationships with a number of major central banks, national treasuries and sovereign wealth funds.

Proactive development of commercial and SME customer base

The Group continued to improve its services to commercial customers in Hong Kong by deepening relationships with family-owned businesses, chambers of commerce and listed companies and helping them by establishing a convenient and effective financial service platform. Its service capabilities for local corporate clients were also enhanced through its integrated payment and settlement product and service package, which offers a superior customer experience. To cater for SME customers' demands for financial services, the Group provided convenient services through its branch network, the largest in Hong Kong, and actively promoted the SME Financing Guarantee Scheme to support the development of Hong Kong's SMEs. BOCHK won the Best SME's Partner Gold Award 2018 for the second consecutive year from the Hong Kong General Chamber of Small and Medium Business. It also received the SME Partner Awards of Excellence 2018 – Guangdong-Hong Kong-Macao Greater Bay Area Commercial Banking Services from *Hong Kong Economic Journal*, in recognition of its support of the development of the SME business community in the Greater Bay Area and its continuous optimisation in cross-border commercial banking services.

Promoting business development in Southeast Asia and the Greater Bay Area

The Group accelerated the improvement of its regional management capabilities and continued to optimise its management model and mechanism. It strengthened collaborative marketing with its Southeast Asian entities so as to acquire high-quality and influential local clients, and successfully participated in a number of major projects in Southeast Asia. It further integrated competitive products and services from Hong Kong into its Southeast Asian entities' local franchises, to help them expand into local mainstream markets. During the year, the Group enhanced BOCHK's brand image and business development in Southeast Asia by actively participating in relevant investment-related promotional activities organised by the HKSAR government and the governments of Southeast Asian countries. In order to capture the enormous business opportunities arising from the development of the Guangdong-Hong Kong-Macao Greater Bay Area, the Group strengthened its collaboration with BOC Group's entities in the Greater Bay Area via four major aspects in cross-border activities, including people flow, commodities flow, fund flow and information flow and established an integrated marketing and services system, with a view to providing a full range of financial services in support of the mutual access of infrastructures within the Greater Bay Area and boosting the development of corporates within the area's technological innovation industry. At the same time, the Group joined hands with the Hong Kong Chinese Enterprises Association and the Chinese Banking Association of Hong Kong to host the Guangdong-Hong Kong-Macao Greater Bay Area Financial Summit Forum, with an aim to strengthening financial cooperation within the Greater Bay Area and driving the synergistic development of Guangdong, Hong Kong and Macao.

Constantly enhancing the competitiveness of corporate banking products and services

The Group continuously upgraded its service capabilities. Following the live launch of the FPS introduced by the HKMA, it remained customer-centric and enhanced the comprehensive and scenario-based applications of its products and services. By accelerating the regional development of its key businesses including cash pooling and treasury centre, and upgrading the competitiveness of its products and services, the Group was able to fully serve customers in Hong Kong, the Chinese mainland and Southeast Asia. In recognition of its excellent and highly professional services, the Group was named Hong Kong Domestic Cash Management Bank of the Year for the fifth consecutive year by *Asian Banking & Finance* and received the Achievement Award for Best Trade Finance Bank in Hong Kong as well as Best Corporate Trade Finance Deal in Hong Kong for the second year from *The Asian Banker*.

Continuous expansion in custody business

In 2018, global investment markets experienced a persistent downward trend amid heightened volatility, which posed challenges to the asset servicing industry. The Group continued to capture opportunities arising from various market links to connect with more local and overseas institutions through Bond Connect. Its market share continued to eclipse its peers, with the value of the Group's assets under custody relating to Bond Connect at one point exceeding RMB16.8 billion. BOCHK was awarded the Bond Connect Best Custodian by Bond Connect Company in recognition of its satisfactory overall services. Meanwhile, the Group's insurance and pension-type client segments exhibited steady expansion, while sovereign-type clients grew and demand for escrow services on assets was robust. This, coupled with active business collaboration within the Group, meant that the Group's custody business achieved substantial growth in its key performance indicators compared to last year. At the same time, risk control standards were further enhanced. In recognition of its professional service, the Group was awarded Best Custodian – QDII (China) and Best QDII Mandate in *The Asset*'s Triple A Asset Servicing, Institutional Investor and Insurance Awards 2018. The Group also proactively contributed to the preparation of Chinese Depository Receipts as well as to the service requirements of the Greater Bay Area. As of the end of 2018, the Group's total assets under custody amounted to HK$1,098.4 billion.

Treasury

Financial Results

Treasury recorded a profit before tax of HK$11,884 million, an increase of HK$2,359 million or 24.8% year-on-year. The growth was driven by an increase in net interest income, net trading gain and net gain on other financial instruments at fair value through profit or loss.

Net interest income increased by 4.7%, which was mainly attributable to an increase in the average balance of debt securities investments and an increase in the average yield of related assets caused by a rise in market interest rates. The treasury business recorded a net trading gain in 2018, as compared to a net loss last year. This was due to a net gain from foreign currency swap contracts in 2018, as compared to a net loss last year. There was also a net gain on other financial instruments at fair value through profit or loss, as compared to a net loss last year. These positive developments were, however, partially offset by a lower net gain on other financial assets.

Business Operations

Constant enhancement of trading and service capabilities

The Group continued to strengthen its market research capabilities and actively responded to market changes. It made its best efforts to promote business diversification and conducted stringent risk control measures. It steadily improved its pricing and trading capabilities by strengthening its trading system infrastructure and continuously refining its electronic trading platform. Adhering to a customer-oriented principle, the Group advanced the development of innovative products and further enriched product lines to meet client needs. By leveraging its expertise, capitalising on market opportunities, expanding its customer base and elevating service quality, the Group achieved rapid growth in customer trading business. It also actively promoted its regional development, making continuous efforts to enhance the development framework for its treasury business in Southeast Asia. In recognition of its treasury business performance, BOCHK was named the Best Overseas Member of Interbank FX Market in 2017 by the China Foreign Exchange Trade System. It received the Best Local Currency Bond Award from *Global Capital*, Gold and Precious Metals Bank of the year – Hong Kong from *Asian Banking & Finance*, and the 2017 Outstanding International Member Award from the Shanghai Gold Exchange. BOCHK also won the Key Business Partner in FIC Market award at the 5th Annual RMB Fixed Income and Currency Conference, organised by HKEX.

Proactive expansion in banknotes business

Drawing on its expertise in the wholesale banknotes business, the Group captured market opportunities and strengthened the development of its banknotes business in the Asia Pacific region, becoming a major bank to provide foreign currency banknotes in Hong Kong and further reinforcing its market leadership in the local banknotes business. By establishing a flexible and efficient cash banknote operating mechanism in the Chinese mainland market, the Group successfully won bids for a number of foreign currency banknote tenders from its mainland peers. As a result, it maintained steady growth of its market share in the Chinese mainland. In addition, it actively and firmly pushed forward its regional development strategy to gradually increase its business scale in overseas markets, including Southeast Asia.

Consolidating competitive advantages in RMB clearing business

The Group leveraged its strong franchise in RMB business to reinforce its leading market position. BOCHK was appointed by China Securities Depository and Clearing Corporation Limited as the sole clearing bank in Hong Kong to support H-share full convertibility. In line with the Phase II construction of the CIPS by the People's Bank of China, BOCHK successfully launched its CIPS Phase II project. This provides a longer operation window through the CIPS channel and connects with the new Deferred Net Settlement ("DNS") mechanism, further enhancing the capability and efficiency of the Clearing Bank in terms of RMB cross-border fund clearing and thus reinforcing BOCHK's leadership in the offshore RMB market. In addition, in order to meet the demand from the local market in Hong Kong for highly efficient payment services, BOCHK launched a 24/7 round-the-clock RMB FPS clearing service, making RMB the only currency other than HKD to support FPS.

A proactive but risk-aware investment strategy

The Group continued to take a cautious approach to managing its banking book investments by closely monitoring market changes and seeking investment opportunities to enhance return while remaining alert to risk. During the year, the Group adjusted its investment portfolio to respond to changes in interest rates and to achieve solid returns.

Steady growth in asset management business

BOCHK Asset Management Limited ("BOCHK AM") actively captured development opportunities and achieved steady growth in many areas. Despite major fluctuations in investment markets, its AUM at the end of 2018 grew steadily compared to the end of 2017, with AUM growth of private funds exceeding 60%. During the year, the Group's major bond portfolios outperformed the market. The performance of its bond funds, such as the BOCHK All Weather China High Yield Bond Fund, was better than that of most market peers. As part of its efforts to proactively promote innovation in fund products, BOCHK AM launched two new public funds and four new private funds to meet the investment needs of different client segments. In addition, BOCHK AM gained new clients and deepened business relationships with existing clients. New discretionary managed accounts were established during the year, with a number of institutional clients increasing their investments in BOCHK AM's funds. Meanwhile, it continued to lay the foundation for growth in cross-border funds distribution. The BOCHK All Weather Hong Kong Equity Fund was approved for distribution in the Chinese mainland, becoming the second northbound fund under the Mainland-Hong Kong Mutual Recognition of Funds scheme ("MRF"). This new fund will be launched for public distribution in the Chinese mainland in due course. In recognition of its market and industry expertise, BOCHK AM was awarded Best China Fund House in Hong Kong and Best Offshore RMB Bond Performance (3 years) in the 2019 Best of the Best Awards organised by *Asia Asset Management*.

Steady growth in trustee business and technological upgrades to services

The Group provides trustee and fund administration services for occupational retirement schemes and Mandatory Provident Fund schemes, as well as trustee and custodian services for unit trusts, through its subsidiary, BOCI-Prudential Trustee Limited ("BOCI-Prudential Trustee"). In 2018, BOCI-Prudential Trustee made technological improvements and upgrades to its MPF services by launching the BOCHK ORSO App, revamping the MPF website to provide a better customer experience, designing and developing a chatbot, and reprogramming the MPF App with the aim of establishing MPF straight-through processing. The AUM of MPF maintained steady growth, with the monthly average value in 2018 increasing by 11.6% from that of 2017. In 2018, BOCI-Prudential Trustee was recognised on its outstanding fund performance and innovative technological strength. BOCI-Prudential Trustee's My Choice MPF Scheme and BOC-Prudential Easy-Choice MPF Scheme received multiple accolades at the MPF Awards 2018, organised by MPF Ratings. It also received the Best Group Over 3 Years – Overall and multiple fund awards at the 2018 Lipper Hong Kong Fund Awards, organised by Thomson Reuters, as well as a number of fund awards at events such as the Top Fund Awards 2018 organised by *Bloomberg Businessweek* and the Fund of the Year Awards 2018 organised by *Benchmark*.

Insurance

Financial Results

In 2018, the standard new insurance premium of the Group's insurance segment was HK$9,240 million, up 8.2% year-on-year. The value of new business was HK$1,161 million, an increase of 36.4% year-on-year. Profit before tax was HK$937 million, down 33.1% year-on-year. This decrease was mainly attributable to losses recorded in equity securities and bond fund investments amid the downturn in investment markets. The loss was, however, partially offset by higher net interest income and reinsurance income.

Business Operations

Proactive application of insurtech to improve customer experience

In 2018, an innovative artificial intelligence chatbot service, Easy Chat, was launched to answer customers' enquiries on claims and certain policy-related matters. This helped to develop and activate the younger customer segment, and enhance the Group's corporate image and operational efficiency. The Group also promoted interaction with customers using social media platforms, including the launch of the brand new BOC Life WeChat Official Account and two Facebook pages (BOC Life and BOC Life Wealth Management Team). During the year, the Group launched eClaims to allow customers to enjoy easy and rapid claims services. In line with the FPS introduced by the HKMA, BOC Life was among the first cohort of companies to adopt the instant transfer function for both premium collection and claims payment.

Maintaining a leading position in RMB insurance business, recognised for service quality and financial strength

In November 2018, Moody's Investor Service upgraded the insurance financial strength rating of BOC Life from A2 to A1, reflecting BOC Life's track record of good profitability, a stable solvency ratio, solid capitalisation and well-diversified distribution channels, leading to an increase in the value of new business. In 2018, the Group maintained its leading position in Hong Kong's life insurance market and remained the market leader in RMB insurance business. In recognition of its service quality and professional image, BOC Life received a number of local and regional awards in 2018, including the Cross Border Insurance Services – Excellence, Annuity Plan – Outstanding, Customer Service – Outstanding and Claims Management – Excellence awards in *Bloomberg Businessweek*'s Financial Institution Awards 2018; and the Outstanding Insurance Business – Customer Service Award (Hong Kong China) and Annuity Award (Hong Kong China) in the 2018 RMB Business Outstanding Awards, jointly organised by Metro Finance and Hong Kong Ta Kung Wen Wei Media Group.

Enhancement and innovation of product and service packages

In 2018, the Group launched new products in line with market trends. Based on the success of the SmartUp Whole Life Insurance Plan series, the Group introduced an enhanced version of SmartUp Plus Whole Life Insurance Plan as well as a new SmartGuard Critical Illness Plan in order to increase the value of the new business. A new annuity product, Smart Immediate Annuity Plan, was also launched to cater for customers' needs for annuity products and retirement protection. The Group joined up with new sales channels by launching its first product for critical illness protection, AlongPro Critical Illness Plan, on the WeChat Pay HK and AlipayHK electronic payment platforms. This product was also launched on BOC Life's online platform, in order to attract customers using mobile devices. To strengthen its service packages, the Group relaxed the underwriting limits of Forever Glorious ULife Plan (Simplified Underwriting) and expanded the appointed hospital list in the hospitalisation plan, so as to fully meet customers' needs.

BOC Life's 20th anniversary brand promotions

The year 2018 marked the 20th anniversary of BOC Life. The Group title-sponsored a number of TV programmes and launched a series of promotional initiatives to raise awareness of the Group's life insurance business and to further strengthen its brand image.

Regional Business

Improving Southeast Asia development strategy with the aim of building mainstream foreign banks in the region

Southeast Asia has remarkable development potential, both as a core focus of China's Belt and Road Initiative, as a market for RMB internationalisation and as a target region for Chinese enterprises' "Going Global" efforts. The Group attached great importance to the opportunities that lies in advancing its asset restructuring in Southeast Asia and accelerating its self-development, in line with its steadfast commitment to building a top-class, full-service and internationalised regional bank. The Group has developed a strong franchise and deep, market-oriented management experience through a century of service in Hong Kong. Now acting as the regional hub for Southeast Asia, the Group fully leveraged these advantages and introduced its competitive products and services, advanced technology and management, and professional talent teams from Hong Kong to Southeast Asia. BOCHK also invested in its Southeast Asian entities by providing capital, subordinated loans and working capital to support their long-term development. The Group actively developed an advanced and efficient regional management model and, on the basis of integrated operations, fully leveraged its competitive advantages in capital funding, products, management and talents in order to upgrade its competitiveness and development quality in the Southeast Asian region.

Accelerating logical integration and continuously refining regional management model

The Group successfully completed the acquisition of the Philippines Business and Vietnam Business of BOC on 29 January 2018. On 4 December 2018, it entered into agreement with BOC in relation to the acquisition of BOC Vientiane Branch and subsequently completed the acquisition on 21 January 2019. BOCHK has developed into a regional bank with initial operating entities in eight Southeast Asian countries, including Thailand, Malaysia, Vietnam, the Philippines, Indonesia, Cambodia, Laos and Brunei. The Group continued to push forward logical integration and stepped up its efforts to promote the integration of the business mechanisms, systems, personnel and culture of its Southeast Asian entities. It adopted an integrated regional management model according to the business characteristics of the front, middle and back offices. Differentiated arrangements were made regarding approval authorisation, resource allocation, personnel management, performance appraisal and daily operations. The frontline units further refined their differentiated regional business positioning and management models, so as to implement integrated operational and management objectives. The middle office units strengthened the internal risk and compliance control of the Southeast Asian entities, in order to effectively improve their overall internal risk control and anti-money laundering capabilities. The back offices enhanced regional administration and resource support in order to improve the operational capacity and technological strength of back office operations across Southeast Asia.

Promoting solid Southeast Asian business development and achieving continuous growth in operating results

The development of the Group's Southeast Asia business achieved satisfactory results in 2018. Net operating income before impairment allowances of its Southeast Asian entities* was HK$2,287 million, a growth of 27.6% year-on-year. At the end of 2018, deposits from customers and advances to customers amounted to HK$45,398 million and HK$39,198 million, up 17.1% and 20.0% respectively from the end of 2017. The non-performing loan ratio was 1.14%, down 0.04 percentage points from the end of 2017.

* Referring to the seven Southeast Asian entities, including BOC Thailand, BOC Malaysia, Ho Chi Minh City Branch, Manila Branch, Jakarta Branch, Phnom Penh Branch and Brunei Branch. Net operating income before impairment allowances, the balance of deposits from customers and advances to customers represented the consolidated data which were prepared in accordance with Hong Kong Financial Reporting Standards. Non-performing loan ratio was calculated in accordance with local regulatory requirements.

In the corporate banking business, the Group actively promoted the marketing and expansion of its Belt and Road related projects, including those relating to road and bridge development infrastructure, telecommunications equipment, energy and petroleum, and aviation facilities. It also established a regional relationship manager system and continued to promote the integrated management of customer development and project marketing by analysing the distribution of "Going Global" enterprises in Southeast Asia and the trend of industrial transfers in the Asia-Pacific region, so as to capture development opportunities from these customers and key projects. The Group also actively expanded its business with institutional clients, promoting RMB products and treasury operations. BOC Malaysia was officially designated as the RMB settlement bank for Labuan Island, the offshore international financial centre of Malaysia. The Manila Branch, meanwhile, supported the Central Bank of the Philippines in successfully issuing its first sovereign Panda bonds, amounting to RMB1.46 billion, in China's interbank bond market. It also initiated the establishment of the Philippine Association of Renminbi Traders, the first self-governed financial organisation outside China to deal in RMB and local currencies, and completed the first direct exchange of RMB against the Philippines Peso in the Philippines market on 20 November 2018.

In the personal banking business, the Group continued to build up its product and service capabilities in Southeast Asia by enhancing its infrastructure and implemented differentiated management approaches. It also strengthened customer positioning and management by allocating suitable products and personnel to support business development and increase revenues. During the year, BOC Malaysia obtained a fund business license and launched two housing loan insurance products. The Jakarta Branch launched a cross-border RMB direct remittance product and set up a personal banking wealth management centre. The Phnom Penh Branch launched money collection services on POS and WeChat Pay.

Promoting regional risk management using the Three Lines of Defense and Take-the-Most-Stringent-Approach principle to achieve healthy and sustainable development

The Group promoted regional risk management on the basis of the Three Lines of Defense and the Take-the-Most-Stringent-Approach principle, actively pushing forward the full implementation of its risk management framework and stepping up the construction of the management structure and personnel deployment of its Southeast Asian entities. It comprehensively strengthened its Southeast Asian entities' management of credit risk, internal control and compliance. By closely monitoring market and liquidity risk in the Southeast Asian market, these entities were able to enhance their emergency handling capabilities and conduct anti-money laundering measures under the most stringent regulatory requirements. By comprehensively enhancing their risk compliance and control capabilities, the Southeast Asian entities will lay a solid foundation for high-quality development, operate in accordance with the standards stipulated by the Group, and ensure compliance with the regulatory requirements of the HKMA and local regulatory bodies.

In conjunction with the Group's implementation of the Southeast Asian Institutional Risk Management Framework, the Group promoted anti-money laundering management in Southeast Asia through related policies and systems, organisational structures, professional staffing and technological systems, with a special focus on system application. The Group also adopted effective measures to gradually improve the credit policies, credit models, loan approval processes, loan time and post-lending management of its Southeast Asian entities, and to continuously strengthen the Group's capabilities in regional credit risk management.

Fintech and Innovations

Adhering to the concept of "navigated by technology, driven by innovation", the Group strived to enhance the competitiveness of its fintech to support business growth. It actively participated in and encouraged the development of innovative technologies, and continued to increase the application of artificial intelligence, big data, blockchain and open API to provide customers with more comprehensive, more efficient and more intelligent banking services. At the same time, the Group accelerated its pace for innovation and refined mechanism to further enhance its innovative capacity.

In line with BOC Group's global strategic IT deployment, the Group completed BOC Group's system integration project on 1 April. Putting customers first, the Group completed the system upgrade within the expected timeframe and operation ran smoothly afterwards.

The Group made proactive efforts to promote the enhanced version of its mobile banking service. In March, the enhanced version of Mobile Banking 3.0 was officially launched, with an optimised user interface and design and upgraded intelligent functions. It offers more than 200 mobile banking service functions with over 110 customer experience enhancements, including Hong Kong and US stocks trading, online investment account opening, mobile token and FPS. The Group also became the first bank in Hong Kong to launch a mobile fund investment service. Moreover, it met customer needs in fund transfer, investment, foreign exchange, payment and security. The number of mobile banking customers and active customers grew by 41.7% and 63.5% respectively from the end of 2017, with a 70.6% increase in the young customer segment (aged 18-35) acting as a key driver.

The Group successfully rolled out its FPS project according to requirements of the HKMA, with an official launch in September. This offers personal and corporate customers a brand new experience for HKD and RMB real-time interbank transfer and cross-platform collection and payment solutions, catering to individuals' payment needs in daily life. It successfully cooperated with a number of major clients in the household, retail and telecommunication industries and led the market in terms of customer acquisition rate and transaction volume.

The Group officially launched the BoC Pay in August, the first mobile App in Hong Kong to provide local and cross-border retail and bill payment, and support local interbank transfer. BoC Pay enables customers to make QR code payments to 9.5 million merchants in the Chinese mainland, 600,000 merchants in the Greater Bay Area and more than a thousand merchants in Hong Kong.

The Group introduced BoC Bill, an integrated collection platform that provides merchants with integrated collection services by supporting different payment channels. The first platform in Hong Kong to enable merchants to handle QR code payments, it caters more than 3,000 retail outlets in Hong Kong, covering different areas including daily living and leisure activities. BoC Bill addresses merchants' business needs and caters for consumers' preferred payment methods, which effectively helps to enhance merchants' competitive edge.

During the year, the Group established the Innovation and Optimisation Centre to promote innovative development of products, services and business models that better satisfy customer needs and meet the changing requirements of the competitive environment. Adopting an internet-first mindset to enhancing the improvement and development of fintech and banking products, the Group completed pioneering prototypes and feasibility analysis of new technologies, business models, products and services, thus advancing innovative projects in an orderly manner and improving overall resilience. The Group deepened communications with venture companies, strengthened cooperation in innovation projects and proactively participated in BOC's product and technological innovations. It helped to create an innovative atmosphere and culture by sponsoring the first Hong Kong B2B eCommerce Youth Festival and hosting the BOCHK Fintech Hackathon, which fostered fintech talent and enhanced the Group's influence among the younger customer segment.

The Group also continuously improved its technology risk and cybersecurity capabilities by implementing multi-dimensional cybersecurity measures and enhancing its protection on information security and cybersecurity control in order to provide itself and its clients with safer and more stable operations and services.

In recognition of its innovation achievements in technology and IT development, BOCHK received the Service Innovation of the Year – Hong Kong award for the first time, the Mobile Banking Initiative of the Year – Hong Kong award for the fourth consecutive year and the Digital Banking Initiative of the Year – Hong Kong award for the third consecutive year in the 13th Retail Banking Awards organised by *Asian Banking & Finance*.

Outlook and Business Focus for 2019

The global economy will face a number of challenges in 2019, including rising trade protectionism, a contraction in liquidity and financial market volatility. According to the forecasts of International Monetary Fund, global economic growth for the year is projected to slow to 3.5%. The US economy is expected to maintain positive growth, albeit at a slower pace. The Chinese mainland economy is expected to continue its growth trend within a reasonable range, in line with the state's guidance for promoting high-quality development, steady growth, active reform, structural adjustment, improvement in people's livelihood and risk prevention. In Southeast Asia, the regional economy is gradually entering into a peak period for the construction of infrastructure projects, which will help foster strong economic growth momentum.

Banks in Hong Kong will face challenges in their operating environment, with Hong Kong's economic outlook expected to be affected by China-US trade friction, the normalisation of Hong Kong dollar interest rates and asset market adjustments. Nevertheless, Hong Kong possesses unique advantages and will continue to play a vital role in the reform and opening-up of the new era in the Chinese mainland. Major national strategies, including the implementation of the Belt and Road Initiative, the steady progress in the development plan for the Guangdong-Hong Kong-Macao Greater Bay Area, and RMB internationalisation will provide more development opportunities for the banking industry in Hong Kong. In 2018, the HKSAR government's Policy Address put forward more than 200 specific measures, which will create a solid foundation for the long-term development of Hong Kong and provide long-term business opportunities for the banking industry.

In view of the opportunities and challenges ahead, the Group remains committed to "Building a Top-class, Full-service and Internationalised Regional Bank" by actively responding to market changes, strengthening its core business development, accelerating its regional development and business transformation, and enhancing product and service innovations while adhering to a high level of risk management, so as to achieve stable, long-term and sustainable development in each of its businesses.

The Group will remain committed to developing the local market and promoting operational and business transformation while adhering to its customer-centric philosophy. The personal banking business will revolutionise its operations by gradually transforming into a RC+P (relationship, channel + product) business model, which is in line with the Group's three goals of transformation, that is, customer-centric, data-driven and agile cooperation. The corporate banking business will focus on improving its comprehensive financial services capabilities. The Group will lend its weight to Hong Kong's economic development, support major projects in Hong Kong, actively expand its customer base and deepen business cooperation with the government and public entities as well as develop financial inclusion so as to fully enhance customers' experience and satisfaction.

Advancement in technology and acceleration in fintech development is another important task of the Group. It will actively promote innovative technology projects, reshape business models and improve innovation mechanisms in order to become a leading digital bank. It will fully embrace the HKMA's seven initiatives for preparing Hong Kong for a "New Era of Smart Banking" and introduce a diversified range of distinctive services.

The Group will seize opportunities arising from the development of the Guangdong-Hong Kong-Macao Greater Bay Area by focusing on the facilitation of people's livelihood and cross-border financial needs and enhancing the competitiveness of its products and services. Based on BOC's *Guangdong, Hong Kong and Macao Greater Bay Area Integrated Financial Services Plan,* it will deepen its collaboration with BOC's entities in the Chinese mainland and overseas countries in order to enhance the quality of its one-stop products and services and its regional service capabilities. The Group will also provide comprehensive support for the mutual connectivity of regional infrastructure projects, industrial transformation and upgrading, technological innovation and international cooperation, with the goal of becoming the first-choice bank for customers in the Greater Bay Area.

The Group will continue to refine its regional management model to promote business development in Southeast Asia. To achieve sustainable and balanced development, the Group will continue to improve its regional management capabilities, reinforce support to its Southeast Asian entities, tailor their business development to local conditions and enrich their product offering with a view to expanding their customer base by attracting customers in countries along the Belt and Road, "Going Global" enterprises, local leading enterprises and high-net-worth clients. The Group will also accelerate the promotion of innovative cross-border RMB products and improve and expand its RMB clearing bank network in Southeast Asia in order to further enhance its leading edge in RMB business. Moreover, it will improve the overall risk management systems of its Southeast Asian entities to ensure that they comply with regulatory requirements.

Credit Ratings

As at 31 December 2018	Long-term	Short-term
Standard & Poor's	A+	A-1
Moody's	Aa3	P-1
Fitch	A	F1

Risk Management

Banking Group

Overview

The Group believes that sound risk management is crucial to the success of any organisation. In its daily operation, the Group attaches a high degree of importance to risk management and emphasises that a balance must be struck between risk control and business development. The principal types of risk inherent in the Group's businesses are credit risk, interest rate risk, market risk, liquidity risk, operational risk, reputation risk, legal and compliance risk, and strategic risk. The Group's risk management objective is to enhance shareholder value by maintaining risk exposures within acceptable limits. The Group has a defined risk appetite statement approved by the Board, which is an expression of the types and level of risk that the Group is willing to take in a controllable way in order to achieve its business goals and to meet the expectations of its stakeholders. For details of the Group's risk management governance structure, please refer to Note 4 to the Financial Statements.

Credit risk management

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. For details of the Group's Credit Risk Management, please refer to Note 4.1 to the Financial Statements.

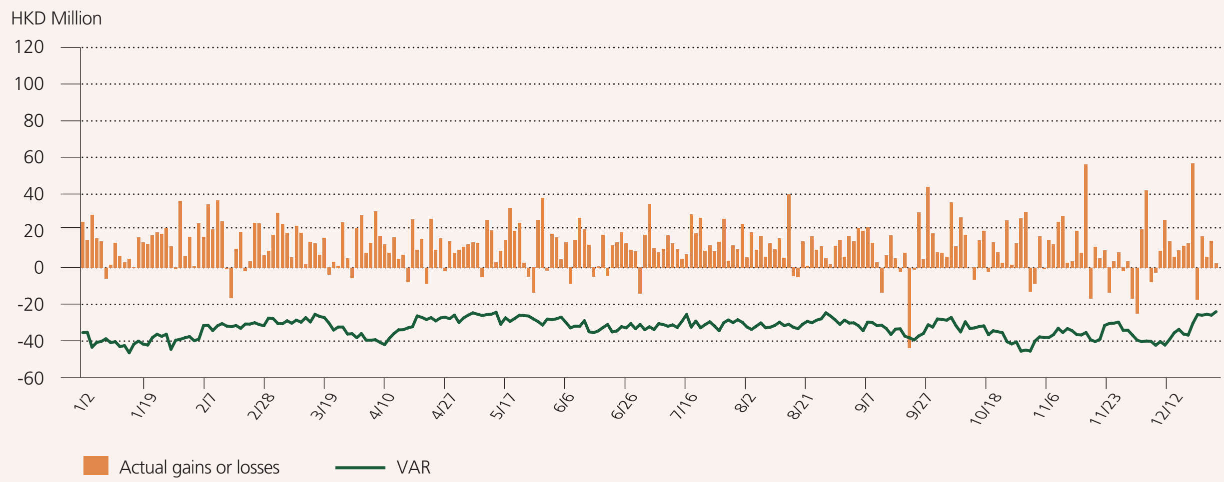
Market risk management

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. For details of the Group's Market Risk Management, please refer to Note 4.2 to the Financial Statements.

The Group uses the VAR to measure and report general market risks to the Risk Committee ("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 subsidiaries over a one-day holding period with a 99% confidence level, and sets up the VAR limit of the Group and subsidiaries.

The Group adopts back-testing to measure the accuracy of VAR model results. The back-testing compares the calculated VAR figure of market risk positions of each business day with the actual and hypothetical gains or losses arising from those positions on the next business day. Generally speaking, the number of back-testing exceptions in a rolling 12-month period will not exceed four times, given a 99% confidence level. The graph below shows the back-testing result of the VAR against actual gains or losses of the Group.

Daily Back-testing in 2018



There was one actual loss exceeding the VAR for the Group in 2018 as shown in the back-testing results.

Interest rate risk management

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, basis risk, yield curve risk and option risk. For details of the Group's Interest Rate Risk Management, please refer to Note 4.2 to the Financial Statements.

Liquidity risk management

Liquidity risk is the risk that banks may not be able to obtain sufficient and timely funding at reasonable cost to meet their obligations as they fall due. The Group maintains 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. For details of the Group's Liquidity Risk Management, please refer to Note 4.3 to the Financial Statements.

Operational risk management

Operational risk is the risk of loss resulting from inadequate or failed internal process, people and system, or from external events. The risk is inherent in every aspect of business operations and confronted by the Group in its day-to-day operational activities.

The Group has implemented the "Three Lines of Defence" for its operational risk management. All departments or functional units as the first line of defence are the first parties responsible for operational risk management, and carry out the duties and functions of self risk control in the process of business operation through self assessment and self enhancement. The Legal & Compliance and Operational Risk Management Department ("LCO"), together with certain specialist functional units in relation to operational risk management within the Group, including the Human Resources Department, Information Technology Department, Corporate Services Department, Financial Crime Compliance Department, Financial Management Department, Treasury and General Accounting & Accounting Policy Department (collectively known as "specialist functional units"), are the second line of defence. They are responsible for assessing and monitoring the operational risk conditions in the first line of defence, and providing them with guidance. The LCO, being independent from the business units, is responsible for assisting the Management in managing the Group's operational risk, including the establishment and review of the operational risk management policy and framework, designing the operational risk management tools and reporting mechanism, and assessing and reporting the overall operational risk position to the Management and RMC. Specialist functional units are required to carry out their managerial duties of the second line of defence with respect to some specific aspects of operational risk and its related issues. Besides taking charge of operational risk management in their own units, these units are also required to provide other units with professional advice/training in respect of certain operational risk categories and to lead the group-wide operational risk management. Group Audit is the third line of defence which provides independent assessment to the effectiveness and adequacy of the operational risk management framework and is required to conduct periodic audit of the operational risk management activities of various departments or functional units within the Group regarding their compliance and effectiveness and to put forward recommendations for remedial actions.

The Group has put in place an effective internal control process which requires the establishment of policies and control procedures for all the key activities. The Group adheres to the fundamental principle of proper segregation of duties and authorisation. The Group adopts various operational risk management tools or methodologies such as key risk indicators, self-assessment, operational risk events reporting and review to identify, assess, monitor and control the risks inherent in business activities and products, as well as purchase of insurance to mitigate unforeseeable operational risks. Business continuity plans are established to support business operations in the event of an emergency or disaster. Adequate backup facilities are maintained and periodic drills are conducted.

Reputation risk management

Reputation risk is the risk that negative publicity about the Group's business practices, whether genuine or not, will cause a potential decline in the customer base, or lead to costly litigation or revenue decrease. Reputation risk is inherent in other types of risk and every aspect of business operation and covers a wide spectrum of issues.

In order to mitigate reputation risk, the Group has formulated and duly followed its Reputation Risk Management Policy. The policy aims to identify and prevent reputation risk proactively at an early stage when an incident occurs. Since reputation risk is often caused by various types of operational and strategic issues that negatively impact the trust and perception of the Group, all operational and key risks identified are assessed through the established Key Control Self-Assessment framework, including risk assessment tools, to evaluate the severity of their impact on the Group, including the damage to reputation.

In addition, the Group has put in place a comprehensive framework to continuously monitor reputation risk incidents in the financial industry. This continuous monitoring enables the Group to effectively manage, control and mitigate any potential adverse impact from an incident. The Group also adopts robust disclosure practices to keep our stakeholders informed at all times, which helps build confidence in the Group and establish a strong public image.

Legal and compliance risk management

Legal risk is the risk that unenforceable contracts, lawsuits or adverse judgments may disrupt or otherwise negatively affect the operations or financial conditions of the Group. Compliance risk is the risk of legal or regulatory sanctions, financial losses or losses in reputation the Group may suffer as a result of its failure to comply with applicable laws and regulations. Legal and compliance risks are managed by the LCO, while the risks related to money laundering, terrorist financing and financial crimes including bribery and corruption are independently managed and monitored by the Financial Crime Compliance Department ("FCC"). Both LCO and FCC report directly to the CRO. As part of the Group's corporate governance framework, the policies for the management of legal and compliance risks, and money laundering, terrorist financing and financial crime compliance risks are approved by the RMC as delegated by the Board.

Strategic risk management

Strategic risk generally refers to the risks that may cause current or future negative impacts on the earnings, or capital or reputation or market position of the Group because of poor business decisions, improper implementation of strategies and inadequacies in the response to the changing market condition. The Board reviews and approves the strategic risk management policy. Key strategic issues have to be fully evaluated and properly endorsed by the senior management and the Board.

The Group regularly reviews its business strategies to cope with the latest market situation and developments.

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 Asset and Liability Management Committee ("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.

To comply with the HKMA's requirements as stated in the Supervisory Policy Manual "Supervisory Review Process", the Group adopts the internal capital adequacy assessment process ("ICAAP") and reviews it annually. 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.

Stress testing

The Group supplements the analysis of various types of risks with stress testing. Stress testing is a risk management tool for estimating risk exposures under stressed conditions arising from extreme but plausible market or macroeconomic movements. These tests are conducted on a regular basis by the Group's various risk management units in accordance with the principles stated in the Supervisory Policy Manual "Stress-testing" published by the HKMA. The ALCO monitors the results against the key risk limits approved by the RMC. The Financial Management Department reports the combined stress test results of the Group to the Board and RMC regularly.

BOC Life

BOC Life's principal business underwrites long-term insurance business in life and annuity (Class A), linked long term business (Class C), permanent health (Class D), retirement scheme management category I (Class G) and retirement scheme management category III (Class I) in Hong Kong. Major types of risk arising from BOC Life's insurance business are insurance risk, interest rate risk, liquidity risk, credit risk, equity price risk and currency risk. BOC Life closely monitors these risks and reports to its Risk Management Committee on a regular basis. Furthermore, BOC Life has regular communication with the Group to ensure consistency with the Group's risk management strategy. The key risks of its insurance business and related risk control process are as follows:

Insurance risk management

BOC Life is in the business of insuring against the risk of mortality, morbidity, disability, critical illness, accidents and related risks. These risks are managed through the application of 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 BOC Life'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.

The reinsurance arrangement transfers the insurance risk associated with the insurance contracts to the third party. It does not, however, discharge BOC Life's liability as the primary insurer. If a reinsurer fails to pay a claim for any reasons, BOC Life remains liable for the payment to the policyholder. The creditworthiness of reinsurers is considered by reviewing the reinsurers' financial strength prior to finalisation of any reinsurance contract. BOC Life directs its reinsurance placement policy and assesses the creditworthiness of all reinsurers and intermediaries by reviewing credit grades provided by rating agencies and other publicly available financial information. BOC Life also monitors the reinsurance counterparty risk exposure on an ongoing basis.

For details of the Group's Insurance Risk Management, please refer to Note 4.4 to the Financial Statements.

Interest rate risk management

An increase in interest rates may result in the depreciation of the value of BOC Life's investment assets. A decrease in interest rates may result in an increase in insurance liability and customer dissatisfaction due to decrease in returns. BOC Life manages the matching of assets and liabilities of its portfolios within an asset liability management framework that has been developed to achieve investment returns that match its obligations under insurance contracts; and to manage the adverse impact due to interest rate movement.

Liquidity risk management

BOC Life's liquidity risk is the risk of not being able to meet obligations as they fall due. BOC Life's asset and liability management framework includes cash flow management to preserve liquidity to match policy payout from time to time.

Credit risk management

BOC Life has exposure to credit risk that a customer, debtor or counterparty will be unable to or unwilling to meet a commitment that they have entered into. Key areas to which BOC Life's insurance business is exposed include:

- Default risk associated with bonds, notes and counterparties
- Credit spread widening as a result of credit migration (downgrade)
- Reinsurers' share of insurance unpaid liabilities
- Amounts due from reinsurers in respect of claims already paid
- Amounts due from insurance contract holders
- Amounts due from insurance intermediaries

BOC Life manages credit risk by placing limits on its exposure to each investment counterparty and issuer. Such limits are subject to review by the Management at least once a year.

Equity price risk management

BOC Life's equity price risk refers to the risk of loss due to volatility of market price in equity securities, equity funds and private equity. BOC Life's asset and liability management framework includes managing the adverse impact due to equity price movement through stress test and exposure limit.

Currency risk management

BOC Life's currency risk refers to the risk of loss due to volatility of exchange rate. BOC Life's asset and liability framework includes managing the adverse impact due to exchange rate movement through stress test, exposure limit and risk limit.