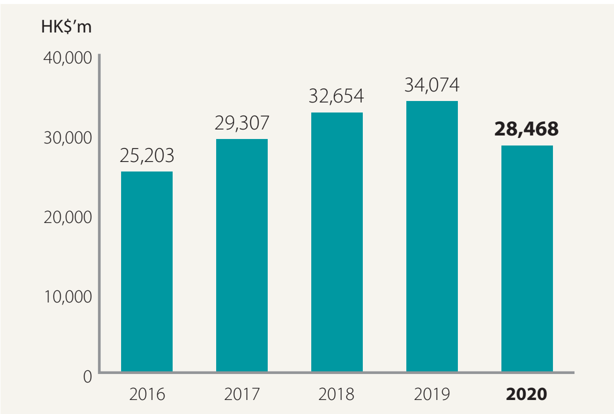
Management Discussion and Analysis

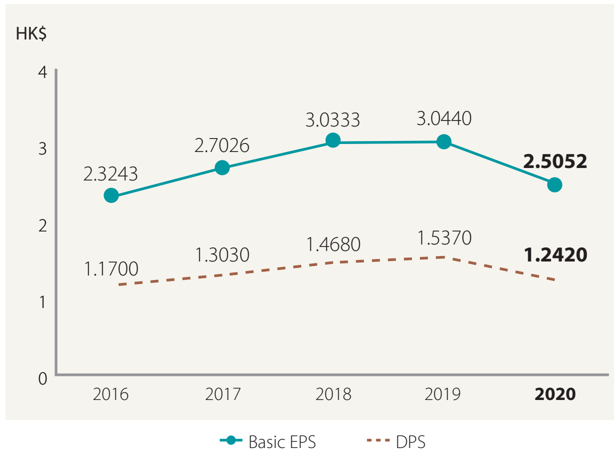
Financial Performance and Conditions at a Glance

The following table is a summary of the Group's key financial results for 2020 and the previous four years. The average value of liquidity coverage ratio and net stable funding ratio for 2020 are reported on a quarterly basis.

Profit For The Year



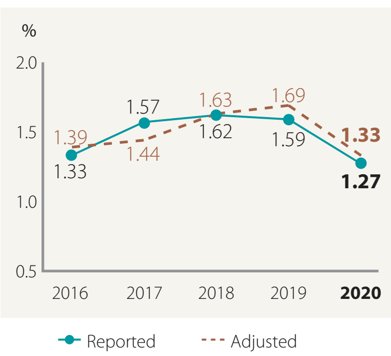
Basic Earnings Per Share ("Basic EPS")[1] and Dividend Per Share ("DPS")[2]



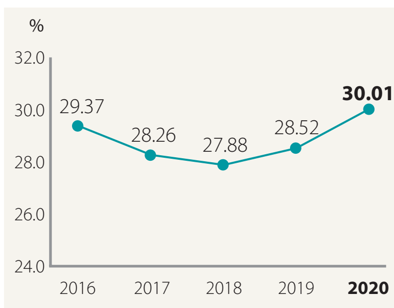
Profit for the year

- Profit for the year decreased by 16.5% year-on-year to HK$28,468 million. Return on average shareholders' equity[3] ("ROE") and return on average total assets[3] ("ROA") stood at 9.05% and 0.86% respectively. Basic EPS was HK$2.5052. DPS was HK$1.2420.

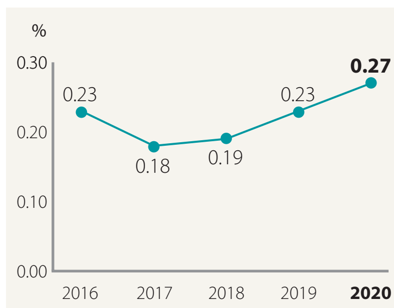
Net Interest Margin ("NIM")



Cost to Income Ratio



Classified or Impaired Loan Ratio[4]



as at 31 December

Adjusted net interest margin ("NIM") narrowed amid falling market interest rates

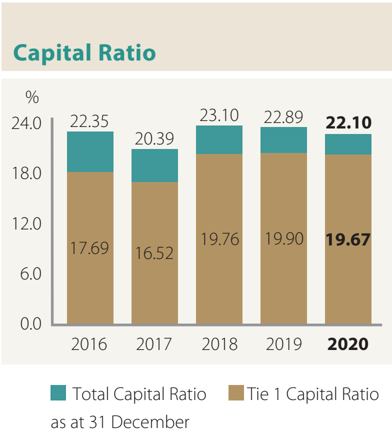
- NIM was 1.27%. If the funding income or cost of foreign currency swap contracts[5] were included, NIM would have been 1.33%, down 36 basis points year-on-year, as a result of falling market interest rates. The Group proactively managed its assets and liabilities in response to challenges in the market environment, resulting in solid growth in advances to customers and an improved mix of deposits from customers, partially offsetting the aforementioned negative impacts.

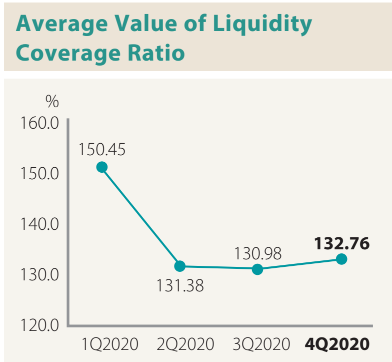
Enhancing operational efficiency through strengthened cost management

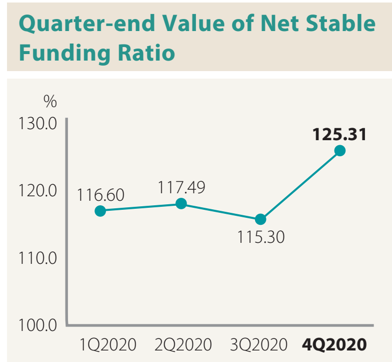
- Cost to income ratio was 30.01%. The Group strengthened cost management and ensured ongoing investment in its strategic priorities, maintaining its cost to income ratio at a satisfactory level relative to industry peers.

Maintaining solid asset quality through prudent risk management

- The classified or impaired loan ratio was 0.27%, remaining below the market average.







Strong capital position to support stable business growth

- Tier 1 capital ratio was 19.67%. Total capital ratio was 22.10%. Subordinated liabilities qualifying as Tier 2 capital instruments matured during the year.

Healthy liquidity position

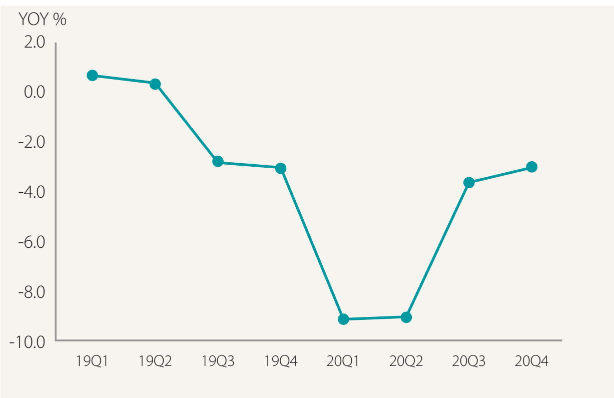
- The average value of the Group's liquidity coverage ratio and the quarter-end value of its net stable funding ratio exceeded regulatory requirements in each quarter of 2020.

1. Financial information is from continuing operations.
2. Excluding special dividend.
3. Return on average shareholders' equity and return on average total assets as defined in "Financial Highlights".
4. Classified or impaired advances to customers represent advances which are either classified as "substandard", "doubtful" or "loss" under the Group's classification of loan quality, or classified as Stage 3.
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

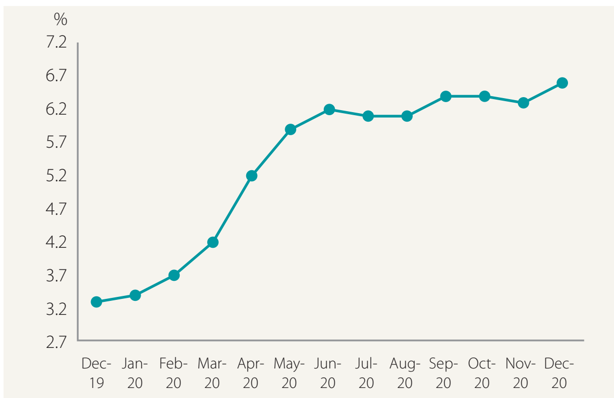
In 2020, the global economy was overwhelmed by the COVID-19 pandemic and fell into recession. At the same time, ongoing China-US tensions and rising political risks in certain countries increased uncertainty in the external environment. The US economy weakened and its labour market deteriorated amid the pandemic. In response, the Federal Reserve cut the federal funds rate to a range of 0 to 0.25%, resumed quantitative easing and enhanced credit support to enterprises. It also revised its forward guidance to allow inflation to run moderately above 2% for some time. The Eurozone economy was also affected by the pandemic, with the European Central Bank repeatedly increasing the scale of its asset purchases to cope with the headwinds. In the Mainland, the pandemic was brought under control earlier than in other countries. Following an economic contraction in the first quarter, the Mainland witnessed an orderly resumption of work and production, which led to positive economic growth from the second quarter onwards. Southeast Asian economies were also affected by the pandemic, with many countries cutting interest rates and introducing expansionary fiscal policies to ease the impacts of the economic downturn.

Hong Kong GDP Growth Rate



Source: HKSAR Census and Statistics Department

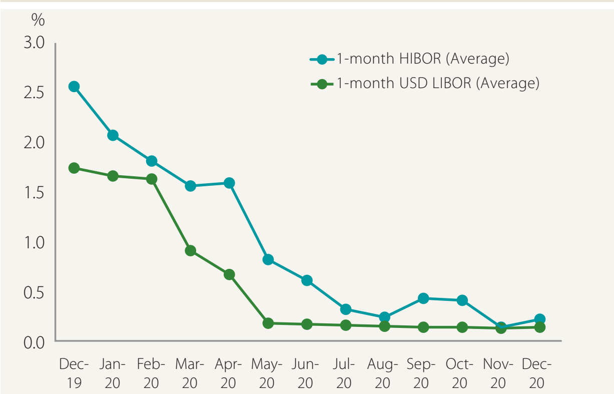
Hong Kong Unemployment Rate



Source: HKSAR Census and Statistics Department

The pandemic situation in Hong Kong was volatile throughout the year, which took a toll on Hong Kong's economy. Industries such as tourism, hotels, retail and imports and exports were severely affected by the travel restrictions and social distancing measures imposed, leading to a deep economic recession and a rise in the unemployment rate. The HKSAR Government introduced relief measures to cope with the challenges. This, coupled with a low interest rate environment, helped to alleviate the impact of the pandemic on the Hong Kong economy.

HIBOR and USD LIBOR



Source: Bloomberg

Movements in the exchange rate of the Hong Kong dollar against the US dollar repeatedly triggered the strong-side Convertibility Undertaking during the year. The Hong Kong Monetary Authority ("HKMA") sold Hong Kong dollars accordingly, thereby increasing the aggregate balance in Hong Kong's banking system, which amounted to HK$457.5 billion as at the end of 2020. The average 1-month HIBOR and 1-month LIBOR dropped from 1.89% and 2.22% respectively in 2019 to 0.85% and 0.52% respectively in 2020.

Regarding the Hong Kong stock market, the Hang Seng Index plummeted to its lowest level in over three years in late March. As countries around the world introduced proactive fiscal policies and central banks successively eased their monetary policies, global stock market performance rebounded and the decline in Hong Kong's stock market narrowed amid improving market sentiment. As at the end of 2020, the Hang Seng Index was down 3.4% compared with the end of the previous year. Against the backdrop of increased secondary listings by Chinese enterprises in Hong Kong, the total amount of funds raised and the average daily trading volume of the stock market jumped 63.7% and 48.6% respectively compared to the previous year.

In the property market, residential property prices were relatively stable given the widespread easing of monetary policies by central banks around the world and the persistently low interest rate environment for the Hong Kong dollar. The HKMA maintained prudent supervisory measures on mortgage loans, which helped banks to maintain stable asset quality in their mortgage businesses. Meanwhile, uncertainties arising from the economic downturn and the pandemic weakened rental demand for commercial properties, leading to a notable decline in the prices and transaction volumes of office and retail properties. The HKSAR Government announced the abolition of Double Stamp Duty on non-residential property transactions so as to mitigate the impact of the pandemic on the Hong Kong economy and local business activities.

Despite these challenges in the macroeconomic environment, the banking industry continues to enjoy enormous development opportunities. *The Opinions on Providing Financial Support for the Development of the Guangdong-Hong Kong-Macao Greater Bay Area*, jointly published by authorities including the People's Bank of China ("PBOC") in May, along with the launch of the "Wealth Management Connect" pilot scheme for the Guangdong-Hong Kong-Macao Greater Bay Area in June, will promote mutual financial market access in the Greater Bay Area and expand market horizons for the Hong Kong banking industry. In addition, the HKSAR Chief Executive's Policy Address announced plans to expand the scope of stocks eligible for trading under the Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect, which is expected to add new impetus to Hong Kong's capital markets. In addition, the HKMA continues to deepen the implementation of "A New Era of Smart Banking" and to promote the phased growth of "Green and Sustainable Banking", which will give rise to more development opportunities for the banking industry.

Consolidated Financial Review

Financial Highlights

HK$'m, except percentages	2020	2019	Change (%)
Net operating income before impairment allowances	**54,474**	58,444	(6.8)
Operating expenses	**(16,347)**	(16,667)	(1.9)
Operating profit before impairment allowances	**38,127**	41,777	(8.7)
Operating profit after impairment allowances	**35,420**	39,755	(10.9)
Profit before taxation	**33,583**	40,088	(16.2)
Profit for the year	**28,468**	34,074	(16.5)
Profit attributable to equity holders of the Company	**26,487**	32,184	(17.7)

In 2020, the Group's profit for the year amounted to HK$28,468 million, a decrease of HK$5,606 million or 16.5% year-on-year. Profit attributable to equity holders was HK$26,487 million, a decrease of HK$5,697 million or 17.7% year-on-year. Net charge of impairment allowances increased year-on-year, as the result of a weakened macroeconomic outlook. Fair-value adjustments on investment properties recorded a net loss, as compared with a net gain last year. Net operating income before impairment allowances was HK$54,474 million, a decrease of HK$3,970 million or 6.8% year-on-year. This was mainly due to a year-on-year decrease in net interest income, resulting from falling market interest rates. Net fee and commission income fell moderately, mainly due to the impact of the COVID-19 pandemic and economic downturn. The Group captured market opportunities to dispose of certain debt securities investments and realised a higher net gain which partially offset the aforementioned decrease in income. The Group continued to invest in support of its long-term business growth. Operating expenses decreased by 1.9% on a year-on-year basis, reflecting the Group's ongoing commitment to invest in its strategic priorities, while always maintaining stringent cost control.

Second Half Performance

In the second half of 2020, the Group's net operating income before impairment allowances decreased by HK$3,012 million or 10.5%, compared to the first half of 2020, mainly due to a decrease in net interest income. Moreover, operating expenses increased from the first half of the year, while the net loss from fair-value adjustments on investment properties expanded. As a result, the Group's profit after taxation decreased by HK$3,854 million or 23.8% on a half-on-half basis.

Income Statement Analysis

Net Interest Income and Net Interest Margin

HK$'m, except percentages	2020	2019	Change (%)
Interest income	49,928	67,784	(26.3)
Interest expense	(15,190)	(27,261)	(44.3)
Net interest income	34,738	40,523	(14.3)
Average interest-earning assets	2,737,726	2,551,288	7.3
Net interest spread	1.16%	1.37%	
Net interest margin	1.27%	1.59%	
Net interest margin (adjusted)*	1.33%	1.69%	

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

Net interest income amounted to HK$34,738 million in 2020. If the funding income or cost of foreign currency swap contracts# were included, net interest income would have decreased by 15.6% year-on-year to HK$36,374 million. This was mainly due to a narrowing of net interest margin, partially offset by growth in average interest-earning assets.

Average interest-earning assets expanded by HK$186,438 million or 7.3% year-on-year. Advances to customers increased, driven by growth in deposits from customers.

Net interest margin was 1.27%. If the funding income or cost of foreign currency swap contracts were included, net interest margin would have been 1.33%, down 36 basis points year-on-year. This was mainly due to falling market interest rates and intense market competition for deposits and loans, resulting in a narrowing of the loan and deposit spread. In addition, the average yield of debt securities investments and other debt instruments dropped and the contribution from net free funds decreased, which also adversely affected net interest margin. The Group proactively managed its assets and liabilities and gave full play to its competitive edges in customer base and regional development in response to challenges in the market environment, resulting in a solid growth in advances to customers and an improved deposit mix with a higher CASA ratio, partially offsetting the negative impacts.

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:

	2020		2019	
ASSETS	Average balance HK$'m	Average yield %	Average balance HK$'m	Average yield %
Balances and placements with banks and other financial institutions	351,515	0.88	319,492	1.76
Debt securities investments and other debt instruments	849,401	1.76	864,637	2.36
Advances to customers and other accounts	1,518,246	2.08	1,345,060	3.06
Other interest-earning assets	18,564	1.20	22,099	2.58
Total interest-earning assets	2,737,726	1.82	2,551,288	2.66
Non interest-earning assets	557,334	–	419,912	–
Total assets	3,295,060	1.51	2,971,200	2.28

LIABILITIES	Average balance HK$'m	Average rate %	Average balance HK$'m	Average rate %
Deposits and balances from banks and other financial institutions	198,804	0.56	191,461	1.18
Current, savings and time deposits	2,082,314	0.65	1,865,178	1.26
Subordinated liabilities	1,452	5.51	13,093	5.49
Other interest-bearing liabilities	28,917	1.27	39,505	1.74
Total interest-bearing liabilities	2,311,487	0.66	2,109,237	1.29
Shareholders' funds* and other non interest-bearing deposits and liabilities	983,573	–	861,963	–
Total liabilities	3,295,060	0.46	2,971,200	0.92

* Shareholders' funds represent capital and reserves attributable to the equity holders of the Company.

Second Half Performance

If the funding income or cost of foreign currency swap contracts were included, the Group's net interest income would have decreased by HK$3,262 million or 16.5% compared to the first half of 2020. This was mainly due to a narrowing in net interest margin of 34 basis points to 1.16%, which was partially offset by growth in average interest-earning assets. The average yield of advances to customers and debt securities investments and other debt instruments dropped amid falling market interest rates. The Group proactively optimised its deposit mix and achieved a higher CASA ratio, resulting in lower deposit costs which partially offset the aforementioned negative impacts.

Net Fee and Commission Income

HK$'m, except percentages	2020	2019	Change (%)
Securities brokerage	**3,567**	2,113	68.8
Loan commissions	**2,310**	2,675	(13.6)
Credit card business	**1,859**	2,975	(37.5)
Insurance	**1,272**	2,111	(39.7)
Funds distribution	**897**	901	(0.4)
Payment services	**740**	716	3.4
Trust and custody services	**689**	651	5.8
Bills commissions	**591**	700	(15.6)
Safe deposit box	**306**	294	4.1
Currency exchange	**226**	599	(62.3)
Others	**1,058**	1,267	(16.5)
Fee and commission income	**13,515**	15,002	(9.9)
Fee and commission expense	**(2,673)**	(4,083)	(34.5)
Net fee and commission income	**10,842**	10,919	(0.7)

In 2020, net fee and commission income amounted to HK$10,842 million, down HK$77 million or 0.7% year-on-year. This was mainly due to the impact of the COVID-19 pandemic and economic downturn, which adversely affected the tourism, retail and trade sectors, resulting in a drop in commission income from currency exchange, credit card business and bills of 62.3%, 37.5% and 15.6% respectively. Commission income from insurance decreased by 39.7% amid lower sales volumes, as changes in market interest rates adversely affected returns of insurance products. Loan commissions also decreased by 13.6% as the number of large-scale financing projects dropped. However, commission income from securities brokerage increased by 68.8% amid increased stock market transaction volumes during the year. Assets under management ("AUM") relating to the Group's trust and custody business expanded as it captured business opportunities from mutual market access schemes, with related income increasing by 5.8%. Commission income from payment services was up 3.4% as a result of the Group's efforts to accelerate the development of its cash management business and the satisfactory growth in its cash pooling business. Fee and commission expenses fell, mainly due to a drop in credit card and insurance related expenses as a result of lower business volume.

Second Half Performance

Compared with the first half of 2020, net fee and commission income decreased by HK$28 million or 0.5%, which was mainly due to a decrease in commission income from loans, insurance and currency exchange. Commission income from securities brokerage increased amid higher transaction volumes in the stock market. Commission income from trust and custody services, bills, payment services, funds distribution and credit card business also grew. Fee and commission expenses decreased due to lower insurance related expenses.

Net Trading Gain

HK$'m, except percentages	2020	2019	Change (%)
Foreign exchange and foreign exchange products	5,282	4,931	7.1
Interest rate instruments and items under fair value hedge	(619)	(578)	(7.1)
Commodities	361	366	(1.4)
Equity and credit derivative instruments	150	81	85.2
Total net trading gain	5,174	4,800	7.8

Net trading gain amounted to HK$5,174 million, an increase of HK$374 million or 7.8% year-on-year. Net trading gain from foreign exchange and foreign exchange products increased by HK$351 million, which was primarily attributable to an increase in the mark-to-market value of foreign exchange products. Net trading loss from interest rate instruments and items under fair value hedge expanded year-on-year, primarily due to changes in the mark-to-market value of certain debt securities investments and interest rate instruments caused by market interest rate movements. Net trading gain from commodities decreased, mainly due to a lower gain from bullion transactions. Net trading gain from equity and credit derivative instruments increased by HK$69 million, with higher income realised from equity-linked products. If the funding income or cost of foreign currency swap contracts were excluded, net trading gain would have increased by 58.2% year-on-year to HK$3,538 million.

Second Half Performance

Compared with the first half of 2020, net trading gain increased by HK$514 million or 22.1%. This was mainly attributable to changes in the mark-to-market value of certain debt securities investments and interest rate instruments caused by market interest rate movements. If the funding income or cost of foreign currency swap contracts were excluded, net trading gain would have increased by 108.2% from the first half of the year to HK$2,390 million.

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

HK$'m, except percentages	2020	2019	Change (%)
Net gain on other financial instruments at fair value through profit or loss	1,959	3,243	(39.6)

Net gain on other financial instruments at fair value through profit or loss decreased by HK$1,284 million or 39.6% in 2020. The change was mainly due to a drop in the mark-to-market gain of BOC Life's debt securities related investments. The mark-to-market changes of the debt securities investments mentioned above were offset by changes to BOC Life's policy reserves, attributable to market interest rate movements, which were reflected in changes in net insurance benefits and claims as well as movements in liabilities.

Second Half Performance

A net gain of HK$1,757 million was recorded in the second half of the year, which was HK$1,555 million higher than the net gain recorded in the first half. This change was mainly attributable to the higher gain from BOC Life's equity securities and bond fund investments as the market was relatively stable in the second half of the year, which was partially offset by the decreased mark-to-market gain of its debt securities investments.

Operating Expenses

HK$'m, except percentages	2020	2019	Change (%)
Staff costs	9,461	9,364	1.0
Premises and equipment expenses (excluding depreciation)	1,235	1,542	(19.9)
Depreciation	3,040	2,881	5.5
Other operating expenses	2,611	2,880	(9.3)
Operating expenses	16,347	16,667	(1.9)

	At 31 December 2020	At 31 December 2019	Change (%)
Staff headcount measured in full-time equivalents	14,915	14,668	1.7

Operating expenses amounted to HK$16,347 million, a decrease of HK$320 million or 1.9% year-on-year. The Group continued to invest in support of its long-term business growth. While maintaining its ongoing investment in its strategic priorities, including digital transformation and fintech innovation, the Group strengthened its cost management in order to maintain operational efficiency. The cost to income ratio was 30.01%, which remained at a satisfactory level relative to industry peers.

Staff costs increased by 1.0% year-on-year, mainly due to annual salary increment and increased headcount. The increase was also due to higher staff allowances and welfare expenses.

Premises and equipment expenses decreased by 19.9%. Following the adoption of Hong Kong Financial Reporting Standard 16 ("HKFRS 16"), "Leases", leases for use of premises are accounted for as a right-of-use asset, with related rental expenses recognised as the depreciation of the right-of-use asset. However, some of the short-term leases, leases of low-value assets and variable lease payments continued to be recognised as rental expenses in 2019. Rental expenses decreased year-on-year subsequent to the expiration of these leases. The decrease in rental expenses was partially offset by the increase in maintenance expenses.

Depreciation increased by 5.5%, mainly due to the impact of HKFRS 16, and increased depreciation charges on premises. Investment in strategic priorities also led to an increase in depreciation charges on information technology.

Other operating expenses decreased by 9.3%, mainly due to a notable decrease in advertising and business promotional expenses, while other major business expenses also decreased.

Second Half Performance

Compared with the first half of 2020, operating expenses increased by HK$1,169 million or 15.4%. The increase was mainly due to higher staff costs, increased investment in information technology and charitable donations. Marketing and promotional activities also gradually resumed during the second half, leading to an increase in related expenses.

Net Charge of Impairment Allowances on Advances and Other Accounts

HK$'m, except percentages	2020	2019	Change (%)
Stage 1	(898)	(701)	28.1
Stage 2	(754)	21	N/A
Stage 3	(837)	(1,172)	(28.6)
Net charge of impairment allowances on advances and other accounts	(2,489)	(1,852)	34.4

Total Loan Impairment Allowances as a Percentage of Advances to Customers

	At 31 December 2020	At 31 December 2019
Total loan impairment allowances as a percentage of advances to customers	0.61%	0.50%

In 2020, the Group's net charge of impairment allowances on advances and other accounts amounted to HK$2,489 million, an increase of HK$637 million or 34.4% year-on-year. Impairment allowances at Stage 1 recorded a net charge of HK$898 million, up HK$197 million year-on-year. The outbreak of COVID-19 shocked the global economy, resulting in a year-on-year drop in GDP and a disruption in business activities which adversely affected the profitability and liquidity of the Group's corporate clients. The rise in the unemployment rate also affected the credit quality of the Group's retail clients. The Group prudently updated the parameter values of its expected credit loss model to take into consideration the increased uncertainty in macroeconomic outlook, resulting in an increase in the net charge of impairment allowances. Impairment allowances at Stage 2 recorded a net charge of HK$754 million, as compared to a net reversal of HK$21 million last year, mainly reflecting the impact of changes to the internal ratings of certain customers. Impairment allowances at Stage 3 amounted to a net charge of HK$837 million, a decrease of HK$335 million year-on-year, mainly due to the downgrading of certain corporate advances last year, resulting in a higher base for comparison. Credit cost of advances to customers was 0.16%, up 2 basis points year-on-year. As at 31 December 2020, the Group's total loan impairment allowances as a percentage of advances to customers was 0.61%.

Second Half Performance

Compared with the first half of 2020, the Group's net charge of impairment allowances on advances and other accounts decreased by HK$133 million. This was mainly because the parameter values of the expected credit loss model were relatively stable in the second half of the year as compared to those in the first half, and because of a relatively higher loan growth in the first half of the year.

Analysis of Assets and Liabilities

The table below summarises the Group's asset composition. 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 42 to the Financial Statements for the contractual amounts of each significant class of contingent liability and commitment and the aggregate credit risk-weighted amounts.

Asset Composition

	At 31 December 2020		At 31 December 2019		
HK$'m, except percentages	Amount	% of total	Amount	% of total	Change (%)
Cash and balances and placements with banks and other financial institutions	**463,711**	**14.0**	366,829	12.1	26.4
Hong Kong SAR Government certificates of indebtedness	**189,550**	**5.7**	163,840	5.4	15.7
Securities investments and other debt instruments[1]	**940,699**	**28.3**	886,846	29.3	6.1
Advances and other accounts	**1,500,416**	**45.2**	1,412,961	46.7	6.2
Fixed assets and investment properties	**65,296**	**2.0**	71,712	2.4	(8.9)
Other assets[2]	**161,309**	**4.8**	123,868	4.1	30.2
Total assets	**3,320,981**	**100.0**	3,026,056	100.0	9.7

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.

As at the end of 2020, the total assets of the Group amounted to HK$3,320,981 million, an increase of HK$294,925 million or 9.7% compared with the prior year end. Cash and balances and placements with banks and other financial institutions increased by HK$96,882 million or 26.4%, mainly due to an increase in balances with banks and central banks. Securities investments and other debt instruments increased by HK$53,853 million or 6.1%, as the Group increased investments in government-related bonds. Advances and other accounts rose by HK$87,455 million or 6.2%, with advances to customers growing by HK$101,981 million or 7.3% and trade bills decreasing by HK$10,901 million or 52.6%. Other assets increased by HK$37,441 million or 30.2%, as a result of an increase in reinsurance assets and accounts receivable of clearing items.

Advances to Customers

HK$'m, except percentages	At 31 December 2020 Amount	At 31 December 2020 % of total	At 31 December 2019 Amount	At 31 December 2019 % of total	Change (%)
Loans for use in Hong Kong	**991,457**	**66.2**	924,734	66.3	7.2
Industrial, commercial and financial	**539,633**	**36.0**	515,548	37.0	4.7
Individuals	**451,824**	**30.2**	409,186	29.3	10.4
Trade financing	**66,497**	**4.4**	75,764	5.4	(12.2)
Loans for use outside Hong Kong	**439,910**	**29.4**	395,385	28.3	11.3
Total advances to customers	**1,497,864**	**100.0**	1,395,883	100.0	7.3

Striving to be customer-centric at all times, the Group continued to enhance services to its personal and corporate clients in Hong Kong in order to meet high-quality loan demand. It actively supported the HKSAR Government's launch of various relief measures by navigating difficult times alongside SMEs and personal customers. In addition, the Group enhanced cross-border collaboration and integrated marketing to seize opportunities arising from the loan needs of key industries and clients in the Greater Bay Area, while further leveraging its role as BOC's Asia-Pacific Syndicated Loan Centre to arrange syndicated loans for large local corporates in Southeast Asia. During the year, the Group remained the top mandated arranger in the Hong Kong-Macao syndicated loan market and captured the top market position in terms of the total number of new mortgage loans in Hong Kong. Advances to customers grew by HK$101,981 million, or 7.3%, to HK$1,497,864 million in 2020.

Loans for use in Hong Kong grew by HK$66,723 million or 7.2%.

- Lending to the industrial, commercial and financial sectors increased by HK$24,085 million or 4.7%, reflecting loans growth in property investment, manufacturing, transport and transport equipment and information technology.

- Lending to individuals increased by HK$42,638 million, or 10.4%, mainly driven by growth in residential mortgage loans.

Trade financing decreased by HK$9,267 million or 12.2%. Loans for use outside Hong Kong grew by HK$44,525 million or 11.3%, mainly driven by growth in loans for use in the Mainland and Southeast Asia.

Loan Quality

HK$'m, except percentages	At 31 December 2020	At 31 December 2019
Advances to customers	**1,497,864**	1,395,883
Classified or impaired loan ratio	**0.27%**	0.23%
Total impairment allowances	**9,172**	7,035
Total impairment allowances as a percentage of advances to customers	**0.61%**	0.50%
Residential mortgage loans[1] – delinquency and rescheduled loan ratio[2]	**0.01%**	0.01%
Card advances – delinquency ratio[2]	**0.23%**	0.27%

	2020	2019
Card advances – charge-off ratio[3]	**1.91%**	1.40%

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.

In view of the ongoing COVID-19 pandemic and the complex and challenging external environment, the Group continuously enhanced its risk management and proactively strengthened its risk management systems for all types of risks. Asset quality remained benign during the year. As at 31 December 2020, classified or impaired loans amounted to HK$3,994 million, up HK$777 million from the end of last year. The classified or impaired loan ratio was 0.27%, up 0.04 percentage points from the end of last year. The combined delinquency and rescheduled loan ratio of residential mortgage loans was 0.01%. The charge-off ratio of card advances was 1.91%, up 0.51 percentage points year-on-year.

Deposits from Customers

HK$'m, except percentages	At 31 December 2020		At 31 December 2019		Change (%)
	Amount	% of total	Amount	% of total	
Demand deposits and current accounts	310,226	14.2	207,013	10.3	49.9
Savings deposits	1,149,035	52.6	900,009	44.8	27.7
Time, call and notice deposits	724,448	33.2	902,251	44.9	(19.7)
Total deposits from customers	2,183,709	100.0	2,009,273	100.0	8.7

In 2020, the Group continued to acquire local customers in Hong Kong by expanding its mid- to high-end customer base. It strengthened cooperation with government authorities, large corporates, major central banks, international financial institutions and sovereign funds through a diversified range of services, including payroll, e-payment and payment collection services. At the same time, it actively leveraged its role as a main receiving bank for IPOs and expanded its cash management and cash pooling business, leading to satisfactory growth in current accounts and savings deposits from both personal and corporate clients. At the end of 2020, total deposits from customers amounted to HK$2,183,709 million, an increase of HK$174,436 million or 8.7% from the end of last year. Demand deposits and current accounts increased by 49.9%. Savings deposits increased by 27.7%. Time, call and notice deposits decreased by 19.7%. The CASA ratio was 66.8%, an increase of 11.7 percentage points from the end of last year.

Capital and Reserves Attributable to Equity Holders of the Company

HK$'m, except percentages	At 31 December 2020	At 31 December 2019	Change (%)
Share capital	52,864	52,864	–
Premises revaluation reserve	38,048	39,458	(3.6)
Reserve for fair value changes	1,726	69	2,401.4
Reserve for own credit risk	–	(33)	100.0
Regulatory reserve	4,780	11,077	(56.8)
Translation reserve	(503)	(581)	13.4
Retained earnings	193,387	175,929	9.9
Reserves	237,438	225,919	5.1
Capital and reserves attributable to equity holders of the Company	290,302	278,783	4.1

Capital and reserves attributable to equity holders of the Company amounted to HK$290,302 million as at 31 December 2020, an increase of HK$11,519 million or 4.1% from the end of last year. The premises revaluation reserve decreased by 3.6%, reflecting a decrease in the valuation of commercial premises in 2020. Reserve for fair value changes increased, mainly driven by the impact of market interest rate movements on debt instruments at fair value through other comprehensive income. The regulatory reserve decreased by 56.8%, mainly due to the HKMA's relaxation of the regulatory reserve requirement, which also led to a corresponding increase in retained earnings. Retained earnings rose by 9.9% from the end of last year, mainly reflecting the profit achieved in 2020 after the distribution of dividends, and the reversal from regulatory reserve.

Capital Ratio

HK$'m, except percentages	At 31 December 2020	At 31 December 2019
Consolidated capital after deductions		
Common Equity Tier 1 capital	**216,542**	195,039
Additional Tier 1 capital	**23,476**	23,476
Tier 1 capital	**240,018**	218,515
Tier 2 capital	**29,558**	32,855
Total capital	**269,576**	251,370
Total risk-weighted assets	**1,220,000**	1,098,018
Common Equity Tier 1 capital ratio	**17.75%**	17.76%
Tier 1 capital ratio	**19.67%**	19.90%
Total capital ratio	**22.10%**	22.89%

As at 31 December 2020, Common Equity Tier 1 ("CET1") capital and Tier 1 capital increased by 11.0% and 9.8% respectively from the end of last year, which was primarily attributable to profits recorded for 2020 and the HKMA's relaxation of its regulatory reserve requirement. Total capital increased by 7.2%, as subordinated liabilities qualifying as Tier 2 capital instruments matured during the year, resulting in lower growth in total capital. Total risk-weighted assets ("RWAs") increased by 11.1% in 2020, mainly driven by growth in advances to customers and the impact of changes to the internal ratings of certain loan customers. The CET1 capital ratio was 17.75% and Tier 1 capital ratio was 19.67%, down 0.01 and 0.23 percentage points respectively from the end of 2019. Total capital ratio was 22.10%, down 0.79 percentage points from the prior year-end. The Group continued to review its capital structure and manage the growth of its RWAs so as to maintain an appropriate capital level to support its sustainable business development while balancing returns to equity holders.

Liquidity Coverage Ratio and Net Stable Funding Ratio

	2020	2019
Average value of liquidity coverage ratio		
First quarter	**150.45%**	183.00%
Second quarter	**131.38%**	156.57%
Third quarter	**130.98%**	142.85%
Fourth quarter	**132.76%**	146.53%

	2020	2019
Quarter-end value of net stable funding ratio		
First quarter	**116.60%**	121.36%
Second quarter	**117.49%**	119.15%
Third quarter	**115.30%**	116.47%
Fourth quarter	**125.31%**	118.00%

The Group's liquidity position remained sound, with the average value of its liquidity coverage ratio and the quarter-end value of its net stable funding ratio exceeding the regulatory requirements for all four quarters of 2020.

Business Review

Against the backdrop of a complex and challenging environment, the Group actively responded to changes in the market environment, strengthened the execution of its strategic plans and steadily pushed forward its business priorities. The Group continued to develop its core market in Hong Kong and fully supported the development of the real economy. It captured new opportunities from the Guangdong-Hong Kong-Macao Greater Bay Area with the aim of becoming cross-border customers' first-choice bank in the Greater Bay Area. The Group gave full play to its regional synergies in Southeast Asia and made use of its proven businesses to push forward its integrated regional development. It deepened the applications of scenario-based ecosystems and expedited its digital transformation. It also constantly optimised its environmental, social and governance ("ESG") structure and targets, and promoted green and sustainable development. At the same time, the Group closely monitored market changes and strengthened its risk and compliance control.

Business Segment Performance

Profit before Taxation by Business Segment

HK$'m, except percentages	2020	% of total	2019	% of total	Change (%)
Personal Banking	11,017	32.8	11,234	28.0	(1.9)
Corporate Banking	13,035	38.8	15,309	38.2	(14.9)
Treasury	9,361	27.9	12,064	30.1	(22.4)
Insurance	854	2.5	701	1.8	21.8
Others	(684)	(2.0)	780	1.9	N/A
Total profit before taxation	33,583	100.0	40,088	100.0	(16.2)

Note: For additional segmental information, see Note 46 to the Financial Statements.

Personal Banking

Financial Results

Personal Banking achieved a profit before tax of HK$11,017 million in 2020, a decrease of HK$217 million or 1.9% year-on-year. This was mainly due to a decrease in net interest income, which resulted in a drop in net operating income, as well as an increase in net charge of impairment allowances. Operating expenses decreased, partially offsetting the negative impact.

Net interest income decreased by 2.5%, mainly due to a narrowing of the deposit spread as a result of falling market interest rates. This decrease was, however, partially offset by an improvement in the loan spread as well as growth in the average balance of loans and deposits. Net fee and commission income increased moderately by 0.2%, which was mainly attributable to a satisfactory increase in commission income from securities brokerage amid higher transaction volumes in the stock market, although this was partially offset by a drop in commission income from the insurance and credit card businesses. Net trading gain increased by 27.2%, owing to an increase in currency exchange income from customer transactions. Operating expenses were down 1.4%, mainly due to a decrease in business-related expenses. Net charge of impairment allowances amounted to HK$421 million, up HK$70 million year-on-year, owing to an increase in impairment allowances linked to heightened uncertainty in the macroeconomic outlook.

Business operations

Providing full support to pandemic relief and addressing people's livelihood banking needs

The Group took the lead in launching a number of financial support and relief initiatives, including those to benefit livelihoods such as a principal repayment moratorium for mortgage loans, grace periods for insurance premium payments, and additional insurance protection, with the aim of offering multi-faceted support to individual customers affected by the pandemic and helping customers to navigate through difficult times. It collaborated with the HKSAR Government's HK$10,000 Cash Payout Scheme, using its mobile and internet banking channels as well as its 169 branches to assist the general public in registering for the scheme. In addition, it was the only bank to offer cheque encashment services for the scheme, helping individuals to register for and collect the payment conveniently. The Group fully supported the HKSAR Government's issuance of iBonds and Silver Bonds, facilitating subscription through its new mobile banking channel, internet banking, investment hotlines and all of its branches, so as to better meet the needs of different customers. It was the only agent bank for the One-off Allowance for New Arrivals from Low-income Families Programme under the Community Care Fund, providing electronic application forms and branch services for eligible customers to register for the programme. To meet the general public's financial needs while ensuring the safety of its customers and staff, the Group provided maximum branch services during the pandemic and extended e-channel service hours for account opening and certain other transactions. It also enriched the service scope of its e-channels, including launching a remote application service for its Qualifying Deferred Annuity Policy and Voluntary Health Insurance Scheme products, and broadening the range of insurance and investment products available online.

Giving full play to online and offline competitive advantages and optimising customer segment services

In response to customer needs, the Group adjusted its service channel strategy by successfully introducing mobile terminals in all branches and setting up eZones in its 181 branches, as well as piloting intelligent counters in certain branches, so as to enhance customer experience and provide customers with tailored online and offline services. During the year, in line with the launch of a brand new premium Private Wealth service for high-end customers, which, along with the newly launched Private Wealth Centre, the Group offers diversified services including investment, wealth management, legacy planning, cross-border property purchase and fashionable lifestyle benefits. Through an exclusive team of wealth management experts, the Private Wealth service provides high-end customers with supreme services by offering professional, exclusive and privileged services, products and experiences. The Group further expanded its customer base, with the number of mid- to high-end customers at the end of 2020 maintaining double-digit percentage growth from the end of last year. By continuously enriching and integrating data resources and strengthening its big data AI infrastructure, the Group offered bespoke products and services according to customers' preferences and behaviours, with a view to enhancing customer activation and loyalty. It remained committed to developing the local customer segment in order to strengthen its core product advantages, thus achieving steady growth in customer deposits, maintaining its top market position in terms of total number of new residential mortgage loans, and recording notable year-on-year growth in the online transaction volumes of key investment products such as equity securities and funds. During the year, BOCHK was awarded The Best Big Data or AI Initiative in the Excellence in Retail Financial Services International Awards 2020 by *The Asian Banker*.

The Group's private banking business maintained steady growth. By enhancing its collaboration with other business units within the Group, it was able to strengthen its value chain for high-net-worth clients and provide them and their families with professional private banking services. By integrating the development of green finance and environmental, social and governance standards into product design and services, the Group enriched its exclusive private banking products. In addition, it continued to promote digital development, expand its exclusive product range and build its talent pool. The number of customers continued to grow during the year. As at the end of 2020, private banking's AUM increased 14.3% from the previous year-end.

Promoting scenario-based application of products to accelerate customer migration to online transactions

The Group closely monitored changes in the market environment during the pandemic and accelerated its development into a digital bank. To meet rapid growth in customer demand for online transactions, the Group adopted a mobile first strategy by enhancing the personal account opening service, payment, wealth management and cross-border service functions of its mobile banking so as to meet customer needs under various financial scenarios. It launched a new personalised design for mobile banking, introduced brand new features such as one-click binding with BoC Pay, QR cardless cash withdrawal and BoC Live, and enriched its online insurance products in order to provide a more personalised and convenient mobile banking experience to customers. In 2020, the total number of transactions conducted via mobile banking increased by over 70% year-on-year and the monthly average number of online mortgage applications was more than double that of last year. The Group remained committed to driving the application of innovative technologies towards delivering efficient and smart banking services. It utilised open Application Programme Interface ("API") technology to expand cross-platform business. In line with the HKMA's Phase II of Open API, it strengthened cooperation with third-party service providers to provide customers with a higher quality wealth management experience. The Group cooperated extensively with online real estate agency platforms, external economic and financial application softwares, product comparison websites and comprehensive service platforms to expand its cross-platform functions, including property purchase planning, securities and foreign exchange trading services and online loan application, and to enrich its product scenario-based applications. It launched a developers' portal and opened up access to more than 90 open APIs. During the year, BOCHK was awarded Mobile Banking & Payment Initiative of the Year – Hong Kong in *Asian Banking & Finance*'s Retail Banking Awards 2020.

Promoting integrated development and collaboration in the Greater Bay Area and enhancing the cross-border financial services experience

The Group actively responded to financial policies for the Guangdong-Hong Kong-Macao Greater Bay Area and continuously optimised the cross-border services experience in order to meet the various spending, lifestyle and investment needs of Hong Kong residents in the Greater Bay Area. During the year, the Group continuously enhanced the customer experience of the Greater Bay Area Account Opening Service ("GBA Account Opening Service"), its Mainland personal account opening attestation service, by supporting a digital account opening application process, as well as allowing the use of Hong Kong mobile phone numbers for applications. Upon successful application, customers are able to link their account to e-wallets in the Mainland for instant handling of daily shopping, bill and online shopping payments. These service enhancements aim to fulfil the livelihood financial needs of Hong Kong residents who travel, work or live in the Greater Bay Area. The Group enriched BoC Pay's application scenarios in the Greater Bay Area with the launch of a cross-border personal remittance service that supports instant fund transfers. To support Hong Kong customers' demand for purchasing properties in the Greater Bay Area, the Group continuously optimised the Greater Bay Area Personal Loan mortgage service, which enhances the full process of service experience in property viewing, contract signing, payment and mortgage services. During the year, BOCHK was awarded Excellent Wealth Management Bank and Excellent Greater Bay Area Financial Service at the Financial Services Awards of Excellence 2020 by *Hong Kong Economic Journal*.

Enriching products and services and strengthening the foundation for future regional business growth

The Group continued to strengthen regional collaboration and optimise regional cross-border services. It expanded its cross-border attestation service to allow customers in Southeast Asian countries such as Indonesia, the Philippines, Vietnam and Brunei to open personal accounts with BOCHK and also BOCHK customers to open personal accounts with BOC Malaysia and BOC's entities in Macao, Australia and Canada and vice versa, with the aim of meeting customer demand for overseas property purchases, investments and study. The Group enriched its regional wealth management services, with BOC Malaysia offering a number of new funds and bonds, including its first RMB fund. It accelerated digital development in Southeast Asia and achieved steady progress in its regional mobile payment project, with BOC Malaysia participating in an instant fund transfer service through local payment system DuitNow and becoming the first local financial institution to launch cross-border UnionPay QR code payment service. BOC Thailand introduced PromptPay in its mobile and internet banking, enabling real-time interbank funds transfer within Thailand. The Vientiane Branch also introduced an interbank funds transfer function in its mobile banking. In order to address personal customers' banking needs for studying, employment, travel and property purchases in Southeast Asia, the Group launched the Personal Financial Services in Southeast Asia page on the BOCHK website.

Corporate Banking

Financial Results

Corporate Banking achieved a profit before tax of HK$13,035 million, a decrease of HK$2,274 million or 14.9% year-on-year, mainly due to a decrease in net interest income and net fee and commission income, which resulted in a drop in net operating income, and an increase in net charge of impairment allowances.

Net interest income decreased by 8.5%, mainly due to a narrowing of the deposit spread as a result of falling market interest rates, although this was partially offset by growth in the average balance of deposits and loans. Net fee and commission income decreased by 10.6%, mainly owing to a drop in loan and bills commissions, which was partially offset by an increase in commission income from trust and custody services. Net charge of impairment allowances amounted to HK$1,877 million, up HK$492 million year-on-year, owing to heightened uncertainty in the macroeconomic outlook and changes in the internal rating of certain corporate customers.

Business Operations

Enhancing customer service capabilities and steadily advancing corporate banking business development

The Group continued to adhere to its customer-centric philosophy and pushed forward the deepening of its business transformation with the aim of meeting customers' needs, reinforcing integrated services and improving customer experience. To address the impact of the COVID-19 pandemic, it responded promptly to market changes, proactively explored business opportunities and continuously improved its regional and comprehensive service capabilities. During the year, the Group strengthened its support to a number of key projects in Hong Kong and Southeast Asia. It remained the top mandated arranger in the Hong Kong and Macao syndicated loan market for the 16th consecutive year and successfully underwrote a number of bond issues with significant market influence. The Group also actively promoted the advancement of green finance in order to ensure sustainable development. During the year, the Group received the Outstanding Award for Green Loan Structuring Advisor – Greatest Number of Green Loans (Verification) and the Outstanding Award for Green Bond Lead Manager – Greatest Number of Green Bonds (Financial Investment Industry) in the Hong Kong Sustainable Finance Awards 2020, held by the Hong Kong Quality Assurance Agency. Meanwhile, it maintained its market leadership as an IPO main receiving bank in terms of the number of main board listing projects. It also deepened its business relationships with the world's major central banks, international financial institutions and sovereign wealth funds. In addition, the Group further advanced its digital transformation and scenario-based applications by enhancing its technological innovation and application capabilities and strengthening cooperation with clients in e-payment and payment collection projects, in order to provide more convenient payment channels for customers in a number of areas including clothing, food, accommodation, necessities and transportation.

Proactively fulfilling social responsibilities and navigating difficult times with its SME customers

The Group continuously deepened its collaboration with high-quality local commercial and SME customers by enabling integrated digitalised and online financial services, undertaken with the aim of further enhancing customer experience. It also actively supported its SME customers in light of the pandemic. It took the lead in introducing five financial support initiatives to relieve the impacts of the pandemic, including a special loan scheme for SMEs featuring an express approval process, as well as a principal moratorium for mortgage loans. It collaborated with HKMC Insurance Limited to launch the Special 100% Loan Guarantee and various optimised measures for credit guarantee products under the SME Financing Guarantee Scheme. The Group also offered full support to the Pre-approved Principal Payment Holiday Scheme launched by the HKMA, in order to help SMEs to cope with business challenges and navigate difficult times alongside them. The Group and the Federation of Hong Kong Industries co-organised the BOCHK Corporate Environmental Leadership Awards Programme for the sixth consecutive year, with the aim of encouraging and rewarding enterprises in Hong Kong and the Pan-Pearl River Delta region to participate in environment friendly practices, promote green operations and support sustainable development. During the year, the Group received the Best SME's Partner Award from the Hong Kong General Chamber of Small and Medium Business for the 13th consecutive year, and the SME Banking Services Award for the second consecutive year in the Financial Services Awards of Excellence organised by *Hong Kong Economic Journal*, demonstrating the esteemed recognition of its quality services for SMEs by the market.

Giving full play to synergistic advantages and expediting the development of regional business

The Group stepped up its efforts to develop its regional business and worked with its Southeast Asian entities to maintain growth momentum with the prerequisite of appropriate risk control. In order to bolster regional cooperation in the Asia-Pacific region and enhance the regional synergies of its Southeast Asian entities, the Group reinforced its integrated marketing efforts with a focus on core customers and key projects. BOCHK capitalised on its position as BOC's Asia-Pacific syndicated loan centre and arranged syndicated loans for sizable businesses in the Southeast Asian region, thus deepening business relationships with local mainstream customers. Through regional collaborations, it was able to facilitate the design, marketing and implementation of sophisticated projects, such as cash management, in an integrated and professional manner. The Group began to roll out its intelligent Global Transaction Banking Platform ("iGTB") in its Southeast Asian entities, laying a solid foundation for the continuous growth of its regional transaction banking business. With continuous innovation in the product and service suite, BOC Thailand took the lead in introducing a new business model that supports third-party payment tools and successfully issued its first blockchain payment guarantee for a client. The Vientiane Branch successfully conducted its first Enterprise Resources Planning Integration ("ERP Integration") service. Moreover, the Group implemented an Asia-Pacific business collaboration mechanism with BOC Singapore Branch and Sydney Branch to further deepen and diversify cooperation, with the aim of exploring new opportunities in Asia-Pacific business. It continued to strengthen its partnerships with BOC's entities in the Greater Bay Area to bolster business collaboration on cross-border transactions, with a view to fulfilling the financial demands of key industries and target customers. With a focus on serving emerging industries, the Group strengthened support for the development of corporations in the technological innovation sector by providing diversified products and services, so as to contribute to financial interconnectivity within the Greater Bay Area.

Constantly optimising products and services and striving to uplift customer experience

The Group continued to improve the range of its corporate banking products in Hong Kong, the Greater Bay Area and Southeast Asia by enhancing its capabilities in online products and services. It further accelerated the development of its key businesses, including cash management, trade financing and treasury centre, and secured its market-leading position in the cash pooling business. In a bid to encourage diversification in financial product development and fintech innovation, the Group continuously enriched its digitalised products and services by launching the e+ product series for corporate customers, promoted and extended products and services to the Southeast Asian region through online service platforms, so as to comprehensively enhance customer experience. In recognition of its excellent and highly professional services, BOCHK was awarded Hong Kong Domestic Cash Management Bank of the Year for the seventh consecutive year and Hong Kong Domestic Trade Finance Bank of the Year for the second consecutive year by *Asian Banking & Finance*. It also received five awards from *The Asian Banker*, including Best Transaction Bank in Hong Kong for the third time, Best Cash Management Bank in Hong Kong for the sixth time, as well as Best ERP Integration Solution, Initiative, Application or Programme, Best Cash Management Project in Hong Kong and Best Shared Service Centre, all for the first time. In addition, a project that BOCHK co-organised with a mobile network provider to support the centralised management of global funds was awarded Best Treasury & Finance Strategies in Asia Pacific in the CT Awards by *CorporateTreasurer*.

Continuously and steadily developing custody and trustee businesses

The Group's custody business effectively responded to market challenges and captured opportunities from the Chinese government's mutual market access policies, enterprises "Going Global" and the development of the Greater Bay Area. As a result, total assets under custody from institutional and corporate clients reached new heights in the year and the total number of Bond Connect clients also continued to rank among the global top tier. Meanwhile, it further deepened its collaboration with Chinese investment enterprises and strengthened its business relationships with banks in the Chinese mainland in terms of overseas custody business. It also proactively enhanced its corporate trust and agency service capabilities, receiving positive feedback from clients. As at the end of 2020, the Group's total assets under custody exceeded HK$1,371.8 billion, an increase of 8.3% from the prior year-end. During the year, it was awarded the Bond Connect Top Custodian for the third time by Bond Connect Company Limited, and the Best Custodian QDII – China for the third time and the Best Custodian – Overall (Highly Commended) – China Offshore for the first time by *The Asset*.

The MPF business of BOCI-Prudential Trustee Limited ("BOCI-Prudential Trustee") maintained steady growth, with AUM at the end of 2020 increasing by 15% over the prior year-end, retaining its top tier position in the MPF market. During the year, BOCI-Prudential Trustee launched the BOCPT MPF e-Form app, which provides integrated one-stop online MPF services that enable members of the Tax Deductible Voluntary Contributions scheme and self-employed persons to complete their MPF applications online. In addition, it was appointed as trustee to a number of employee share award schemes, and it proactively partnered with international asset management companies to take advantage of the opportunities bestowed by the integration of Hong Kong, Shenzhen and the Greater Bay Area to expand its fund trustee business. In 2020, BOCI-Prudential Trustee received a number of awards, including multiple top prizes at the 2020 MPF Awards, organised by independent rating agency MPF Ratings and The Best MPF Scheme – Finalist at the 2020 Morningstar Fund Awards Hong Kong, organised by Morningstar Investment Management Asia Limited. In addition, it received a number of awards at the Lipper Fund Awards Hong Kong 2020 organised by *REFINITIV*, the Top Fund Awards 2020 organised by *Bloomberg Businessweek* and the Excellent Trustee & Management Services Award at the Financial Services Awards of Excellence 2020 organised by *Hong Kong Economic Journal*.

Treasury

Financial Results

Treasury recorded a profit before tax of HK$9,361 million, a decrease of HK$2,703 million or 22.4% year-on-year. This was primarily due to a decline in net interest income, net fee and commission income and net trading gain. Net gain on other financial assets increased, which partially offset the negative impact.

Net interest income decreased by 55.8%, which was mainly attributable to a drop in the average yield of debt securities investments and other debt instruments as well as interbank placements caused by falling market interest rates. Net trading gain decreased, primarily due to changes in the mark-to-market value of certain debt securities investments and interest rate instruments caused by market interest rate movements. The above changes were partially offset by a higher net gain on financial assets from the disposal of certain debt securities.

Business Operations

Continuously enhancing service capabilities and steadily promoting regional development

The Group actively responded to the business impact of the pandemic and vigorously promoted online business. It significantly enhanced its online trading transaction volume and service capabilities, achieving satisfactory growth in client business. By closely monitoring changes in the market environment and actively capturing business opportunities, the Group achieved good performance in its interest rate and precious metal businesses. During the year, it completed the upgrade and reform of its core trading system and constantly optimised its business processes, which in turn greatly improved its trade processing capabilities and service efficiency. The Group continuously enhanced its internal control mechanism and adhered to stringent risk management control, while achieving solid development in all businesses. In recognition of its treasury business performance, BOCHK was named Excellent Overseas Participant in Inter-bank FX Market by the China Foreign Exchange Trade System and Bond Connect Top FX Settlement Bank by Bond Connect Company Limited. BOCHK was also awarded Special Market Stability Contribution Reward in COVID-19 and Outstanding International Member Award by the Shanghai Gold Exchange, as well as Key Business Partner in FIC Market at the RMB Fixed Income & Currency Pan Asian Conference organised by HKEX.

By continuously enhancing its trading, sales, product development and risk control capabilities, as well as developing the building blocks for RMB business in regional financial markets, the Group was able to further improve its integrated regional and professional capabilities in customer service and product development. During the year, its Southeast Asian entities further enhanced their treasury product lines to support the internationalisation of RMB and promote direct quotation of RMB. With the approval of the PBOC, the Phnom Penh Branch became the first offshore quoting bank for RMB to Cambodia Riel ("KHR") in the regional market and the member of the China Foreign Exchange Trade System. It successfully completed the first CNY/KHR direct exchange trade for its clients.

Leveraging its strong franchise in RMB clearing services to expand the depth and breadth of its cross-border business

BOC Malaysia was successfully authorised by the PBOC and the Central Bank of Malaysia to continue to serve as Malaysia's RMB clearing bank and local RMB settlement institution. Taking advantage of the fintech innovation supervision pilot policy launched by the PBOC, BOC Malaysia cooperated with BOC Guangxi Branch to process the first RMB inter-bank financing business and the first RMB trade financing cross-border transfer business in the Chinese mainland. The Manila Branch officially launched its RMB clearing bank service on 16 January 2021. In addition, the Hong Kong RMB Clearing Bank opened up a special green channel of the Cross-border Interbank Payment System in the Mainland during the 2020 Chinese New Year holidays. Through this channel, it was able to provide RMB clearing services for cross-border donations and payments for the procurement of infectious prevention resources, facilitating the timely transfer of funds. In April, the Hong Kong RMB Clearing Bank officially joined SWIFT's Global Payments Innovation ("gpi"), further enhancing the transparency and customer experience of RMB cross-border remittance.

Capturing market opportunities and adopting a proactive but risk-aware investment strategy

The Group continued to take a cautious approach to managing its banking book investments. By closely tracking central banks' interest rate adjustments and planning ahead, it actively sought fixed income investment opportunities to enhance returns while remaining alert to risk. In 2020, the Group actively responded to interest rate changes in order to achieve balanced growth in assets and liabilities and continuously enhance the portfolio mix of its banking book investments.

Steadily expanding asset management business by capturing market opportunities

BOCHK Asset Management Limited ("BOCHK AM") maintained satisfactory growth momentum, achieving continuous value creation for customers and solid growth in AUM and profit after tax. As at the end of 2020, its AUM had increased by 46% compared to the prior year-end. During the year, BOCHK AM launched in June 2020 the 12th sub-fund of the BOCHK Wealth Creation Series, namely the BOCHK All Weather Asian High Yield Bond Fund, successfully capturing investment opportunities for clients. At the same time, it continued to expand its customer base and distribution channels while deepening business relationships with existing customers. Moreover, BOCHK AM exhibited sound investment performance, with the average returns of key fixed income funds, equity funds and investment portfolios outperforming the local market. It also achieved notable performance in its alternative investment business, generating attractive financial returns for its clients. In 2020, BOCHK AM was awarded Best RMB Manager and Best Offshore RMB Bond Performance (3 years) in the 2020 Best of the Best Awards by *Asia Asset Management*. In addition, the BOCHK All Weather Asian Bond Fund was awarded Best Fund over 3 Years – Bond Asia Pacific LC in the Lipper Fund Awards Hong Kong 2020 by *REFINITIV*.

Insurance

Financial Results

In 2020, the Group's insurance segment recorded a gross premium of HK$28,013 million, up 10.4% year-on-year. As adversely affected by the pandemic, its standard new premium for the year amounted to HK$11,344 million, down 17.8% year-on-year, and the value of new business was HK$1,115 million, a decrease of 12.8% year-on-year. However, profit before tax was up 21.8% year-on-year to HK$854 million, which was mainly attributable to an increase in net interest income and reinsurance income.

Business Operations

Promoting transformation of business mix to meet diversified customer needs

In view of the pandemic's impact on insurance products sales, BOC Life expedited its business development via online channels. It launched annuity products and online hospital cash refund plans via mobile banking in the first half of the year, and an online short-term insurance savings plan via internet banking in the second half of the year, thus achieving year-on-year growth of over 80% in annual standard new premium conducted via electronic channels. In addition, BOC Life further enhanced business development through its bancassurance channel in order to increase its market share, achieving satisfactory sales volume of insurance products distributed via bancassurance. To further promote the transformation of its product mix, it continued to launch whole life insurance plans with both savings and critical illness protection features, including the Forever Wellbeing Whole Life Plan and SmartUp Pro Whole Life Plan. BOC Life also continued to promote the development of products with high value and coverage, thus enhancing the value of new business margins. The Qualifying Deferred Annuity Policy ("QDAP") launched last year has been well received by customers, with BOC Life maintaining its leading market position in this product category. BOC Life was also the first insurance company to introduce an online application for QDAP. In the first half of the year, BOC Life collaborated with Bupa (Asia) Limited to offer customers a high-end Voluntary Health Insurance Scheme plan. In the second half of the year, BOC Life partnered with Quality HealthCare Medical Services Limited to launch the QHMS Wellness Online Shop, which enabled customers of designated plans to redeem healthcare products and services.

Living its customer-centric promise and navigating alongside customers through difficult times

BOC Life strongly adhered to its service mission of putting customers' interests first. It introduced a number of coverage additions and services tailored to customers' needs during the pandemic, including a hospital cash benefit for customers of life insurance plans who were diagnosed with COVID-19, as well as a special premium for a designated group of customers. In addition, BOC Life offered customers an extended grace period for premium payment to help those who might be affected by the pandemic. Furthermore, additional coverage was provided to customers of designated critical illness plans who were diagnosed with COVID-19. These benefits included cash benefits, admission to intensive care unit coverage and death benefits. These initiatives reflected BOC Life's commitment to corporate social responsibility and serving the community.

Maintaining market leadership in life insurance and winning recognition for high-quality service

BOC Life maintained its leading position in Hong Kong's life insurance business and remained the market leader in RMB insurance. In recognition of its service quality and professional image, BOC Life received a number of local and regional awards, including Top-three Finalists of Outstanding Customer Services in the Hong Kong Insurance Awards 2020, organised by The Hong Kong Federation of Insurers and *South China Morning Post*, Outstanding Insurance Business – Outstanding Annuity Insurance Award and Outstanding Insurance Business – Outstanding Saving Insurance Award in the 2020 RMB Business Outstanding Awards, organised by Metro Finance and Hong Kong Ta Kung Wen Wei Media Group, Annuity Plan – Outstanding and Online Platform – Outstanding in the Financial Institution Awards 2020, organised by *Bloomberg Businessweek*, the Outstanding Customer Services Award in the GBA Insurance Award 2020 (HK Region) organised by Metro Finance, and the Standard of Excellence Award in the WebAward 2020 of the Web Marketing Association, and other enterprise awards.

Regional Business

The Group continued to pursue integrated regional development and provided strong support to its Southeast Asian entities, with the aim of building them into mainstream foreign banks in their local markets. In 2020, a breakthrough occurred as the Southeast Asian region became China's largest trading partner for the first time. The official signing of the Regional Comprehensive Economic Partnership ("RCEP") proposed by the ASEAN in November 2020 will further promote economic and trade relations and investment cooperation between Southeast Asia and its regional partners. The successful conclusion of the 17th China-ASEAN Expo and China-ASEAN Business and Investment Summit will lead to a higher level of cooperation between China and Southeast Asian countries in key areas such as strategic mutual trust, economic and trade cooperation, technological innovation and anti-pandemic cooperation, thereby creating more business opportunities in various sectors including the financial industry. In addition, the attractiveness of RMB assets to overseas investors continues to increase, which will open up new growth opportunities for the Group's regional business.

Enhancing regional business network layout and continuing to deepen integrated regional development

The Group was approved by the Central Bank of Myanmar to set up its Yangon Branch, which already commenced business. As a result, its regional business now covers nine countries in Southeast Asia. On 30 December 2020, the Group was approved by the State Bank of Vietnam to set up its Hanoi Representative Office, the establishment of which not only improves its institutional layout in Vietnam but also lays a solid foundation for business collaboration. The Group actively developed and implemented its regional management model and continuously enhanced its institutional management in the region. It steadily centralised the operations of its Southeast Asian businesses, with most of the regional operations becoming gradually centralised to BOCHK. The Group also accelerated the construction of its regional operation centre in Nanning, China, which effectively enhanced the business development and management capabilities of the Southeast Asian entities. On 1 March 2020, the Jakarta Branch was approved by the Indonesian regulatory authority to upgrade its status to Commercial Bank Based on Business Activities 3. It ranked first among all foreign banks in Indonesia in terms of overall operations in the Indonesian banking industry for two consecutive years, and was once again named Best Foreign Bank of the Year at the 2020 Best Indonesian Business Awards. Moreover, the Jakarta Branch was named Best Robust Foreign Bank in the Indonesia Best Bank Awards 2020 for the first time.

The Group's Southeast Asian entities* recorded steady business growth. As at the end of 2020, deposits from customers and advances to customers amounted to HK$57,289 million and HK$54,080 million respectively, up 1.2% and 7.4% from the end of last year. Amid falling market interest rates, net operating income before impairment allowances amounted to HK$2,501 million, a drop of 10.9% year-on-year. As at the end 2020, the non-performing loan ratio was 1.90%, up 0.39 percentage points from the end of 2019.

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

Adhering to stringent risk management so as to comprehensively enhance regional risk control capabilities

The Group steadily pushed forward the construction of its regional risk management framework by strengthening its Southeast Asian entities' credit risk management capacities. It continuously optimised its rating model for corporate customers and credit approval process so as to improve the efficiency of approval for key projects. It also strengthened its capability in non-performing loan collection and recovery and maintained benign asset quality by enhancing its risk monitoring and alert mechanisms to reduce risks in key industries, key customers and key businesses, and thus minimise new non-performing loans. Moreover, it comprehensively enhanced its Southeast Asian entities' risk management capabilities in market risk, interest rate risk and liquidity risk, while closely monitoring, timely assessing and actively responding to the impact of the pandemic on Southeast Asian markets and its entities. The Group continued to reinforce its risk management infrastructure in all aspects, including compliance, anti-money laundering and anti-fraud, and made use of systems and technical advantages to further strengthen its risk control capabilities.

Digital Transformation Development

The Group is engaged in deepening its application of innovative fintech and accelerating the digitalisation of its business processes so as to improve operational efficiency. Its digital transformation is driven by top-level design, in line with the established Digital Transformation Blueprint of BOCHK and the new IT 3-Year Plan (2019 – 2021). By focusing on the five key digital capabilities of innovation, agility, data application, mobility and regionalisation, it aims to establish three catalysing platforms, namely an intelligent platform, a digital platform and an open platform, to provide a stable, reliable and unified cornerstone for cloud technology and security governance. At the same time, the Group adheres to its customer-centric concept, actively promotes digital transformation processes and strengthens agile and innovative resources support mechanisms, organizational structures and corporate culture. To support digital transformation, it also actively acquired and cultivated innovative fintech talents, with the aim of gradually becoming a digital bank characterised by business ecologies, process digitalisation, intelligent operations, agile project management and cloud computing.

Building business ecologies

The Group actively deepened scenario-based applications and continuously promoted open banking services. Focusing on payment ecology scenarios in government services, transportation, consumer spending, charity and education, the Group launched a QR code payment collection service for the HKSAR Government, allowing it to achieve full coverage of bill payments for water, electricity, gas, rates and tax. It provided an electronic collection service using QR code for a bus company's entire fleet and launched payment services in major restaurants, supermarkets and other chain stores. An e-donation platform, the first of its kind in Hong Kong, was launched to provide solutions for charitable organisations seeking to process day-to-day donations. The Group also launched an ecosystem project, which was a pilot scheme for an e-education platform, partnering with a leading local e-education platform to create its first online lunch ordering scenario for students, which allowed seamless connection to BoC Bill payment service solutions. This project was well received and participated by a number of schools. In terms of e-payment services, the Group's FPS service introduced a direct debit function for batch processing in order to shorten the confirmation time for merchants' payment receivables, and supported the linking of Hong Kong ID cards to bank accounts for payment collections to further improve customer experience. The number of customers with linked accounts increased by 72.8% compared to the end of last year. The Group continued to provide comprehensive fund collection solutions to all kinds of enterprises, charitable organisations and government agencies through BoC Bill, including the use of traditional bank cards, QR codes, FPS and Octopus card services, to cover all industries relating to people's livelihood, with a year-on-year growth of 179.7% in QR code merchant acquiring volume. BoC Bill, together with BoC Pay, continued to support the transformation of industries engaged in livelihood-related payments and to promote the development of cashless payments in Hong Kong. The total number of BoC Pay users increased by 83.4% from the end of last year, while related transaction volumes also recorded a growth of 272% compared to the same period last year. The Group continued to innovate and optimise the BoC Pay customer experience by launching a cross-border P2P transfer function to support instant money transfer and the instant approval of virtual credit cards. At the same time, the Group facilitated cross-sector cooperation to expedite fintech development and opened up access to more than 90 open APIs. It joined hands with three major real estate agencies to launch an online real-time property valuation service and mortgage application service via API. The online real-time property valuation service via API was used over 3 million times up to the end of 2020. The Group also cooperated with two stock quoting platforms to offer cross-platform mobile banking stock trading services for Hong Kong stocks, US stocks and A shares. In addition, new fintech functions such as mobile banking app 5.0, online remote account opening and cardless cash withdrawals were introduced, and the registered users of mobile banking increased by 27.7% year-on-year.

Digitalising processes

To meet rapid growth in customer demand for online transactions, the Group adopted a mobile first strategy by expanding the personal account opening service of its mobile banking to non-BOCHK customers, which significantly shortened transaction times for basic banking services. Its property valuation process was optimised through the application of blockchain technology, which covered 97% of the Group's total property valuations in 2020, an increase of 13 percentage points compared to last year, enhancing customer experience and operational efficiency as well as reducing manpower resources and expenses. The Group constantly upgraded its intelligent Global Transaction Banking Platform (iGTB) with functional enhancements, increased its marketing efforts, and extended its services to the Southeast Asian region, so as to enhance its regional online service capabilities. It also stepped up its efforts to link eTradeConnect, an innovative trade finance platform in Hong Kong, with the trade finance platform of the PBOC, and completed the first batch of blockchain cross-border trade transactions and the first trade financing service with BOC Guangdong Branch and BOC Shenzhen Branch. At the same time, it actively cooperated with third-party platforms in areas such as blockchain for letter of credit and shipping data, so as to promote the deep integration of technology and trade finance and enhance its digitalisation capabilities in trade finance. Robotic process automation ("RPA") was further extended in the handling of middle and back office operational procedures, which effectively automated operational procedures, reduced business processing time and enhanced efficiency.

Moving towards intelligent operations

The Group introduced identity verification technology and continuously optimised facial recognition and optical character recognition ("OCR") technologies. The average pass rate of the facial recognition platform in the second half of the year increased by 2.8% compared to the first half of the year. Enhancements to the OCR system increased the average recognition efficiency rate by 45.5%, improving the efficiency and accuracy of remote account opening. The Group also introduced an electronic account opening application service for SMEs, enhancing account opening efficiency and customer experience. The new generation customer service platform allows an intelligent chatbot to answer customer queries, while constantly enriching the knowledge base, question design and scenario-based design of the intelligent chatbot by analysing customers' questions. More counter transactions at branches can now be performed using finger vein authentication services, which reduces manual verification on signatures and shortens transaction processing times. Artificial intelligence was used to enhance analysis capabilities, driving more precise marketing and higher response rates. The Group introduced an automatic loan approval model for retail SMEs and refined the automatic approval process for qualifying personal residential mortgage loan applications in order to improve approval efficiency. It accelerated the construction of intelligent customer services through intelligent chatbot and online chat services to facilitate the transition of customer services from physical to online. The usage of intelligent chatbot Bonnie has increased rapidly since its launch in December 2019, with customer interactions increasing fivefold in December 2020 as compared to December 2019, further accelerating customer service channel migration. During the year, in line with its business strategies and introduction of large-scale projects, the Group improved application of knowledge in different scenarios for the chatbot that effectively improved both the usage and accuracy of its knowledge base. It also constructed a bank-wide intelligent anti-fraud platform to enhance its capabilities in fraud case detection and remedy, and thus comprehensively strengthen anti-fraud risk management. In addition, it introduced behavioural cyber security defence tools to increase the early warning and response rate of abnormal and new cyber attacks. In response to the pandemic, a secure mobile office solution was introduced to support staff working from home and ensure continued business operations. In line with the Group's regional development strategy, it established a regional document imaging management platform to provide electronic file management for its Southeast Asian entities.

Adopting agile project management

The Group promoted the application of fintech and fully pushed forward the development of an agile mechanism and system. It deepened its agile organisational structure and conducted agile and effective approaches to coordinate, drive and implement innovative projects. The organisation of innovative activities and measures helped to boost employees' creative thinking and accelerated transformation for innovation. The Group established relevant human resources management systems to facilitate agile project operation, agile teams formation and inter-departmental collaborations. To enhance talent acquisition for technological innovation, the Group expanded its recruitment channels to attract talented professionals with expertise in big data and artificial intelligence. It established the Innovation and Digital Academy and launched a series of digital transformation and certified professional training courses to accelerate the development of fintech talent. It also pushed forward the comprehensive development of professional pathways and strengthened the cultivation of professional talent. "Encourage innovative thinking and build an agile culture that is responsive, collaborative and efficient" has been established as one of the key concepts underpinning the Group's corporate culture building efforts. The Group will continue to enhance employees' awareness of digital developments and build up an atmosphere of innovation and agile culture through videos, interviews with internal and external guests and online activities.

Moving towards cloud computing

The Group actively pushed forward the construction of its cloud-based system to expedite its transformation for IT modernisation. During the year, by conducting an in-depth analysis on mature and forward-looking cloud-based technological solutions in the market and integrating this into its development strategy for digital transformation, the Group was able to comprehensively formulated the technological solutions for its cloud-based system, a framework design based on micro-service application and technology enabled operations. The Group also formulated the implementation strategy to gradually migrate various banking services and applications to the cloud, paving the way for the development of a new generation of its enterprise-level IT architecture systems, processes and operational models using a distributed cloud-based platform in the future and forming a foundation for gradually moving towards a modern application architecture and a technological operation model. By continuously deepening the construction of its cloud-based system, it introduced a cloud-based agile development model for rapid, reliable, scalable and continuous delivery of new application services. This in turn will support all business lines in responding to market changes in a quick and agile manner, and boost progress towards meeting customer service requirements and developing open banking that will fully support its digital transformation development strategy.

Launching a virtual bank

Livi Bank Limited ("livi"), a joint venture virtual bank owned by BOC Hong Kong (Holdings) Limited, JD Technology and the Jardine Matheson Group, commenced business on 12 August 2020. Focusing on retail banking business at launch, livi provides a simple digital banking product offering that is secure and designed to address the everyday needs of Hong Kong customers. The livi app has been well received by customers. livi will continue to expand its product and service offering, work with business partners to build its ecosystems that benefit its customers' lifestyles, and introduce new product features to provide convenient, inclusive and smart banking services.

Outlook and Business Focus for 2021

Looking ahead, the global economy is expected to recover in 2021 following the severe recession brought about by the COVID-19 pandemic in 2020. However, overall economic prospects remain largely uncertain, as future growth trends will depend on the development of the pandemic, changes in the monetary and fiscal policy of major countries as well as the prevalence of geopolitical risks. The US economy is expected to rebound with support from an ultra-loose monetary policy and a proactive fiscal policy. The Chinese mainland is expected to maintain its lead in terms of economic recovery, but geopolitical risks may create uncertainty for its economic prospects. The Southeast Asian region will continue to be affected by global trade and market uncertainties. However, the signing of the RCEP agreement will help promote regional economic integration and trade liberalisation, leading to the steady growth of the regional economy. Meanwhile, Hong Kong's economy is expected to rebound in 2021 from the low levels of 2020. In light of the uncertainties arising from the pandemic, the Group will closely monitor changes in the market environment and the impact to its financial performance.

Striving to be customer-centric at all times, the Group will continue to develop the local market by reinforcing its customer base and business foundation in Hong Kong. It will deepen business relationships with the government and local blue-chip companies in a bid to become those client's main bank. The Group will also actively capture policy opportunities in the Guangdong-Hong Kong-Macao Greater Bay Area, actively engage in the development of strategic emerging industries in Shenzhen and tap into the potential of cross-border business. Moreover, it will proactively develop business relationships with Chinese and high-quality local enterprises in Southeast Asia, accelerate the delivery of featured products and services from Hong Kong, and sharpen the competitive advantages of its RMB business. At the same time, the Group will continue to optimise the construction of business ecologies for scenario-based application, in order to improve its personalised customer service capabilities and build an agile digital bank. It will construct an integrated platform for key businesses such as asset management, life insurance, private banking and treasury markets, and enhance its collaboration internally and externally, with the aim of continuously improving its regional integrated service capabilities. It will also strive to push forward the balanced development of its ESG priorities, vigorously promote inclusive finance and fully implement operational efficiency optimisation and cost-saving measures. In addition, the Group will continue to strengthen its risk management, human resources, culture and operating mechanisms in order to provide strong support for the implementation of its business strategies.

Credit Ratings

As at 31 December 2020	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, market risk, interest rate 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.

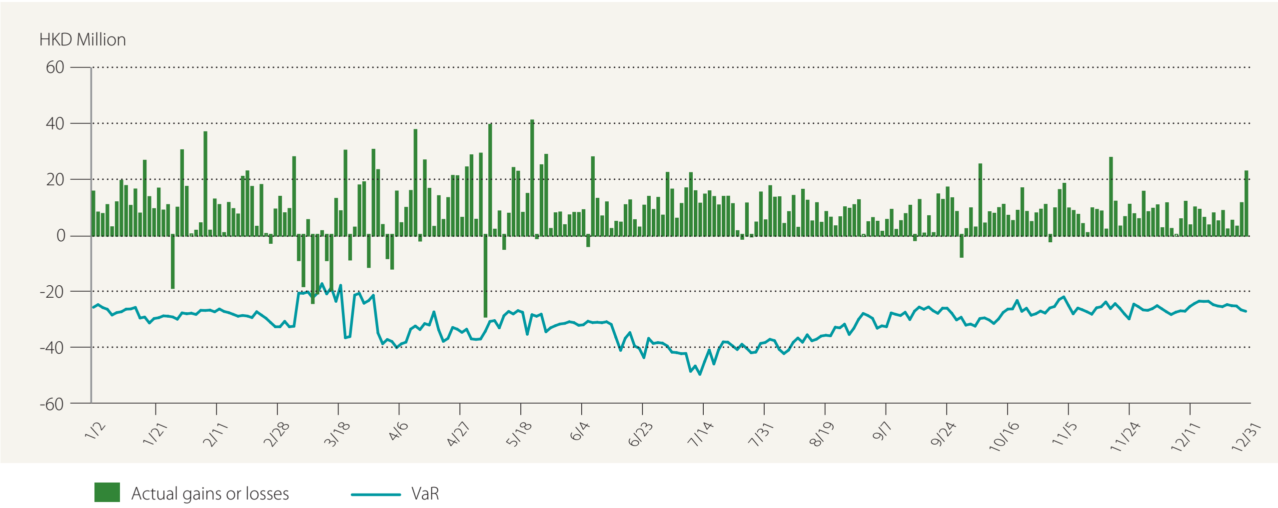
Market risk management

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 its subsidiaries over a one-day holding period with a 99% confidence level, and sets up the VaR limit of the Group and its subsidiaries.

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 2020



There were two actual losses exceeding the VaR for the Group in 2020 as shown in the back-testing results. It was mainly due to unexpectedly high market volatility in March 2020 that the model failed to predict.

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 gap risk, basis 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 a reasonable cost to meet their obligations as they fall due. The Group maintains a sound liquidity risk appetite to provide stable, reliable and adequate sources of cash to meet liquidity needs under normal circumstances and stressed scenarios. 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, 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, fraud, bribery and corruption are independently managed and monitored by the Financial Crime Compliance Department ("FCC"). Both LCO and FCC report directly to the DCE. 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, reinsurance arrangements and regular experience monitoring.

The underwriting strategy is intended to set premium pricing at an appropriate level that corresponds with the underlying exposure of the risks underwritten, and BOC Life's underwriting procedures include 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.

Uncertainty in the estimation of future benefit payments and premium receipts for long-term insurance contracts arises from the unpredictability of long-term changes in overall levels of mortality, morbidity and persistency. In this regard, BOC Life has conducted relevant experience studies and researches regularly to identify emerging trends. Results would be taken into account in pricing and underwriting management.

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 payment obligations as they fall due. BOC Life's asset and liability management framework includes stress tests and cash flow management to preserve liquidity to fulfil policy payment obligations 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.

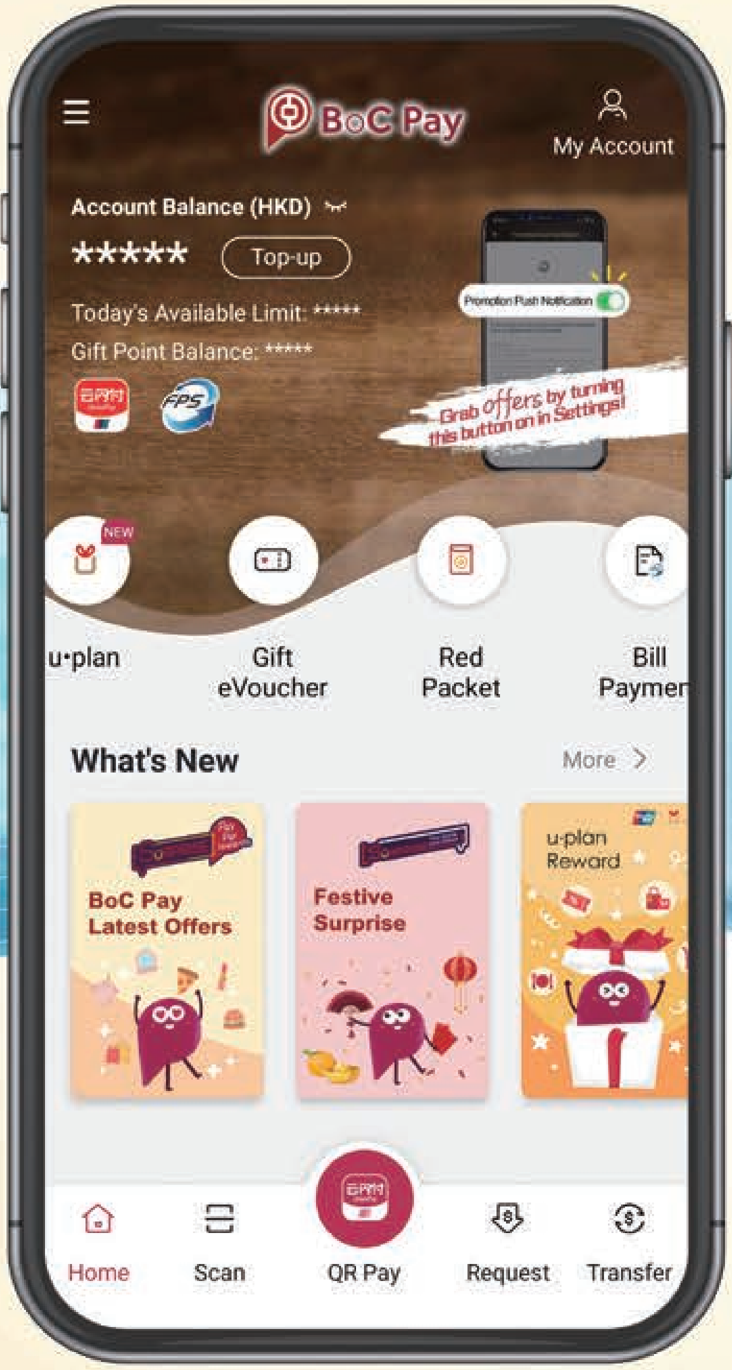
Equity price risk management

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.

New Payment Experience



BoC Pay
Easy-to-use Mobile Payment App

e-Donation Platform

Scan to Pay

Greater Bay Area Account Opening Service

Digital Payment Convenience across Borders

Phone Lai See