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HONG KONG MONETARY AUTHORITY
香港金融管理局

2020 ANNUAL REPORT

HKMA at a Glance

The Hong Kong Monetary Authority (HKMA) is the government authority in Hong Kong responsible for maintaining monetary and banking stability.

The HKMA's policy objectives are:

- to maintain currency stability within the framework of the Linked Exchange Rate System;
- to promote the stability and integrity of the financial system, including the banking system;
- to help maintain Hong Kong's status as an international financial centre, including the maintenance and development of Hong Kong's financial infrastructure; and
- to manage the Exchange Fund.

The HKMA is an integral part of the Hong Kong Special Administrative Region Government but operates with a high degree of autonomy, complemented by a high degree of accountability and transparency. The HKMA is accountable to the people of Hong Kong through the Financial Secretary and through the laws passed by the Legislative Council that set out the Monetary Authority's powers and responsibilities. In his control of the Exchange Fund, the Financial Secretary is advised by the Exchange Fund Advisory Committee.

The HKMA's offices are at

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The HKMA Information Centre is located at 55/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong and is open from 10:00 a.m. to 6:00 p.m. Monday to Friday and 10:00 a.m. to 1:00 p.m. on Saturday (except public holidays). The Centre consists of an exhibition area and a library containing materials on Hong Kong's monetary, banking and financial affairs and central banking topics.

The HKMA's bilingual website (www.hkma.gov.hk) provides comprehensive information about the HKMA including its main publications and many other materials.

Contents

The chapter on Banking Stability in this Annual Report is the report on the working of the Banking Ordinance and the activities of the office of the Monetary Authority during 2020 submitted by the Monetary Authority to the Financial Secretary in accordance with section 9 of the Banking Ordinance.

The full text of this Report is available on the HKMA website.

Chief Executive's Statement

The year 2020 in many ways defied our wildest imaginations.

COVID-19 swept the globe at a rate that very few would have anticipated, bringing economic activities around the world to a near standstill. In Hong Kong, after having experienced a contraction in 2019, the economy suffered a further blow from COVID-19 and contracted further for the second consecutive year, registering the most severe contraction in GDP on record. The unemployment rate surged to a 16-year high, with some sectors hit particularly hard.

It is often during trying times when one's strengths become apparent. Despite these significant headwinds, Hong Kong's monetary and banking systems once again stood the test. This resilience did not happen fortuitously. Rather, it is a result of prudent policies applied over the years.

The recovery path ahead will not be plain sailing. Although central banks and governments worldwide have gone to great lengths to support the economy, the outlook remains clouded with uncertainties, ranging from the monetary policy stance of central banks globally, through to the progress of vaccination programmes as well as the potential effects of a prolonged low interest rate environment. Meanwhile, the pendulum of geopolitical tensions continues to swing, further clouding the horizon.

Amid these uncertainties, the HKMA will continue to safeguard monetary and financial stability to provide an environment conducive to economic recovery. At the same time, the HKMA will strive to capture opportunities to further strengthen Hong Kong's competitiveness as a global financial hub in the evolving banking and financial landscape.

Monetary and financial stability: resilience unshaken

In 2020, the Linked Exchange Rate System (LERS) continued to operate in a smooth and orderly manner. Since its inception in 1983, the LERS has weathered difficult times and has continued to demonstrate its resilience and robustness against shocks. Throughout 2020, the Hong Kong dollar exchange rate remained stable despite COVID-19 and the volatile macro environment. The strong-side Convertibility Undertaking was triggered a total of 85 times, leading to aggregate inflows of around HK$383.5 billion into the Hong Kong dollar.

Chief Executive's Statement

Underpinning the robustness of the LERS is the solid foundation that has been built up over the years. As the International Monetary Fund summed up in its *External Sector Report 2020*, the credibility of the LERS is assured by the transparent set of rules, ample fiscal and foreign reserves, strong financial regulation and supervision, a flexible economy, and a prudent fiscal framework. The HKMA was also quick to dispel rumours and provide timely updates on facts and figures through active industry engagement, and effective public communication through both conventional and social media. Concurrently, the HKMA continued to enhance its surveillance capacity by leveraging the latest technology and data analytics, so as to stay agile in the light of the latest market conditions and emerging risks.

While the COVID-19 pandemic weighed heavily on the economy, the banking sector remained resilient with robust capital and liquidity positions. As at end-2020, the capital adequacy ratio of local banks was 20.7%, well above the international minimum requirement of 8%. The average liquidity coverage ratio of large banks was also well above the statutory minimum requirement of 100%, reaching 155.1% in the fourth quarter of 2020. Reflecting the impact of the COVID-19 pandemic, the asset quality of banks has deteriorated modestly, with the classified loan ratio increasing to 0.9% as at the end of 2020, but this level remains comparatively healthy, well below the long-run average of 1.8% since 2000.

Banking sector: lifeblood of the economy

The banking sector plays an essential financial intermediation role in the economy and society. During the year, while maintaining its focus on the supervision of the credit and liquidity risk management of banks, the HKMA also monitored closely the impact of the COVID-19 pandemic on banking operations and has taken a number of measures to ensure that the banking sector can continue to provide essential services, as well as extend credit to borrowers to support the economy. In March, the HKMA reduced the Countercyclical Capital Buffer by 100 basis points to 1%, and reduced the regulatory reserve requirement in April. These measures helped release about HK$1 trillion of lending capacity in the banking sector.

Mindful of the cash flow problems that may be faced by small and medium-sized enterprises (SMEs), the HKMA together with the Banking Sector SME Lending Coordination Mechanism which we set up in 2019, launched several rounds of relief measures including the Pre-approved Principal Payment Holiday Scheme (PPPHS) which deferred all loan principal payments of eligible corporates by six months. By the end of 2020, over 58,000 cases for payment holiday and other relief measures totalling over HK$740 billion had been granted by banks. The PPPHS was extended as appropriate in view of the lingering pandemic situation, and was further extended in March 2021 to end-October 2021. The Hong Kong Mortgage Corporation Limited also introduced the Special 100% Loan Guarantee under the SME Financing Guarantee Scheme to alleviate the burden of paying employee wages and rents by SMEs. More than 25,000 applications involving some HK$40 billion had been approved by the end of 2020. In the first quarter of 2021, the scheme was enhanced and the application period was extended to 31 December 2021. During 2020, banks also approved more than 28,000 cases totalling over HK$44 billion relating to the provision of cash flow support for individual customers. It is encouraging to see how the banking sector came together to help tide both corporates and individual borrowers over in these difficult times.

In the meantime, we have kept advancing our work with the banking industry to enhance the sector's inclusiveness and customer-centric culture. We devoted further efforts to encouraging banks to pay special attention to customers in need. Good progress was achieved in the sharing of good practices in providing banking services to persons with intellectual impairment and in the provision of more barrier-free and accessible banking services.

Chief Executive's Statement

Given the rapidly changing banking landscape as a result of evolving technologies, the HKMA's work extends beyond tackling the current challenges to expanding the talent pool to support the future growth and stable development of the banking industry. We cooperated with the Hong Kong Association of Banks and the Hong Kong Institute of Bankers in carrying out the "Capacity Building for Future Banking" exercise with an aim to identify the potential talent gaps in the industry and develop a clear road map for banks to narrow such gaps in the coming years. To nurture young talent for the banking sector, we rolled out the Banking Talent Programme with the industry to offer fresh graduates from local universities six-month work opportunities and industry-specific training. The programme is also timely in offering aspiring young talented individuals the chance to join the banking industry amid a difficult local labour market.

International financial centre: undaunted by challenges

In keeping with the HKMA's mandate to help maintain Hong Kong's status as an international financial centre, our forward-looking agenda extends beyond the banking sector to the financial system more broadly. Our work has continued during the pandemic to enhance our competitiveness as an international financial centre in the evolving financial landscape. In particular, substantial efforts have been made in opening up new opportunities to capitalise on new trends and changes.

Growing and greening Hong Kong's financial industry for a more sustainable future

The first area is promoting green and sustainable finance, where steady progress continued to be made under the HKMA's three-phase approach announced in May 2019. In 2020, we completed the assessment of the "greenness baseline" for 47 banks, and published a white paper and circular to provide guidance and share experiences on banks' management of climate risks. We have been pressing ahead with Phase II in formulating the regulatory framework for addressing climate risk in the banking industry. We will also take steps to be the first in Asia with concrete requirements for banks to align with the recommendations of the Task Force on Climate-related Financial Disclosures regarding disclosure of climate-related information by 2025.

We are also doing our part as one of the largest reserves managers globally. The HKMA has been actively incorporating environmental, social and governance (ESG) factors in the selection, appointment and monitoring of its external managers. We have also been consciously making ESG investments, including into green, social and sustainability bonds and low-carbon projects.

To further develop the green finance ecosystem in Hong Kong, the HKMA has been assisting the Government in issuing green bonds, and most recently, the second issuance of Government green bonds received an overwhelming response from international investors. Building on this momentum, the Financial Secretary announced recently in the 2021–22 Budget that the Government will double the size of the borrowing ceiling of the Government Green Bond Programme to HK$200 billion and increase the diversity in both the types and channels of future issuances.

Chief Executive's Statement

As part of our overall strategy to consolidate Hong Kong's position as a regional green and sustainable finance hub, we are collaborating with other local regulators as well as the international community to advance the green agenda. Locally, the HKMA partnered with other regulators to form the Green and Sustainable Finance Cross-Agency Steering Group (CASG) to coordinate efforts across the financial sector. The CASG has set out a strategic plan for promoting green and sustainable finance in Hong Kong. Internationally, the HKMA was invited by the International Finance Corporation to serve as the founding member and first regional anchor to co-launch the Alliance for Green Commercial Banks which aims to promote green banking in the global financial market, starting with Asia with a view to expanding to other regions.

We hope these efforts will contribute to mitigating our financial sector's climate risks, as well as unleashing the capacity of our banks to satisfy the huge financing needs for green investments in the region.

Fintech: for the people, for the economy

Another key growth engine for the financial industry is fintech which has been further accelerated amid the COVID-19 pandemic.

The past year has clearly demonstrated that fintech can expand our toolkit for responding to unexpected shocks. Amid COVID-19, electronic payment channels played a more important role than ever. Since its inception in September 2018, the accounts registered with the Faster Payment System (FPS) had reached 6.9 million at the end of 2020. The average daily turnover of the FPS soared 230% during the year, facilitating the public to transfer money and make payments in a safe, convenient, and hygienic manner even if they are subject to social distancing restrictions. We have also been working with the Government on further expanding the use of the FPS for payment of Government bills and services.

Fintech could also help banks bring more diverse and convenient banking services to customers. All of the eight virtual banks which have been granted a licence by the HKMA have now commenced operation in Hong Kong. By the end of 2020, a total of 420,000 virtual bank accounts had been opened, with customer deposits totalling HK$15 billion. Some of these virtual banks have pioneered the use of alternative data to conduct credit assessment with a view to reaching out to new types of customers and enhancing financial inclusion. As part of the Banking Made Easy initiative, the HKMA continued its work to foster a larger and more diverse regulatory technology (Regtech) ecosystem in Hong Kong. The goal is to streamline regulatory requirements so as to enhance customer experience. Besides raising industry awareness of Regtech applications through our newsletter series, we have also published a white paper which included a two-year roadmap to accelerate Regtech adoption in the banking sector. The HKMA has also embarked on a project on Commercial Data Interchange, which will enable SMEs to use their digital footprints to enhance access to credit facilities from banks.

As the fintech landscape continues to evolve and technology adoption increases, it is important for the HKMA to uphold its supervisory rigor. To this end, we have introduced an upgraded Cybersecurity Fortification Initiative 2.0 to strengthen banks' cyber resilience, stepped up on-site examinations on technological risk management, and developed supervisory frameworks to assess credit risks of new personal loan products supported by innovative credit risk assessment techniques. We have also embarked on a three-year roadmap for supervisory technology (Suptech) adoption to make our supervisory processes more effective and forward-looking. Work is underway, including on enhancing anti-money laundering and counter-financing of terrorism supervision with a better use of data and technology.

Chief Executive's Statement

Fintech also has great potential to facilitate transactions across geographic boundaries, addressing the long-standing pain points in cross-border payments. The HKMA has been undertaking a number of initiatives. Key progress has been made, including the successful linkage between eTradeConnect and the People's Bank of China (PBoC) Trade Finance Platform, which could streamline cross-border trade finance transactions. We are also cooperating with three other central banks in studying the application of central bank digital currency (CBDC) in cross-border payments through the m-CBDC Bridge project, which has been included into the ambit of the Bank for International Settlements Innovation Hub. Furthermore, the HKMA also supported the Digital Currency Institute of the PBoC on technical pilot testing of the use of e-CNY, the digital renminbi issued by the PBoC, for making cross-boundary payments in Hong Kong. This will bring greater convenience and enhance user experience in cross-boundary consumption.

Looking ahead, the HKMA will continue to refine our strategy to facilitate the healthy growth of Hong Kong's fintech eco-system and capitalise on fintech's transformative power to improve people's daily lives as well as spur further economic development in Hong Kong.

Gateway to the Mainland, connecting the world

Finally, connectivity has always been a defining feature of Hong Kong as an international financial centre and continues to be highly placed on our agenda. During the year, we continued to consolidate our core strengths as the dominant gateway to Mainland China and our competitiveness as a global financial hub.

The vibrancy of the connect schemes with the Mainland can speak for their importance. The average daily turnover of Stock Connect more than doubled during the year, with significant increases in both northbound and southbound traffic. Daily turnover under Bond Connect increased by 82% in 2020, accounting for 52% of overall trading turnover by foreign investors in the China Interbank Bond Market. A number of enhancements to Bond Connect were introduced, offering more convenience and flexibility to investors. Building on the success of the Northbound Bond Connect, we have also started a study on the framework for the Southbound Bond Connect with the PBoC.

We have every confidence that the opportunities presented by our connection with the Mainland will keep expanding, particularly in view of the recent developments in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). Following the promulgation of a high-level blueprint for financial market development in the GBA by Mainland authorities, we have been in close dialogue with Mainland authorities to promote cross-boundary financial collaboration. In June, the HKMA and its counterparts in the Mainland and Macao jointly announced the decision to implement a Wealth Management Connect scheme in the GBA. The HKMA has been working with the Mainland and local authorities as well as the industry to formulate the implementation details. The HKMA also closely engaged with the Mainland authorities on other initiatives to expand room for banks in Hong Kong to broaden the scope of their cross-boundary business.

Chief Executive's Statement

In other financial services areas, we continued to make rigorous efforts to maintain our competitive position. Hong Kong is well positioned as a hub for private equity (PE) and family office businesses. A major milestone during the year was the establishment of the Limited Partnership Fund (LPF) regime which came into effect in August. To date, it has attracted more than 170 LPFs to register in Hong Kong. The HKMA has also been working with the Government to introduce legislative amendments to provide a tax concession for carried interest, thereby providing a more competitive tax environment for PE funds. The HKMA will continue to promote the setting up of PE funds in Hong Kong, and refine the LPF regime to meet market needs.

Exchange Fund: investing for the people of Hong Kong

Despite the difficult and complex investment environment, in 2020 the Exchange Fund recorded an investment income of HK$235.8 billion, representing an investment return of 5.3%. We also continued to diversify our investments through the Long-Term Growth Portfolio (LTGP). The annualised internal rate of return of the LTGP from 2009 to the end of 2020 was 13.7%.

In late-March 2021, we are still facing significant uncertainties surrounding the disconnect between the financial market and the real economy, the ultra-low interest rate environment, as well as the road to global economic recovery. We will adhere to the principle of "Capital Preservation First, Long-Term Growth Next" in managing the Exchange Fund, and continue to invest prudently for the people of Hong Kong.

Navigating uncertainties with dedication and professionalism

Notwithstanding the challenges in 2020, the HKMA has maintained its operational resilience and continued to carry out its work in a smooth and efficient manner. I want to thank my HKMA colleagues for their swift and robust responses to unexpected challenges and their dedication in fulfilling their duties, which ensured that the HKMA's commitment to serving the people of Hong Kong was uncompromised.

As always, the HKMA will endeavour to identify any forthcoming risks and opportunities ahead of the curve and ensure that Hong Kong will continue to thrive in the new banking and financial landscape. We will continue to care and to dare — to care for the economy, and to dare to undertake new endeavours for future development. On the one hand, we will spare no effort to facilitate economic recovery and maintain financial stability. On the other, we stand ready to grasp the opportunities presented by green finance, fintech, and connectivity with the Mainland. Despite the potential headwinds and challenges ahead, we will continue to serve the people of Hong Kong with dedication and professionalism.

Eddie Yue
Chief Executive

Highlights of 2020

Economic & Financial Environment

In 2020, the Hong Kong economy contracts by the most severe magnitude on record amid the COVID-19 pandemic, with consumption and tourism-related sectors particularly hard-hit. The labour market deteriorates sharply while inflation moderates. Amid the challenging environment, the Government and the HKMA roll out relief measures to support the economy.

Despite the significant headwinds, the Hong Kong banking sector remains resilient, with solid financial positions and growing deposits. The capital and liquidity positions remain strong, while asset quality stays at healthy levels.

Monetary Stability

Despite the heightened uncertainty amid the pandemic, Hong Kong's monetary system remains resilient, as evidenced by the smooth functioning of the Hong Kong dollar foreign exchange and money markets. The Hong Kong dollar firms throughout most of 2020, with repeated triggering of the strong-side Convertibility Undertaking. This demonstrates the confidence in, and robustness of, the Linked Exchange Rate System.

Banking Stability

The HKMA closely monitors the impact of the pandemic on banking operations, while maintaining its focus on the supervision of the credit and liquidity risk management of banks. In the face of increasing cyber risks and the industry's accelerated technology adoption, the HKMA strengthens the supervision of banks' technology risk management and operational resilience while enhancing consumer protection in digital financial services.

The HKMA provides flexibilities to facilitate banks' continued provision of services to customers amid the pandemic. It also works with other authorities on the implementation details for the cross-boundary wealth management connect pilot scheme, and the provision of guidance on family office and wealth management businesses.

On anti-money laundering and counter-financing of terrorism, the HKMA has acted swiftly to clarify how the risk-based approach and technology could help banks better respond to the COVID-19 situation, while also carefully managing the impact of rising geopolitical tensions on the banking sector. The HKMA also continues to promote information sharing through public-private partnership and support Regtech adoption in the banking industry.

New rules and regulations are rolled out to enhance the banking regulatory regime in line with the latest international standards. On green and sustainable banking, the HKMA moves forward with Phase II of the three-phased approach to formulate supervisory expectations. The HKMA also advances its work in establishing resolution standards, undertaking resolution planning and developing resolution execution capability to ensure a credible resolution regime for banks.

Highlights of 2020

International Financial Centre

The HKMA continues to support the development of the fintech ecosystem. Banking and payment industries increasingly make use of fintech. The Faster Payment System has seen significant growth in its turnover. The HKMA actively engages in cross-border cooperation in areas such as Central Bank Digital Currency.

Hong Kong maintains a firm foothold as a global hub for offshore renminbi business, while serving as the key gateway to Mainland China. Financial connectivity with the Mainland continues to be enhanced through Hong Kong's world-class market infrastructure and the Connect schemes. Headway is being made in capturing opportunities in the Guangdong-Hong Kong-Macao Greater Bay Area.

The HKMA makes notable efforts in opening up new opportunities to further enhance the competitiveness of Hong Kong's financial platform for areas including asset and wealth management, corporate treasury centres, as well as green and sustainable finance.

Reserves Management

Despite the ever-changing and complex investment environment, the Exchange Fund records an investment income of HK$235.8 billion (or 5.3% return) in 2020, with positive returns in all of its five major investment categories.

The HKMA continues its effort in promoting responsible investment and asset diversification. The Long-Term Growth Portfolio records an annualised internal rate of return of 13.7% since its inception in 2009.

Corporate Functions & Social Responsibility

Throughout the year, the HKMA continues to maintain effective communication with the community and the market through various channels to enhance public understanding of its policies and operations. In carrying out its work, the HKMA upholds a high standard of corporate governance by supporting professional development of staff, instituting rigorous financial discipline and enhancing IT capabilities and security to cope with new challenges and initiatives, as well as the increasing complexity of work.

Meanwhile, the HKMA remains committed to fulfilling its corporate social responsibility and strives to be a responsible and sustainable organisation. Amid the COVID-19 pandemic, the HKMA adopts special work arrangements to ensure the normal operation of essential functions while safeguarding the well-being of its staff. At the same time, the HKMA introduces various measures to support individuals and enterprises in need to mitigate the adverse impact of the pandemic.

Highlights of 2020

KEY FIGURES FOR 2020

Monetary Stability

HKD exchange rate*	7.753 per USD
Base Rate*	0.50 %
Backing Ratio*	109.9 %
Monetary Base*	HK$ 2,099.3 billion
Aggregate Balance* (before Discount Window)	HK$ 457.5 billion

Banking Stability

Total assets*	HK$ 25.9 trillion
Capital adequacy ratio*	20.7 %
Loan growth#	1.2 %
Liquidity Coverage Ratio (Q4 2020)	155.1 %
Liquidity Maintenance Ratio (Q4 2020)	57.9 %
Authorized institutions*	161 licensed banks 17 restricted licence banks 12 deposit-taking companies
Classified loan ratio (all AIs)*	0.90 %
Loan-to-deposit ratio*	72.3 %
Average LTV ratio for new RMLs (Dec 2020)	57 %
Average DSR for new RMLs (Dec 2020)	37 %
G-SIBs for which the HKMA is a member of the Crisis Management Group or Resolution College*	14
G-SIBs hosted in Hong Kong*	All 30 G-SIBs

Sources: SWIFT, Bank for International Settlements and HKMA.

* Figures as at the end of 2020.
\# Figures for the year of 2020 as a whole.
^ About 99.98% if including downtime caused by external factors.

CMU – Central Moneymarkets Unit
CPI – Consumer Price Index
DSR – Debt servicing ratio
EF – Exchange Fund
FPS – Faster Payment System
FX – Foreign Exchange
HKD – Hong Kong dollar
G-SIBs – Global systemically important banks
IFFO – Infrastructure Financing Facilitation Office
LTGP – Long-Term Growth Portfolio
LTV – Loan-to-value
RMB – Renminbi
RMLs – Residential mortgage loans
RTGS – Real Time Gross Settlement
SVF – Stored value facility
USD – US dollar

Highlights of 2020

International Financial Centre

RMB deposits*
#1 *largest offshore RMB liquidity pool*
RMB **757.2** billion

Availability of four RTGS systems and CMU#^
100%

Hong Kong's share of RMB SWIFT payments globally#
#1 *in the world*
> **70**%

RMB RTGS average daily turnover#
RMB **1,191.5** billion

Daily turnover of RMB FX transactions (Apr 2019)
#1 *in offshore RMB FX markets*
US$ **107.6** billion equivalent

HKD RTGS average daily turnover#
HK$ **956.1** billion

Dim sum bonds outstanding*
#1 *in the world*
RMB **179.8** billion

FPS registrations*
6.9 million

Average daily real-time transactions of FPS#
355,000
(↑ 230% from 2019)

Bond Connect investors*
2,352

IFFO partners*
95

Registered limited partnership funds*
68

SVF accounts*
63.9 million

Value of SVF transactions#
HK$ **221.6** billion
(↑ 10% from 2019)

Reserves Management

EF investment income#
HK$ **235.8** billion

EF investment return#
5.3%

EF compounded annual investment return (since 1994)
4.8%
(>2.0% increase in HK composite CPI over the same period)

EF assets*
HK$ **4,499.2** billion

Market value of LTGP investments*
HK$ **406.4** billion

LTGP annualised internal rate of return (since 2009)
13.7%

Calendar of Events 2020

MONETARY STABILITY

9 Apr The HKMA announces a plan to reduce the issuance size of Exchange Fund Bills by HK$20 billion to increase the overall Hong Kong dollar liquidity in the interbank market and help ensure continued smooth operation of the Hong Kong dollar interbank market amid a volatile global macro environment brought about by COVID-19.

22 Apr The HKMA announces the introduction of a temporary US Dollar Liquidity Facility to make available US dollar liquidity assistance for licensed banks and to help alleviate tightness in the global US dollar interbank money markets.

23 Oct The HKMA announces the designation of nine authorized institutions (AIs) as Primary Liquidity Providers for offshore renminbi market in Hong Kong.

25 Nov The People's Bank of China (PBoC) and the HKMA announce that the currency swap agreement has been renewed for a term of five years, with its size expanded to RMB500 billion/HK$590 billion from RMB400 billion/HK$470 billion.

BANKING

21 Feb The HKMA and the Insurance Authority (IA) introduce temporary facilitative measures to allow non-face-to-face (non-F2F) distribution of certain insurance products amid COVID-19, and collaborate to review sandbox proposals on non-F2F distribution of insurance products involving AIs.

16 Mar The HKMA announces that the Countercyclical Capital Buffer for Hong Kong is reduced from 2.0% to 1.0% with immediate effect.

26 Mar The HKMA together with the Social Welfare Department and Hong Kong Association of Banks (HKAB) introduce measures to enable social security recipients residing on the Mainland to receive payments through remote channels without the need to return to Hong Kong in person amid COVID-19.

17 Apr The HKMA, together with the Banking Sector SME Lending Coordination Mechanism, announces the launch of a Pre-approved Principal Payment Holiday Scheme (PPPHS) to support small and medium-sized enterprises (SME) customers.

Calendar of Events 2020

BANKING

20 Apr The Special 100% Loan Guarantee under the SME Financing Guarantee Scheme (SFGS), introduced by HKMC Insurance Limited (HKMCI), starts receiving applications.

24 Apr The Banking (Capital) (Amendment) Rules 2020 are gazetted.

The HKMA launches a dedicated enquiry service to assist customers under the PPPHS amid COVID-19.

7 May The Fixed-rate Mortgage Pilot Scheme introduced by the Hong Kong Mortgage Corporation Limited (HKMC) starts receiving applications.

8 May The HKMA issues a Consultation Paper on Implementation of Mandatory Reference Checking Scheme to mitigate the risk of AIs hiring individuals with a history of misconduct.

22 May The HKMA publishes a comprehensive report on Review of Self-assessments on Bank Culture to provide a range of practices for reference by the industry.

29 May The HKMCI announces enhancement measures to the 80% and 90% Guarantee Products under the SFGS with immediate effect.

4 Jun The HKMA announces the launch of the Banking Talent Programme together with the banking industry to provide short-term work opportunities and industry-specific training to fresh university graduates amid the pandemic.

30 Jun The HKMA publishes a white paper on green and sustainable banking setting out the initial thinking about its supervisory approach to addressing climate-related issues.

10 Jul The HKMA consults the industry on proposal for enhancing the regulation and supervision of trust business.

31 Jul The HKMA provides guidance to banks on simplified arrangements for sale and distribution of eligible retail bonds issued by government and related organisations.

5 Aug The HKMA, together with the Banking Sector SME Lending Coordination Mechanism, announces a 90-day repayment deferment for trade facilities under the PPPHS.

The HKMA collaborates with the IA and issues guidance to the industry on the regulatory requirements for using video conferencing tools in sale of long-term insurance products.

20 Aug The HKMA relaxes the countercyclical macroprudential measures for mortgage loans on non-residential properties. The applicable loan-to-value ratio caps for mortgage loans on non-residential properties are adjusted upward from 40% to 50% for general cases.

Calendar of Events 2020

BANKING

2 Sep

To alleviate the cash flow pressure of SMEs, the HKMCI announces that the application period for principal moratorium for the 80% and 90% Guarantee Products under the SFGS is extended for six months to 31 March 2021.

On the same day, the HKMA, together with the Banking Sector SME Lending Coordination Mechanism, announces that the PPPHS will be extended for six months to 30 April 2021.

4 Sep

The HKMA issues a circular on enhanced disclosure requirements to provide a "double reminder" to retail individual customers and SMEs when they apply for AIs' unsecured loan and credit card products on digital platforms.

18 Sep

The maximum amount of loan per enterprise under the Special 100% Loan Guarantee of the SFGS is raised to the total amount of employee wages and rents for 12 months, or HK$5 million, whichever is lower. The maximum repayment period is increased to five years.

29 Sep

The HKMA releases a report "AML/CFT Supervision in the Age of Digital Innovation" illustrating how it is strengthening the use of data and supervisory technology (Suptech) in its risk-based anti-money laundering and counter-financing of terrorism (AML/CFT) supervision as part of its Digitalisation Programme.

30 Sep

The HKMA shares with the industry key observations and good practices noted from mystery shopping programme on retail banks' sale of investment and insurance products.

2 Nov

The HKMC announces that the application period for the Fixed-rate Mortgage Pilot Scheme will be extended for one year to 30 October 2021.

3 Nov

The HKMA develops a two-year roadmap to promote Regtech adoption in the local banking sector, as laid out in a white paper entitled "Transforming Risk Management and Compliance: Harnessing the Power of Regtech".

The HKMA announces the launch of an upgraded Cybersecurity Fortification Initiative 2.0, which reflects the latest trends in technology and incorporates recent developments in global cyber practices with a view to raising the cyber resilience of the banking sector to an even higher level.

15 Dec

Endorsed by the HKMA, HKAB and the DTC Association jointly publish the Guideline on Banking Services for Persons with Intellectual Disabilities setting out the principles and good practices recommended for providing banking services to customers in need.

18 Dec

The HKMA announces the launch of the Enhanced Competency Framework module on operational risk management to facilitate talent development and enhancement of the professional competencies of banking practitioners.

Calendar of Events 2020

BANKING

23 Dec
The HKMA provides guidance to banks regarding provision of investment services using non-F2F channels and streamlining of product disclosure of investment products for sophisticated non-retail banking customers.

31 Dec
The HKMA releases the conclusion of the public consultation relating to rules on contractual stays on termination rights in financial contracts for AIs proposed to be made as subsidiary legislation pursuant to section 92 of the Financial Institutions (Resolution) Ordinance (Cap. 628), and consults the industry on the draft text of the rules at the same time.

INTERNATIONAL FINANCIAL CENTRE

22 Jan
The HKMA and the Bank of Thailand announce the outcomes of and publish a report on a joint Central Bank Digital Currency (CBDC) research project named Project Inthanon-LionRock, which studies the application of CBDC to cross-border payments.

Feb
The HKMA is appointed as the co-chair of the Evaluation and Compliance Working Group of the Financial Action Task Force, the international standard setting body for anti-money laundering based in Paris, France for a two-year term from 2020 to 2022.

Calendar of Events 2020

INTERNATIONAL FINANCIAL CENTRE

5 May
The HKMA and the Securities and Futures Commission co-initiate the establishment of the Green and Sustainable Finance Cross-Agency Steering Group.

20 May
The Hong Kong Institute for Monetary and Financial Research (HKIMR) releases its first in a series of Applied Research reports titled "Fintech Adoption and Innovation in the Hong Kong Banking Industry".

29 Jun
The HKMA, the PBoC, and the Monetary Authority of Macao jointly announce the decision to implement the cross-boundary wealth management connect pilot scheme in the Guangdong-Hong Kong-Macao Greater Bay Area.

3 Aug
The HKMA and the Bank for International Settlements Innovation Hub Centre in Hong Kong launch the TechChallenge — Digitising Trade Finance initiative.

19 Aug
The Chief Executive of the HKMA chairs the first session of 25th Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) Governors' Meeting via video conference. The second session of the meeting is held via video conference on 16 November.

21 Aug
The HKIMR releases its second Applied Research report titled "Artificial Intelligence in Banking: The Changing Landscape in Compliance and Supervision".

31 Aug
The Limited Partnership Fund Ordinance (Cap. 637) comes into operation, enabling investment funds to set up in the form of limited partnerships in Hong Kong.

Calendar of Events 2020

INTERNATIONAL FINANCIAL CENTRE

2–6 Nov

The HKMA co-organises with InvestHK Hong Kong FinTech Week 2020, which attracts over 1.2 million viewers from more than 130 economies. It also announces a wide range of initiatives, including the Commercial Data Interchange and the linkage between eTradeConnect and the PBoC Trade Finance Platform, to further foster the fintech ecosystem and support corporates, particularly SMEs.

3 Nov

The fourth Hong Kong-Switzerland Financial Dialogue, co-organised by the HKMA and the State Secretariat for International Financial Matters under the Swiss Federal Department of Finance, is held virtually.

9 Nov

The HKMA and International Finance Corporation (IFC), a member of the World Bank Group, signs a new partnership on the Alliance for Green Commercial Banks, with a view to encouraging commercial banks in Asia to adopt strategies and targets to become greener.

16 Nov

The seventh inflation-linked retail bond, or iBond, is issued under the Government Bond Programme.

24 Nov

The HKIMR releases its third Applied Research report titled "The Green Bond Market in Hong Kong: Developing a Robust Ecosystem for Sustainable Growth".

Calendar of Events 2020

INTERNATIONAL FINANCIAL CENTRE

27 Nov
The HKMA announces its appointment as the chair of the Study Group on Resolution of EMEAP, a resolution-specific forum that supports knowledge sharing and discussion among regional authorities in relation to resolution in a cross-border context.

6 Dec
The Faster Payment System (FPS) launches a new feature which allows citizens to link their Hong Kong Identity Card number to their bank account for receiving payments from institutions.

14–15 Dec
The Centre for Green Finance under the HKMA Infrastructure Financing Facilitation Office and the IFC co-host the first IFC Climate Business Webinar.

17 Dec
The Green and Sustainable Finance Cross-Agency Steering Group launches its green and sustainable finance strategy that sets out six key focus areas for strengthening Hong Kong's financial ecosystem.

21 Dec
FPS payment extends to government counters and self-help kiosks.

22 Dec
The fifth Silver Bond is issued under the Government Bond Programme.

17, 21 & 22 Dec
The HKMA leads the delegation of HKAB to have annual meetings with the Mainland financial regulators via video conference, which discusses the recent financial developments in Hong Kong and the Mainland.

Calendar of Events 2020

RESERVES MANAGEMENT

18 Dec
The HKMA announces that it will conduct a market survey in relation to the Hong Kong Growth Portfolio established as part of the Government's Future Fund.

CORPORATE FUNCTIONS

13 Nov
The HKMA releases the public education online drama series "STEPS" on its social media platforms, which introduces various aspects of the HKMA's work.

Online drama series "STEPS"

31 Dec
During 2020, an additional 11 sets of financial data published on the HKMA website are made available via Open Application Programming Interface for free use by the public.

About the HKMA

The Hong Kong Monetary Authority is Hong Kong's central banking institution. The HKMA has four main functions:

- maintaining currency stability within the framework of the Linked Exchange Rate System;
- promoting the stability and integrity of the financial system, including the banking system;
- helping to maintain Hong Kong's status as an international financial centre, including the maintenance and development of Hong Kong's financial infrastructure; and
- managing the Exchange Fund.

About the HKMA

THE HKMA'S LEGAL MANDATE

The HKMA was established on 1 April 1993 after the Legislative Council passed amendments to the Exchange Fund Ordinance in 1992 empowering the Financial Secretary to appoint a Monetary Authority.

The powers, functions and responsibilities of the Monetary Authority are set out in the Exchange Fund Ordinance, the Banking Ordinance, the Financial Institutions (Resolution) Ordinance, the Deposit Protection Scheme Ordinance, the Payment Systems and Stored Value Facilities Ordinance, and other relevant Ordinances. The division of functions and responsibilities in monetary and financial affairs between the Financial Secretary and the Monetary Authority is set out in an exchange of letters dated 25 June 2003. The exchange of letters discloses delegations made by the Financial Secretary to the Monetary Authority. The letters are public documents and can be found on the HKMA website.

The Exchange Fund Ordinance establishes the Exchange Fund under the control of the Financial Secretary. According to the Ordinance, the Fund shall be used primarily for affecting the exchange value of the Hong Kong dollar. It may also be used (whilst having regard to its primary purpose) for maintaining the stability and integrity of the monetary and financial systems of Hong Kong, with a view to maintaining Hong Kong as an international financial centre.

The Monetary Authority is appointed under the Exchange Fund Ordinance to assist the Financial Secretary in performing his functions under the Exchange Fund Ordinance and to perform such other functions as are assigned by other Ordinances or by the Financial Secretary. The office of the Monetary Authority is known as the HKMA, and the Monetary Authority is the Chief Executive of the HKMA.

The Banking Ordinance provides the Monetary Authority with the responsibility and powers for regulating and supervising banking business and the business of taking deposits. Under the Ordinance, the Monetary Authority is responsible for the authorization of licensed banks, restricted licence banks and deposit-taking companies in Hong Kong.

The Financial Institutions (Resolution) Ordinance provides that the Monetary Authority is the resolution authority for banking sector entities. Under the Ordinance, the Monetary Authority is vested with a range of powers to effect the orderly resolution of a non-viable, systemically important, banking sector entity for the purpose of maintaining financial stability, while seeking to protect public funds.

The Securities and Futures Ordinance and the Mandatory Provident Fund Schemes Ordinance provide certain powers to the Monetary Authority regarding the securities and mandatory provident fund businesses of banks.

The Monetary Authority has been delegated with powers of inspection and investigation by the Insurance Authority under the Insurance Ordinance in relation to the insurance related businesses of banks.

The Anti-Money Laundering and Counter-Terrorist Financing Ordinance empowers the Monetary Authority to supervise banks' compliance with the requirements under the Ordinance.

The Deposit Protection Scheme Ordinance confers responsibility on the Monetary Authority to assist in the operation of the Deposit Protection Scheme and to trigger payment of compensation from the Deposit Protection Scheme Fund to depositors of a failed licensed bank.

The Payment Systems and Stored Value Facilities Ordinance provides a statutory regime for the Monetary Authority to designate and oversee certain significant clearing and settlement systems and retail payment systems operating in Hong Kong. It also empowers the Monetary Authority to administer a licensing regime for electronic and physical "facilities", which are used to store monetary value and which meet the criteria specified in the Ordinance.

Corporate Governance

As Hong Kong's central banking institution, the HKMA is committed to high standards of corporate governance, as good governance is crucial in maintaining and safeguarding the trust and confidence of the public in the HKMA to fulfil its statutory mandate.

Corporate Governance

To achieve its commitment to good corporate governance, the HKMA:

- puts in place a well-defined governance structure with a high degree of accountability;
- exercises robust controls to manage risks and ensure that staff behaviours at all levels and its day-to-day operations are consistent with specified standards; and
- pursues a policy of high transparency and accessibility, and keeps close contacts with stakeholders.

THE HKMA AND THE HONG KONG SPECIAL ADMINISTRATIVE REGION GOVERNMENT

The HKMA is an integral part of the Hong Kong Special Administrative Region (HKSAR) Government, but is able to employ staff on terms different from those of the civil service in order to attract personnel of the right experience and expertise. The Chief Executive of the HKMA and his staff are public officers. In its day-to-day work, the HKMA operates with a high degree of autonomy within the relevant statutory powers conferred upon, or delegated to, the Monetary Authority.

The Financial Secretary is responsible for determining the monetary policy objective and the structure of the monetary system of Hong Kong: a letter from the Financial Secretary to the Monetary Authority dated 25 June 2003 specifies that these should be currency stability defined as a stable exchange value at around HK$7.80 to one US dollar maintained by Currency Board arrangements. The Monetary Authority is on his own responsible for achieving the monetary policy objective, including determining the strategy, instruments and operational means for doing so. He is also responsible for maintaining the stability and integrity of the monetary system of Hong Kong.

The Financial Secretary, assisted by the Secretary for Financial Services and the Treasury, has responsibility for policies for maintaining the stability and integrity of Hong Kong's financial system and the status of Hong Kong as an international financial centre. In support of these policies, the Monetary Authority's responsibilities include:

- promoting the general stability and effective working of the banking system;
- promoting the development of the debt market, in co-operation with other relevant bodies;
- matters relating to the issuance and circulation of legal tender notes and coins;
- promoting the safety and efficiency of the financial infrastructure through the development of payment, clearing and settlement systems and, where appropriate, the operation of these systems; and
- seeking to promote, in co-operation with other relevant bodies, confidence in Hong Kong's monetary and financial systems, and market development initiatives to help strengthen the international competitiveness of Hong Kong's financial services.

The Exchange Fund is under the control of the Financial Secretary. The Monetary Authority, under delegation from the Financial Secretary, is responsible to the Financial Secretary for the use of the Exchange Fund, and for the investment management of the Fund.

Corporate Governance

ACCOUNTABILITY AND TRANSPARENCY

The autonomy given to the HKMA in its day-to-day operations, and in the methods it uses to pursue policy objectives determined by the Government, is complemented by a high degree of accountability and transparency.

The HKMA serves Hong Kong by promoting monetary and banking stability, by managing the official reserves effectively, and by developing and overseeing a robust and diverse financial infrastructure. These processes help to strengthen Hong Kong's role as an international financial centre and to foster Hong Kong's economic well-being.

The HKMA must have the confidence of the community if it is to perform its duties well. The HKMA therefore takes seriously the duty of explaining its policies and work to the general public and makes every effort to address any concerns within the community relevant to the HKMA's responsibilities. In particular, the HKMA makes timely clarifications on misinformation and rumours about the HKMA's policies via traditional and social media.

The HKMA is accountable to the people of Hong Kong through the Financial Secretary, who appoints the Monetary Authority, and through the laws passed by the Legislative Council that set out the Monetary Authority's powers and responsibilities. The HKMA also recognises a broader responsibility to promote a better understanding of its roles and objectives and to keep itself informed of community concerns. In its day-to-day operations and in its wider contacts with the community, the HKMA pursues a policy of transparency and accessibility. This policy has two main objectives:

- ♦ to keep the financial industry and the public as fully informed about the work of the HKMA as possible, subject to considerations of market sensitivity, commercial confidentiality and statutory restrictions on disclosure of confidential information; and
- ♦ to ensure that the HKMA is in touch with, and responsive to, the community it serves.

The HKMA seeks to follow international best practices in its transparency arrangements. It maintains extensive relations with the mass media and produces a range of regular and special publications in both English and Chinese. The HKMA's bilingual website (www.hkma.gov.hk) carries a large number of HKMA publications, press releases, speeches and presentations, in addition to dedicated sections on research, statistics, regulatory resources, consumer information and other topics. Social media platforms are also used to communicate with the public more efficiently in the digital era. The HKMA maintains an Information Centre at its offices, consisting of a library and an exhibition area, which is open to the public six days a week. Further information on the HKMA's work on public communications and engagement is contained in the *Corporate Functions* chapter.

Corporate Governance

Over the years, the HKMA has progressively increased the detail and frequency of its disclosure of information on the Exchange Fund and Currency Board Accounts. Since 1999, the HKMA has participated in the International Monetary Fund's Special Data Dissemination Standard project for central banks. The HKMA publishes records of meetings of the Currency Board Sub-Committee of the Exchange Fund Advisory Committee and the reports on Currency Board operations. The supervisory policies and guidelines on banking have been published on the HKMA website since 1996.

The relations between the HKMA and the Legislative Council play an important part in promoting accountability and transparency. There is a formal commitment from the Chief Executive of the HKMA to appear before the Panel on Financial Affairs of the Legislative Council three times a year to brief Members and to answer questions on the HKMA's work. Representatives from the HKMA attend Legislative Council panel and committee meetings from time to time to explain and discuss particular issues and to assist Members in their scrutiny of draft legislation.

CONTROLS

The HKMA adopts robust internal and external control mechanisms to ensure that it upholds a high standard of staff conduct, prudent risk management as well as appropriate checks and balances. Internal and external audit functions provide independent assessment on the adequacy and effectiveness of the control mechanisms.

Code of Conduct

A Code of Conduct, which provides guidance to staff on their ethical and legal responsibilities, is put in place to ensure that staff behaviours are consistent with specified standards at all levels.

Internal controls

Operational controls

All departments and divisions have ownership and responsibility to assess risks of their operational processes and put in place appropriate controls for ensuring proper day-to-day operations of the HKMA. This serves as the first line of defence for risk management.

Corporate Governance

Organisational risk management

Risk management is also undertaken at the corporate level, with the Risk Committee, chaired by the Chief Executive of the HKMA, being one of the cornerstones of the organisational risk management framework.

Potential and emerging risks identified by the functional units, and the adequacy of the control measures and mitigating strategies they devise, are reported to and discussed at the Risk Committee, which decides on appropriate follow-up actions.

Internal audit

The Internal Audit Division of the HKMA independently assesses the adequacy and effectiveness of control, risk management and governance processes of different functional units, and advises on areas for improvement.

External Audit

In accordance with section 7 of the Exchange Fund Ordinance, the Audit Commission of the HKSAR Government audits the financial statements of the Exchange Fund. The Commission does not charge for this service. The audited financial statements of the Exchange Fund are included in the *HKMA Annual Report*.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

In his control of the Exchange Fund, the Financial Secretary is advised by the Exchange Fund Advisory Committee (EFAC). EFAC is established under section 3(1) of the Exchange Fund Ordinance, which requires the Financial Secretary to consult the Committee in his exercise of control of the Exchange Fund. The Financial Secretary is ex officio Chairman of EFAC. Other members, including the Monetary Authority, are appointed in a personal capacity by the Financial Secretary under the delegated authority of the Chief Executive of the Hong Kong Special Administrative Region. Members of EFAC are appointed for the expertise and experience that they can bring to the Committee. Such expertise and experience include knowledge of monetary, financial and economic affairs and of investment issues, as well as of accounting, management, business and legal matters.

EFAC is assisted in its work by five Sub-Committees, which monitor specific areas of the HKMA's work and report and make recommendations to the Financial Secretary through EFAC. The Committee held four meetings in 2020 to discuss a full range of issues relating to the work of the HKMA, most of which had been previously discussed by the relevant Sub-Committees.

Brief biographies of EFAC Members and the Code of Conduct for EFAC Members can be found on the HKMA website. A Register of Members' Interests, which contains the declarations of interests by Members, is available for public inspection during 10:00 a.m. to 6:00 p.m. Monday to Friday (except public holidays) at the HKMA offices.

The terms of reference for EFAC and its Sub-Committees are available at the HKMA website.

Advisory Committees

1 April 2021

Chairman

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary

Members

Mr Eddie YUE, JP
The Monetary Authority

Mr Benjamin HUNG Pi-cheng, BBS, JP
Chief Executive Officer, Asia
Standard Chartered Bank

Mr Peter WONG Tung-shun, GBS, JP
Deputy Chairman and Chief Executive
The Hongkong and Shanghai Banking Corporation Limited

Dr David WONG Yau-kar, GBS, JP

Mr Nicky LO Kar-chun, SBS, JP

Dr Silas YANG Siu-shun, JP

Advisory Committees

Dr Anthony CHOW Wing-kin, SBS, JP
Consultant
Guantao & Chow Solicitors and Notaries

Dr the Honourable Moses CHENG Mo-chi, GBM, GBS, JP
Chairman
Insurance Authority

The Honourable Bernard Charnwut CHAN, GBM, GBS, JP
President
Asia Financial Holdings Limited

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young

Ms Irene LEE Yun-lien
Chairman
Hysan Development Company Limited

The Honourable Rimsky YUEN Kwok-keung, GBM, SC, JP
Temple Chambers

Mr Stephen YIU Kin-wah

Advisory Committees

Mr Tim LUI Tim-leung, SBS, JP
Chairman
Securities and Futures Commission

Mrs Ayesha MACPHERSON LAU, JP
Chairman
Mandatory Provident Fund Schemes Authority

Mr SUN Yu
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
(from 15 March 2021)

Mr T. Brian STEVENSON, GBS, JP
(until 31 January 2020)

Mr Carlson TONG, GBS, JP
Chairman
University Grants Committee
(until 29 February 2020)

Mr GAO Yingxin, JP
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
(until 24 May 2020)

Secretary

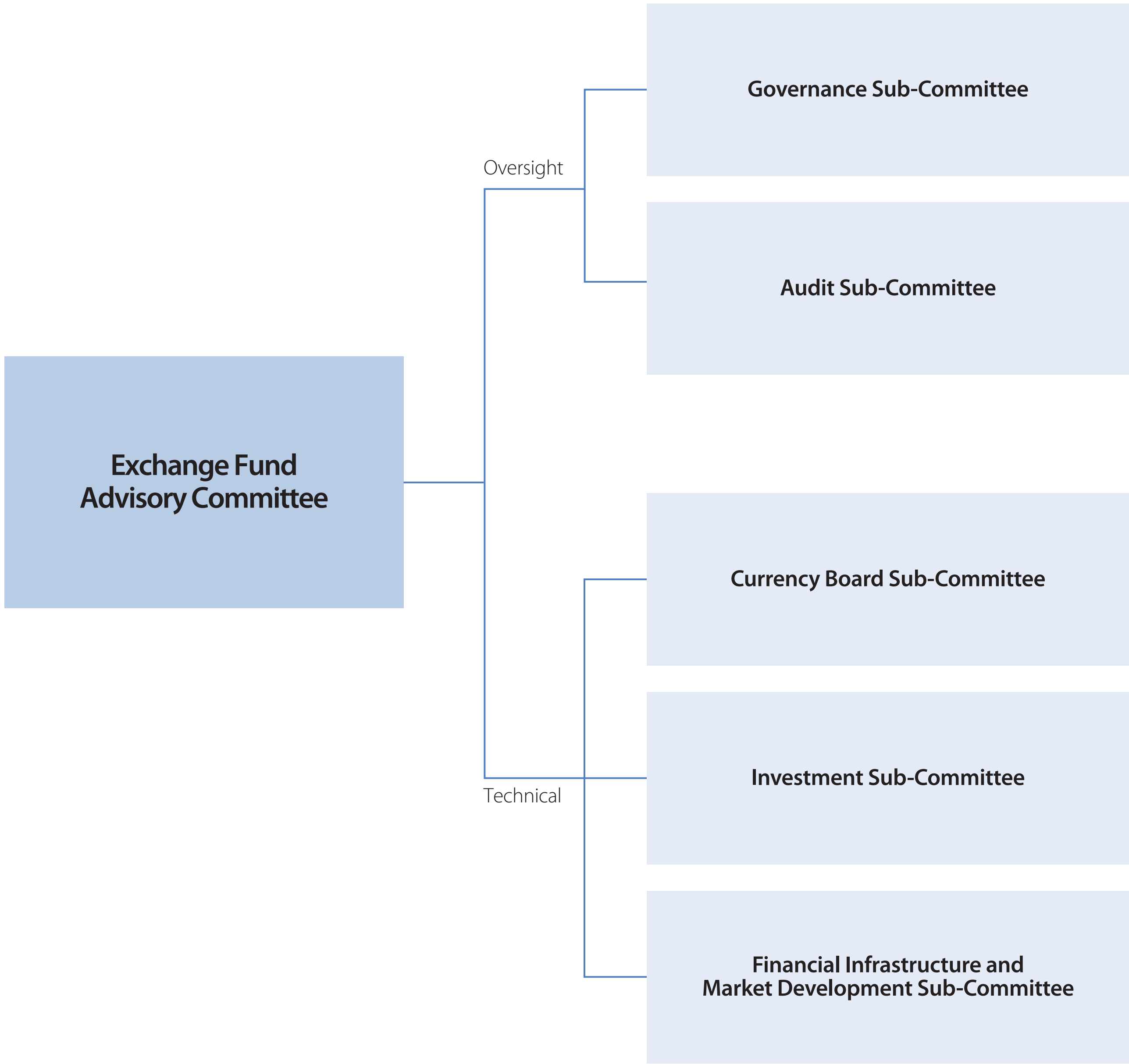
Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

SUB-COMMITTEE STRUCTURE



Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

GOVERNANCE SUB-COMMITTEE

The Governance Sub-Committee monitors the performance of the HKMA and makes recommendations to EFAC on remuneration and human resources policies, and on budgetary, administrative and governance issues. The Sub-Committee met five times in 2020 to consider a range of subjects including the HKMA's expenditure budget, performance assessment, annual pay review and strategic planning matters. The Sub-Committee also received regular reports on the work of the HKMA.

Chairman

Mr Nicky LO Kar-chun, SBS, JP

Members

Dr David WONG Yau-kar, GBS, JP

Dr Anthony CHOW Wing-kin, SBS, JP
Consultant
Guantao & Chow Solicitors and Notaries

Dr the Honourable Moses CHENG Mo-chi, GBM, GBS, JP
Chairman
Insurance Authority

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited

The Honourable Bernard Charnwut CHAN, GBM, GBS, JP
President
Asia Financial Holdings Limited

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young

The Honourable Rimsky YUEN Kwok-keung, GBM, SC, JP
Temple Chambers

Mr Stephen YIU Kin-wah

Mr Tim LUI Tim-leung, SBS, JP
Chairman
Securities and Futures Commission

Mrs Ayesha MACPHERSON LAU, JP
Chairman
Mandatory Provident Fund Schemes Authority

Mr T. Brian STEVENSON, GBS, JP
(until 31 January 2020)

Secretary

Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

AUDIT SUB-COMMITTEE

The Audit Sub-Committee reviews and reports on the HKMA's financial reporting process and the adequacy and effectiveness of the internal control systems of the HKMA. The Sub-Committee reviews the HKMA's financial statements, and the composition and accounting principles adopted in such statements. It also examines and reviews with both the external and internal auditors the scope and results of their audits. None of the members of the Sub-Committee performs any executive functions in the HKMA. The Sub-Committee met two times in 2020 and received reports on the work of the Risk Committee and the Internal Audit Division.

Chairman

Mr Stephen YIU Kin-wah

Members

Dr Silas YANG Siu-shun, JP

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young

Mr T. Brian STEVENSON, GBS, JP
(until 31 January 2020)

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited

Mr Tim LUI Tim-leung, SBS, JP
Chairman
Securities and Futures Commission

Mr Carlson TONG, GBS, JP
Chairman
University Grants Committee
(until 29 February 2020)

Secretary

Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

CURRENCY BOARD SUB-COMMITTEE

The Currency Board Sub-Committee monitors and reports on the Currency Board arrangements that underpin Hong Kong's Linked Exchange Rate System. It is responsible for ensuring that Currency Board operations are in accordance with established policy, recommending improvements to the Currency Board system, and ensuring a high degree of transparency in the operation of the system. Records of the Sub-Committee's meetings and the reports on Currency Board operations submitted to the Sub-Committee are published regularly. In 2020, the Sub-Committee met four times.

Chairman

Mr Eddie YUE, JP
The Monetary Authority

Members

Mr Arthur YUEN, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Howard LEE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Edmond LAU, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Dr John GREENWOOD, SBS
Group Chief Economist
Invesco Asset Management Limited

Professor Lawrence J. LAU, GBS, JP
Ralph and Claire Landau Professor of Economics
The Chinese University of Hong Kong

Dr David WONG Yau-kar, GBS, JP

Dr PENG Wensheng
Chief Economist
Managing Director, Head of Research Department
China International Capital Corporation Limited

Professor CHEUNG Yin-wong
Hung Hing Ying Chair Professor of International Economics
Department of Economics and Finance, City University of Hong Kong

Professor LIN Chen
Chair of Finance and Stelux Professor in Finance
Faculty of Business and Economics, The University of Hong Kong

Mrs Helen CHAN, SBS, JP

Ms Diana CESAR
Chairperson
The Hong Kong Association of Banks
(from 1 January 2021)

Mr GAO Yingxin, JP
Chairperson
The Hong Kong Association of Banks
(1 January 2020 to 24 May 2020)

Mr ZHUO Chengwen
Chairperson
The Hong Kong Association of Banks
(25 May 2020 to 31 December 2020)

Secretary

Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

INVESTMENT SUB-COMMITTEE

The Investment Sub-Committee monitors the HKMA's investment management work and makes recommendations on the investment policy and strategy of the Exchange Fund and on risk management and other related matters. The Sub-Committee held five meetings during 2020.

Chairman

Mr Eddie YUE, JP
The Monetary Authority

Members

Mr Howard LEE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Dr David WONG Yau-kar, GBS, JP

Mr Stephen YIU Kin-wah

Mr T. Brian STEVENSON, GBS, JP
(until 31 January 2020)

Dr Silas YANG Siu-shun, JP

Mr Nicky LO Kar-chun, SBS, JP

Dr Anthony CHOW Wing-kin, SBS, JP
Consultant
Guantao & Chow Solicitors and Notaries

Secretary

Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

FINANCIAL INFRASTRUCTURE AND MARKET DEVELOPMENT SUB-COMMITTEE

The Financial Infrastructure and Market Development Sub-Committee makes recommendations on measures to further develop Hong Kong's status as an international financial centre and strengthen the international competitiveness of Hong Kong's financial services, including promoting the development, operational excellence, safety and efficiency of the financial infrastructure in Hong Kong; and promoting the development of Hong Kong as an offshore renminbi centre and fostering the development of other enabling factors. It also makes recommendations on initiatives for the HKMA and monitors the work of the HKMA. In 2020, the Sub-Committee met three times.

Chairman

Mr Eddie YUE, JP
The Monetary Authority

Members

Mr Arthur YUEN, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Howard LEE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Edmond LAU, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Jack CHEUNG Tai-keung
Chief Executive Officer
Treasury Markets Association

Mrs Ayesha MACPHERSON LAU, JP
Chairman
Mandatory Provident Fund Schemes Authority

Mr Joseph NGAI, JP
Senior Partner and Managing Partner, Greater China
McKinsey & Company, Inc. Hong Kong

Professor Kalok CHAN
Wei Lun Professor of Finance
Department of Finance, CUHK Business School
The Chinese University of Hong Kong

Ms Jacqueline LEUNG
President & Managing Director
Leighton Textiles Co., Ltd.
Leighton Investments Ltd.

The Honourable Bernard Charnwut CHAN, GBM, GBS, JP
President
Asia Financial Holdings Limited

Mr Ericson CHAN
Group Chief Information & Digital Officer
Zurich Insurance

Mr Leong CHEUNG
Executive Director, Charities and Community
The Hong Kong Jockey Club

Ms Mary HUEN Wai-yi
Executive Director and Chief Executive Officer, Hong Kong
Cluster Chief Executive Officer (Hong Kong, Taiwan & Macau)
Standard Chartered Bank (Hong Kong) Limited

Mrs Ann KUNG YEUNG Yun-chi
Deputy Chief Executive
Bank of China (Hong Kong) Limited

Ms Miranda KWOK Pui-fong
President and Executive Director
China Construction Bank (Asia) Corporation Limited

Ms Amy LO Choi-wan
Co-Head UBS Wealth Management APAC
Head and Chief Executive UBS Hong Kong Branch
Group Managing Director
UBS

Ms Helen WONG Pik-kuen, JP
Deputy President
Head of Global Wholesale Banking
OCBC Bank

Advisory Committees

Mr Dennis CHOW Chi-in
Chairman
Deloitte China

Ms Angel NG Yin-yee
Chief Executive Officer, Hong Kong and Macau
Citibank, N.A.

Ms Diana CESAR
Group General Manager
Chief Executive, Hong Kong
The Hongkong and Shanghai Banking Corporation Limited

Mr Jim LAI
Vice President of Tencent
Chairman of Fusion Bank
(from 1 June 2020)

Ms DING Chen
Chief Executive Officer
CSOP Asset Management Limited
(until 19 October 2020)

The Honourable Rimsky YUEN Kwok-keung, GBM, SC, JP
Temple Chambers

Mr CHEN Shuang, JP
Founding & Managing Partner
APlus Partners Management Co., Limited

Dr the Honourable Moses CHENG Mo-chi, GBM, GBS, JP
Chairman
Insurance Authority
(from 1 February 2020)

Mr Vincent CHUI Yik-chiu
Chief Executive
Morgan Stanley Bank Asia Limited
(until 19 October 2020)

Mr Harold WONG Tsu-hing, JP
Managing Director and Chief Executive
Dah Sing Bank, Limited
(until 19 October 2020)

Secretary

Ms Sarah KWOK
(from 21 December 2020)

Ms Carrie CHAN
(until 20 December 2020)

Advisory Committees

BANKING ADVISORY COMMITTEE

The Banking Advisory Committee is established under section 4(1) of the Banking Ordinance to advise the Chief Executive of the Hong Kong Special Administrative Region on matters relating to the Banking Ordinance, in particular matters relating to banks and the carrying on of banking business. The Committee consists of the Financial Secretary as the Chairman, the Monetary Authority, and other persons appointed by the Financial Secretary under the delegated authority of the Chief Executive of the Hong Kong Special Administrative Region.

Chairman

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary

Ex Officio Member

Mr Eddie YUE, JP
The Monetary Authority

Members

Mr Christopher HUI Ching-yu, JP
Secretary for Financial Services and the Treasury
(from 22 April 2020)

Mr SUN Yu
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
Representing Bank of China (Hong Kong) Limited
(from 23 December 2020)

Ms Diana CESAR
Group General Manager
Chief Executive, Hong Kong
The Hongkong and Shanghai Banking Corporation Limited
Representing The Hongkong and Shanghai Banking Corporation Limited

Ms Mary HUEN Wai-yi
Executive Director and Chief Executive Officer, Hong Kong
Cluster Chief Executive Officer (Hong Kong, Taiwan & Macau)
Standard Chartered Bank (Hong Kong) Limited
Representing Standard Chartered Bank (Hong Kong) Limited

Mr Tim LUI Tim-leung, SBS, JP
Chairman
Securities and Futures Commission
Representing Securities and Futures Commission

The Honourable CHAN Chun-ying, JP
Member
Legislative Council

Ms KWANG Kam-shing
Chief Executive Officer
Asia Private Bank
JPMorgan Chase Bank, N.A.

Mr Paul YANG
Chief Executive Officer
Corporate and Institutional Banking Asia Pacific
BNP Paribas

Mr Yoshikazu SHIMAUCHI
Executive Officer
Managing Director
Head of Hong Kong Branch
MUFG Bank, Limited
(from 1 December 2020)

The Honourable James H. LAU Jr., JP
Secretary for Financial Services and the Treasury
(until 21 April 2020)

Mr GAO Yingxin, JP
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
Representing Bank of China (Hong Kong) Limited
(until 24 May 2020)

Mr ZHUO Chengwen
Chief Risk Officer
Bank of China (Hong Kong) Limited
Representing Bank of China (Hong Kong) Limited
(25 May 2020 to 22 December 2020)

Mr Yuzuru NASHIMOTO
Managing Director
Head of East Asia Administration Department
Mizuho Bank Limited
(until 8 June 2020)

Secretary

Ms Jasmin FUNG

Advisory Committees

DEPOSIT-TAKING COMPANIES ADVISORY COMMITTEE

The Deposit-taking Companies Advisory Committee is established under section 5(1) of the Banking Ordinance to advise the Chief Executive of the Hong Kong Special Administrative Region on matters relating to the Banking Ordinance, in particular matters relating to deposit-taking companies and restricted licence banks and the carrying on of a business of taking deposits by them. The Committee consists of the Financial Secretary as the Chairman, the Monetary Authority, and other persons appointed by the Financial Secretary under the delegated authority of the Chief Executive of the Hong Kong Special Administrative Region.

Chairman

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary

Ex Officio Member

Mr Eddie YUE, JP
The Monetary Authority

Members

Mr Christopher HUI Ching-yu, JP
Secretary for Financial Services and the Treasury
(from 22 April 2020)

Ms Gilly WONG Fung-han
Chief Executive
Consumer Council
Representing the Consumer Council

Mr Andy POON Shiu-chung
Chief Executive Officer
First Abu Dhabi Bank Hong Kong Branch
(Former Chief Executive of Scotiabank (Hong Kong) Limited)

Mr CHONG Yam-kiang
Executive Director and Chief Executive
Public Finance Limited
(from 1 December 2020)

Mr Vincent CHUI Yik-chiu
Chief Executive
Morgan Stanley Bank Asia Limited
(until 30 November 2020)

Mrs Lourdes A. SALAZAR
Chairperson
The DTC Association (The Hong Kong Association of Restricted Licence Banks and Deposit-taking Companies)
Representing The DTC Association

The Honourable Elizabeth QUAT, BBS, JP
Member
Legislative Council

Mr Jack CHAN Hoi
Chairman, China
Regional Managing Partner, Greater China
Ernst & Young

The Honourable James H. LAU Jr., JP
Secretary for Financial Services and the Treasury
(until 21 April 2020)

Secretary

Ms Jasmin FUNG

Chief Executive's Committee

1 April 2021

The Chief Executive's Committee comprises the Chief Executive of the HKMA, who chairs the Committee, the Deputy Chief Executives, the Senior Executive Director and the Executive Directors of the HKMA. The Committee meets regularly to report to the Chief Executive on the progress of major tasks being undertaken by the various departments of the HKMA and to advise him on policy matters relating to the operations of the HKMA.

Eddie YUE, JP
Chief Executive

Arthur YUEN, JP
Deputy Chief Executive

Howard LEE, JP
Deputy Chief Executive

Edmond LAU, JP
Deputy Chief Executive
(from 1 April 2021)
Senior Executive Director
(until 31 March 2021)

Raymond LI, JP
Senior Executive Director
Chief Executive Officer
Hong Kong Mortgage Corporation

Chief Executive's Committee

Stefan GANNON, JP
Commissioner, Resolution Office

Francis CHU, JP
Chief Operating Officer
(Exchange Fund Investment Office)

Karen KEMP, JP
General Counsel

Carmen CHU, JP
Executive Director (Enforcement and AML)

Darryl CHAN, JP
Executive Director (External)
Executive Director (Corporate Services)
(until 9 February 2020)

Grace LAU, JP
Executive Director (Risk and Compliance)
Chief Risk Officer
(Exchange Fund Investment Office)

Chief Executive's Committee

Lillian CHEUNG, JP
Executive Director (Research)

Raymond CHAN, JP
Executive Director (Banking Supervision)

Daryl HO, JP
Executive Director (Banking Policy)

Alan AU, JP
Executive Director (Banking Conduct)

Colin POU, JP
Executive Director (Financial Infrastructure)

Linda SO
Executive Director (Corporate Services)
(from 10 February 2020)

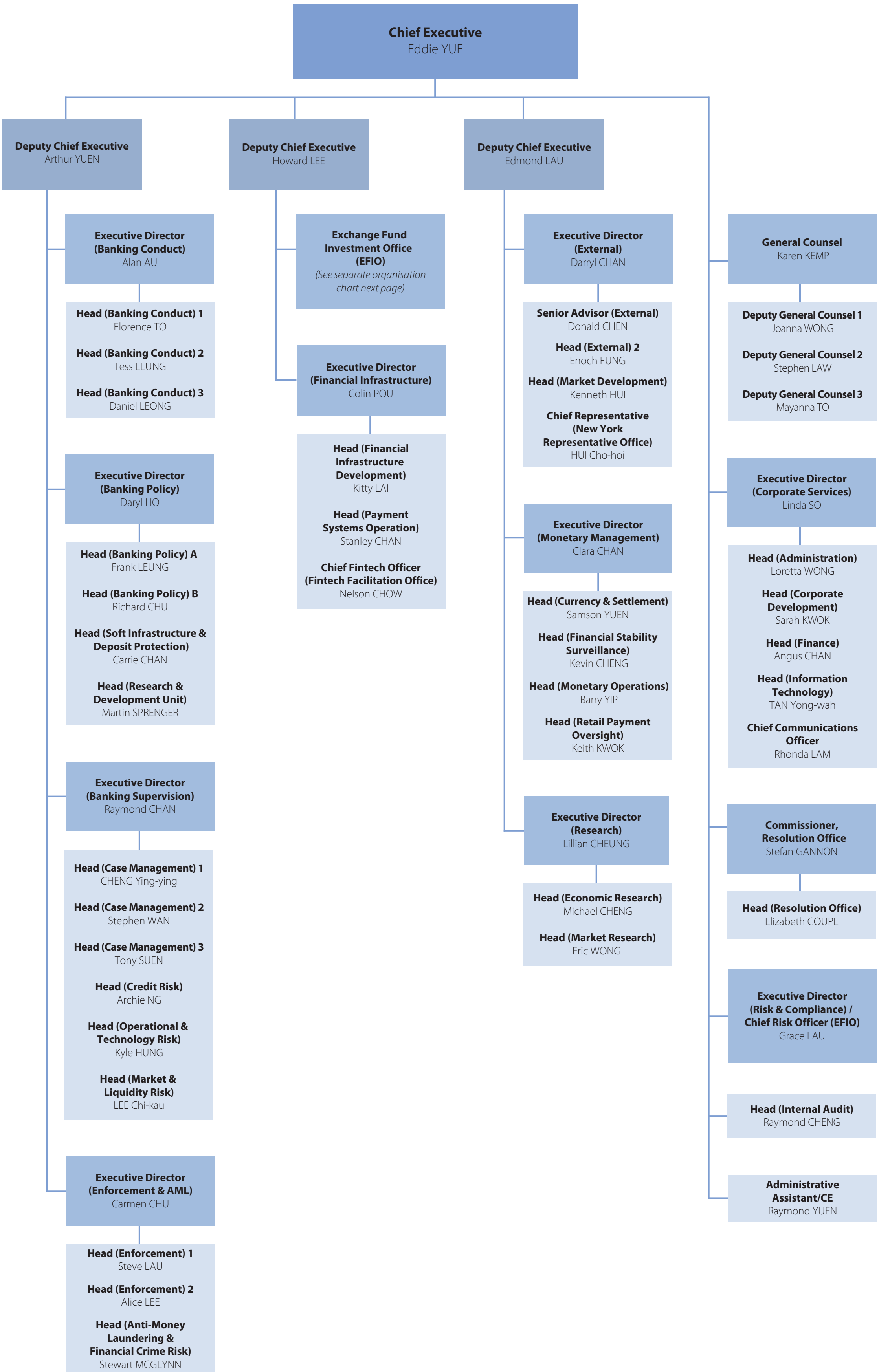
Chief Executive's Committee

Clara CHAN
Executive Director (Monetary Management)
(from 17 October 2020)

Clement LAU, JP
Executive Director (Monetary Management)
(until 16 October 2020)

HKMA Organisation Chart

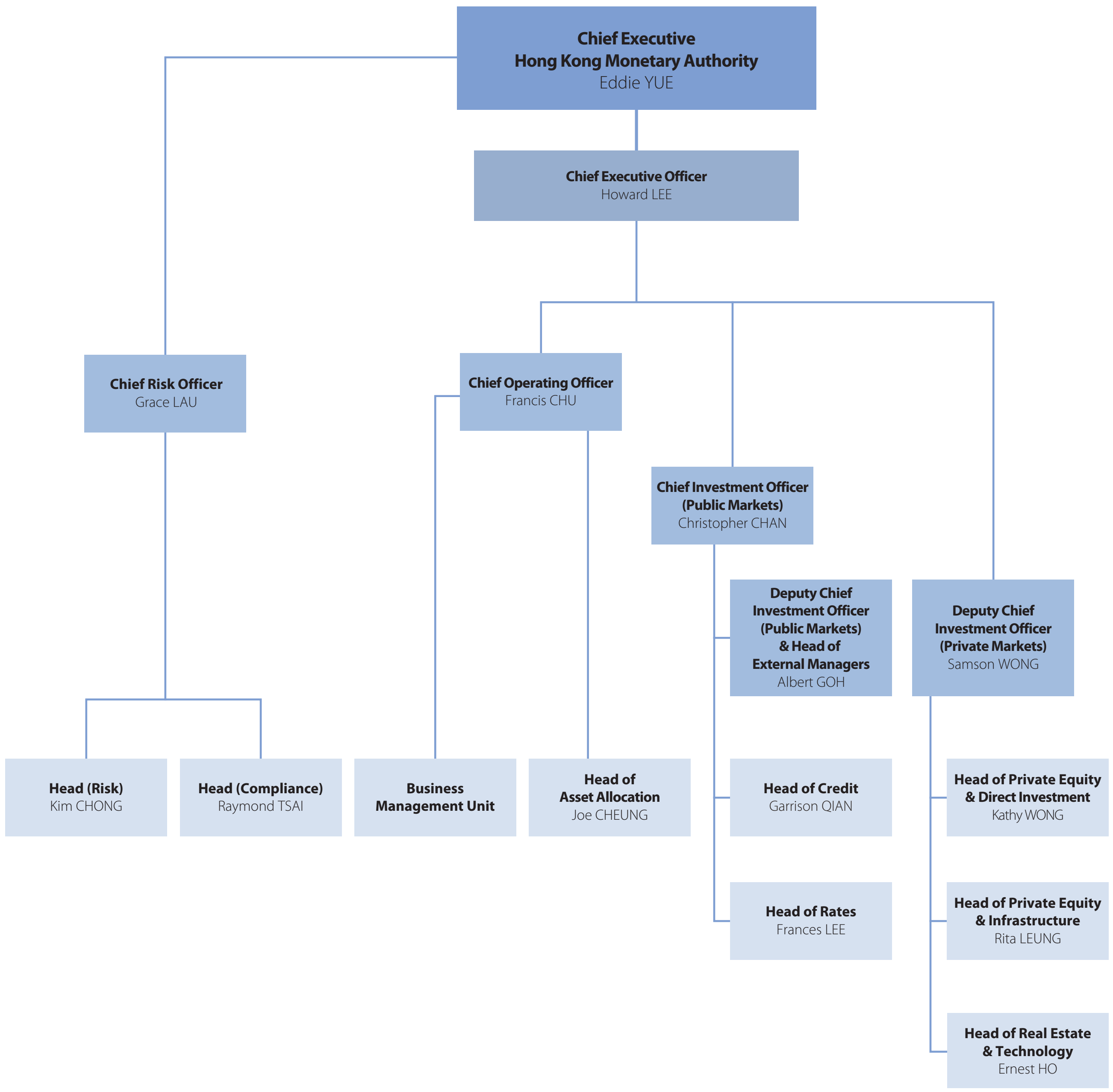
1 April 2021



HKMA Organisation Chart

HKMA EXCHANGE FUND INVESTMENT OFFICE (EFIO) ORGANISATION CHART

1 April 2021



Economic and Financial Environment

The Hong Kong economy contracted for the second consecutive year and by the most severe magnitude on record amid the COVID-19 pandemic in 2020. Consumption and tourism-related sectors were particularly hard-hit, registering much steeper contractions than the overall economy. In tandem, the labour market deteriorated sharply while inflation moderated. In response to the challenging economic environment, the Government and the HKMA rolled out relief measures of unprecedented scale to support the economy. Economic growth is expected to resume in 2021 in the hope of COVID-19 vaccination normalising economic activities, albeit subject to a host of uncertainties that will affect the strength and pace of recovery, especially factors surrounding the pandemic situation and vaccine availability, reach and efficacy.

Economic and Financial Environment

THE ECONOMY IN REVIEW

Real activities

Battered by the COVID-19 pandemic, the Hong Kong economy contracted by 6.1% in 2020, marking the second consecutive year of annual contraction and the most severe one on record (Table 1). The steep fall in economic activities was driven mainly by a sharp reduction in domestic demand (Chart 1). Local consumption activities were severely disrupted by the outbreak and the resultant social distancing measures, while overall investment spending retreated noticeably in a worsening business environment. Externally, despite supply chain disruptions and global demand contraction induced by the pandemic, Hong Kong's export of goods saw only a slight decline for the year as a whole, in part supported by a quick resumption of production and economic activities in Mainland China. By contrast, export of services took a big hit as lockdowns, border closures and restricted passenger flows brought global tourism to a standstill. With weak domestic and re-export-induced demand, imports of goods and services also worsened. On net, trade contributed positively to gross domestic product (GDP) (Chart 1) because total imports declined faster than exports. Analysed by economic sector, consumption and tourism-related businesses, such as retail, accommodation and food services, were particularly hard-hit and recorded much steeper contractions than the overall economy, while the financial sector experienced mild growth.

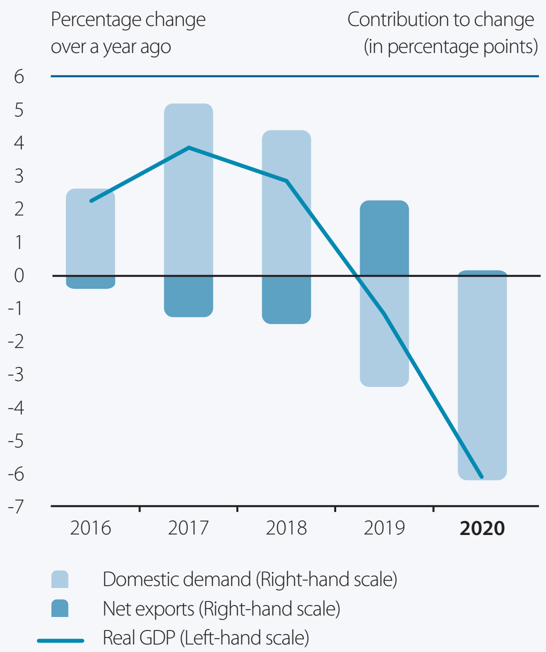
Table 1 Real GDP growth by expenditure component (period-over-period)

	2020					2019				
(% Period-over-period, unless otherwise specified)	**Q1**	**Q2**	**Q3**	**Q4**	**2020**	Q1	Q2	Q3	Q4	2019
Gross Domestic Product	**(5.6)**	**(0.1)**	**2.7**	**0.2**	**(6.1)**	0.8	(0.3)	(3.0)	(0.4)	(1.2)
(year-on-year growth)	**(9.1)**	**(9.0)**	**(3.6)**	**(3.0)**		0.7	0.4	(2.8)	(3.0)	
Private consumption expenditure	**(7.2)**	**(3.9)**	**2.6**	**1.4**	**(10.1)**	0.8	0.2	(4.1)	0.3	(1.1)
Government consumption expenditure	**3.4**	**1.7**	**0.1**	**0.3**	**7.8**	0.9	0.8	2.5	1.7	5.1
Gross domestic fixed capital formation	**–**	**–**	**–**	**–**	**(11.5)**	–	–	–	–	(12.3)
Exports										
Exports of goods	**(8.5)**	**6.2**	**4.9**	**4.1**	**(0.3)**	(1.7)	(1.6)	(1.2)	2.0	(4.6)
Exports of services	**(16.2)**	**(16.1)**	**6.1**	**(4.9)**	**(36.8)**	1.0	(3.6)	(13.1)	(10.6)	(10.2)
Imports										
Imports of goods	**(6.2)**	**1.7**	**7.1**	**5.4**	**(2.1)**	(2.2)	(2.6)	(2.0)	(0.3)	(7.3)
Imports of services	**(20.0)**	**(26.1)**	**8.3**	**0.7**	**(35.1)**	0.3	0.5	(5.9)	(0.3)	(2.4)

Note: Seasonally adjusted quarter-on-quarter rates of change in the gross domestic fixed capital formation are not available.
Source: Census and Statistics Department.

Economic and Financial Environment

Chart 1 Real GDP growth by contribution



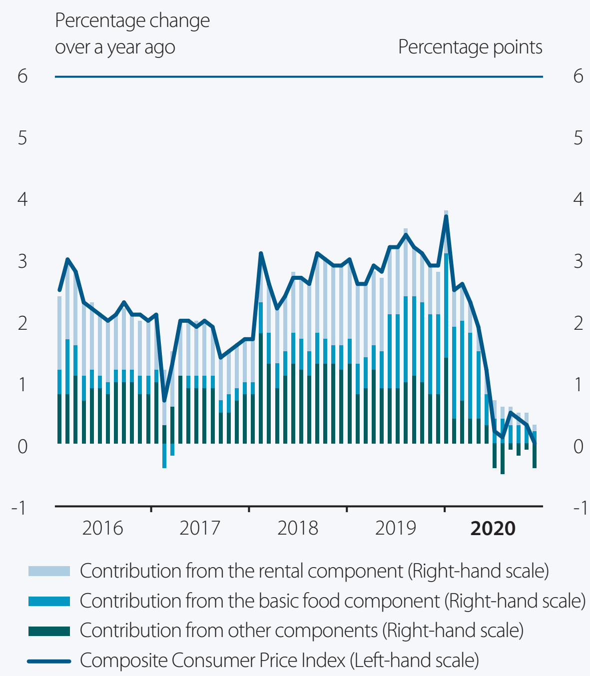
Source: Census and Statistics Department.

In response to the pandemic, the Government swiftly introduced relief measures of unprecedented scale totalling more than HK$300 billion through the 2020–21 Budget and dispensed four rounds of aid from the Anti-Epidemic Fund. These measures included a one-off cash transfer of HK$10,000 to eligible residents, wage subsidies through the Employment Support Scheme (ESS), as well as one-off subsidies, rent concessions and fee waivers for hard-hit sectors. On its part, the HKMA took a three-pronged approach to bolster the banking sector in support of the real economy. The measures comprised proactive coordination with the banking sector to ease cash flow pressures on enterprises and households, releasing buffers to boost the lending capacity of banks and ensuring that banks had abundant liquidity to support domestic economic activities[1].

Inflation

Inflationary pressures subsided notably in 2020. Netting out the effects of the Government's one-off relief measures, the underlying inflation rate decelerated to 1.3%, the slowest since the global financial crisis in 2009[2]. Price pressures on basic foodstuffs, particularly fresh pork, receded notably, and outside of home cooking, meals became cheaper in the second half of the year as restaurants offered deep discounts. The housing component of consumer price inflation also softened along with an earlier decline in fresh-letting private residential rentals (Chart 2). More broadly, domestic business cost pressures eased amid decelerated nominal wage growth and soft commercial rentals, while imported inflation moderated under the subdued global economic conditions.

Chart 2 Underlying consumer price inflation



Source: Census and Statistics Department.

1 As the pandemic lingers, some measures have been refined or extended. For example, the HKMA in March 2021 announced extending the Pre-approved Principal Payment Holiday Scheme to October 2021. These extensions are expected to ease cash flow difficulties faced by some corporate customers.

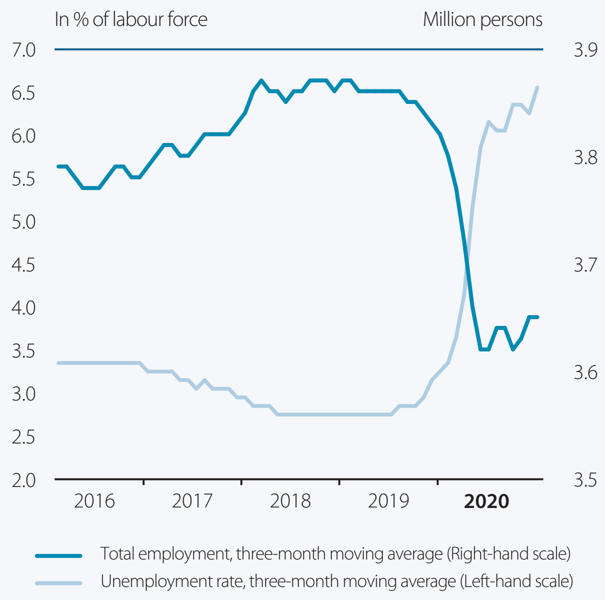
2 Inclusive of the effects of the Government's relevant one-off relief measures, the year-on-year headline inflation rate was negative between July and December, dragging down the full-year rate to merely 0.3%.

Economic and Financial Environment

Labour market

The labour market deteriorated sharply in 2020. The seasonally adjusted unemployment rate surged from 3.3% to a 16-year high of 6.6% over the course of the year (Chart 3), with hard-hit sectors such as retail, accommodation and food services experiencing unemployment rates of over 10%. The underemployment rate also rose to a post-SARS high of 3.8% in August. The labour force participation rate edged down, due in part to a cyclical response to the sharp deterioration in economic conditions. Overall labour demand shrank further, as reflected by the steep fall in total employment (Chart 3) and private-sector vacancies. Growth in nominal wage and earnings slowed down further. To provide time-limited financial support to employers to retain employees, the Government launched the ESS, which lent some support to the labour market[3].

Chart 3 Labour market conditions

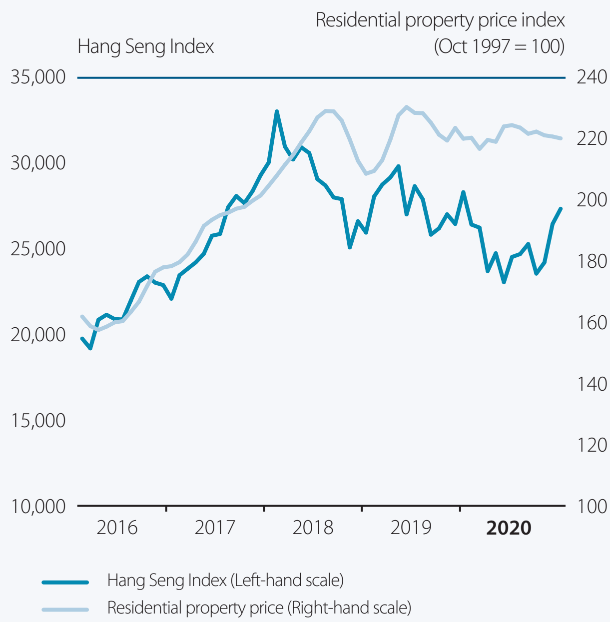


Source: Census and Statistics Department.

Stock market

The Hang Seng Index plunged to a three-year low during the first quarter alongside the COVID-19 outbreak but stabilised somewhat in the second and third quarters following massive support measures introduced by central banks and governments across the globe (Chart 4). Stock prices regained some upward momentum towards the end of the year on breakthroughs in COVID-19 vaccines. The Hang Seng Index finished the year at 27,231 points, registering an overall loss of 3.4% for the year. Underpinned by Mainland enterprises' secondary listing activities, Hong Kong ranked second globally in terms of the roughly HK$400 billion raised through initial public offerings in 2020.

Chart 4 Asset prices



Sources: Rating and Valuation Department and Hong Kong Exchange and Clearing Limited.

3 Wage subsidies provided to eligible employers under the ESS covered 50% of the actual wage paid to each regular employee in a specified month, with a wage cap of HK$18,000 per month (i.e. the maximum subsidy per employee was HK$9,000 per month). The subsidies were disbursed in two tranches to pay the wages of employees from June to November. Employers participating in the ESS were required to undertake that they will not implement redundancies during the subsidy period and will spend all the wage subsidies on paying wages to their employees.

Economic and Financial Environment

Property market

Partly supported by ultra-low interest rates, the residential property market broadly held up in 2020 (Chart 4). Overall, both housing prices and transaction volumes were virtually unchanged compared with a year earlier. However, housing affordability became more stretched as household income declined. Meanwhile, the non-residential property market weakened further, with prices declining by varying degrees and transactions bottoming out. Rentals for office premises and retail spaces registered large declines, reflecting the economic fallout and higher vacancy. Given that the non-residential property market has seen major corrections since 2019 and will likely remain under pressure, and taking into account other factors such as economic fundamentals and the external environment, the HKMA adjusted countercyclical macroprudential measures on non-residential properties in August[4]. In view of the slackening market demand, the Government also abolished the Doubled Ad Valorem Stamp Duty in the purchase of non-residential properties as a demand management measure in November.

OUTLOOK FOR THE ECONOMY

Economic environment

Hong Kong's economy is expected to see positive growth for 2021 as a whole in the hope of COVID-19 vaccination normalising economic activities, albeit subject to a host of uncertainties that will affect the strength and pace of recovery, especially factors surrounding the pandemic situation and vaccine availability, reach and efficacy[5]. In particular, as it takes time for vaccines to be widely adopted, the local economy still faces considerable challenges in the early part of 2021. Externally, the Mainland economy is anticipated to strengthen further and render support to Hong Kong's export of goods and services, but the pace of recovery in other major economies will hinge on the success of their mass vaccination campaigns. The Government forecasts real GDP growth in the range of 3.5–5.5% for the whole of 2021, consistent with the average 4.4% projected by international organisations and private-sector analysts in their latest Hong Kong growth estimates.

Inflation and the labour market

Inflationary pressures are expected to remain muted in 2021 as global and local economic conditions are still challenging. In addition, the feed-through of the earlier decline in fresh-letting residential rentals will continue to restrain local inflation. Market consensus forecasts a headline inflation rate of 1.5% in 2021, while the Government projects the headline and underlying inflation rates to be 1.6% and 1% respectively. The labour market will remain under pressure in the near term, given the challenging outlook in the early part of 2021 and in view of expectations by private-sector analysts for the unemployment rate to remain high at about 5.9% for 2021 as a whole.

4 See the circular "Prudential Measures for Mortgage Loans on Non-residential Properties" issued by the HKMA on 19 August.

5 The economic outlook is subject to other uncertainties and risks, including those stemming from China-US relations under the new US administration, global geopolitics, rising debts worldwide and lofty valuations of global equity markets with signs of disconnecting from the real economy.

PERFORMANCE OF THE BANKING SECTOR

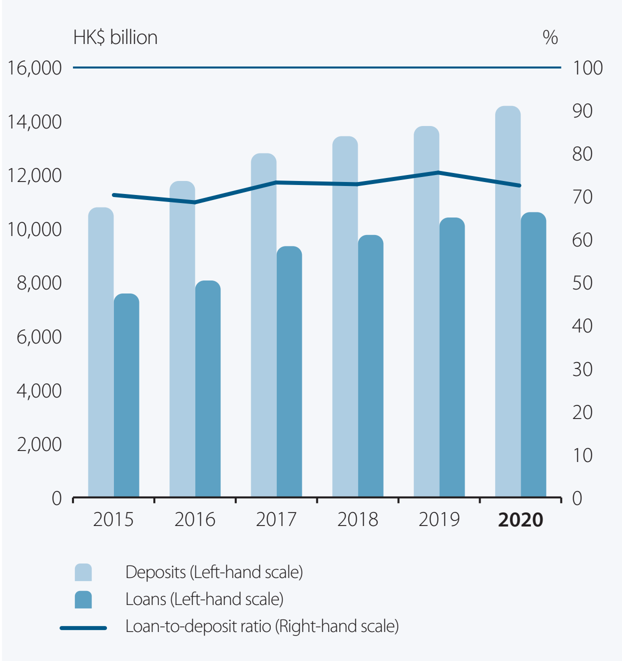
The Hong Kong banking sector remained resilient in 2020, underpinned by the solid financial positions of banks. Despite the challenges posed by the COVID-19 pandemic, bank balance sheets continued to grow, along with an expansion in deposit funding. The capital and liquidity positions of the banking sector continued to be strong. Asset quality deteriorated modestly but remained at a healthy level.

Balance sheet trends

The banking sector's balance sheet grew by 5.7% in 2020. As the economic downturn took hold, credit growth slowed to 1.2% during the year, compared with 6.7% in 2019. Loans for use in Hong Kong grew by 2.2% and loans for use outside Hong Kong grew marginally by 0.1%, while trade finance decreased by 6.2%. Mainland-related lending edged down by 0.2% in 2020, compared to a 7.4% growth in 2019.

On the liabilities side of bank balance sheets, total deposits increased by 5.4% in 2020, compared with 2.9% in 2019. As total deposits increased at a faster pace than total loans, the overall loan-to-deposit ratio decreased to 72.3% at the end of 2020 from 75.3% a year ago (Chart 5).

Chart 5 Loans and deposits of the banking sector



Economic and Financial Environment

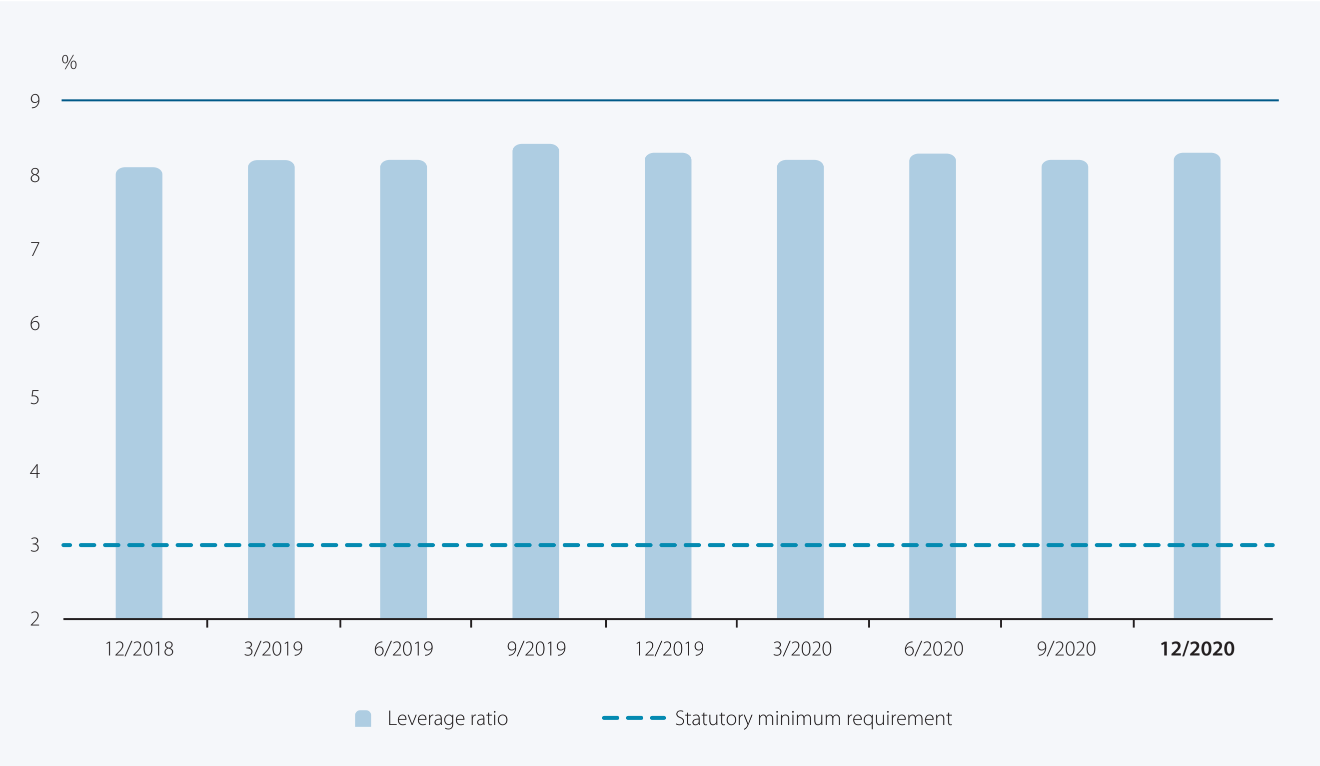
Capital adequacy

The capital positions of the banking sector remained robust in 2020, providing banks with a strong buffer to withstand potential shocks. The consolidated total capital ratio of locally incorporated authorized institutions (AIs) remained stable at 20.7% at the end of 2020 as compared to the end of 2019. The Tier 1 capital ratio increased slightly to 18.7% from 18.5% during the same period (Chart 6).

The Basel III leverage ratio remained steady at 8.2% at the end of 2020 as compared to the end of 2019, well above the statutory minimum requirement of 3% (Chart 7).

Chart 6 Consolidated capital ratios of locally incorporated AIs

Chart 7 Consolidated leverage ratio of locally incorporated AIs

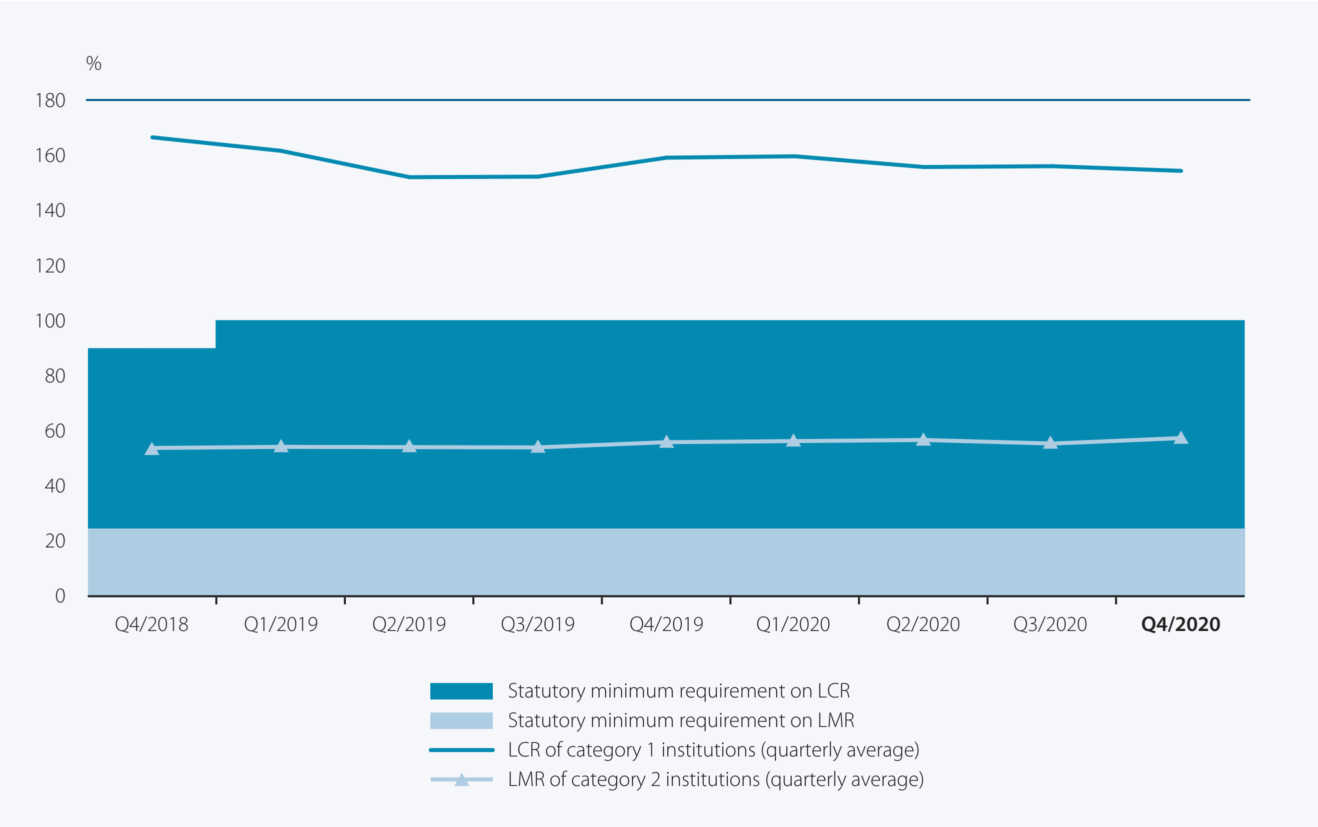


Economic and Financial Environment

Liquidity

The liquidity position of the banking sector remained sound, indicating its ability to withstand liquidity shocks in times of stress. The quarterly average Liquidity Coverage Ratio (LCR) of category 1 institutions was 155.1% in the fourth quarter, well above the statutory minimum requirement of 100%. The quarterly average Liquidity Maintenance Ratio (LMR) of category 2 institutions was 57.9%, also well above the statutory minimum requirement of 25% (Chart 8).

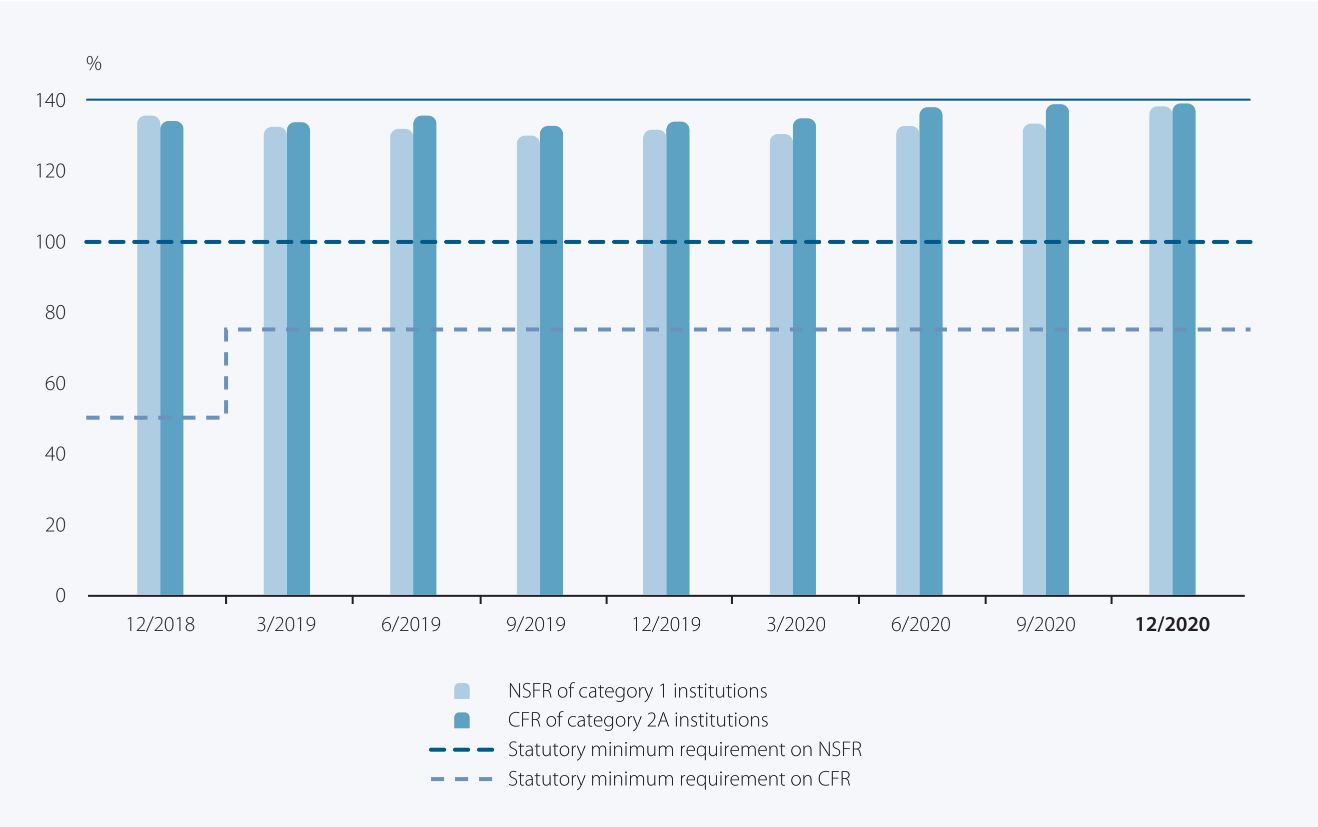
Chart 8 **Liquidity ratios of designated AIs**



Economic and Financial Environment

The sources of funding of the banking sector remained stable. The Net Stable Funding Ratio (NSFR) of category 1 institutions was 138.6% at the end of 2020, well above the statutory minimum requirement of 100%. The Core Funding Ratio (CFR) of category 2A institutions was 139.5% at the end of 2020, also well above the statutory minimum requirement of 75% (Chart 9).

Chart 9 Funding ratios of designated AIs

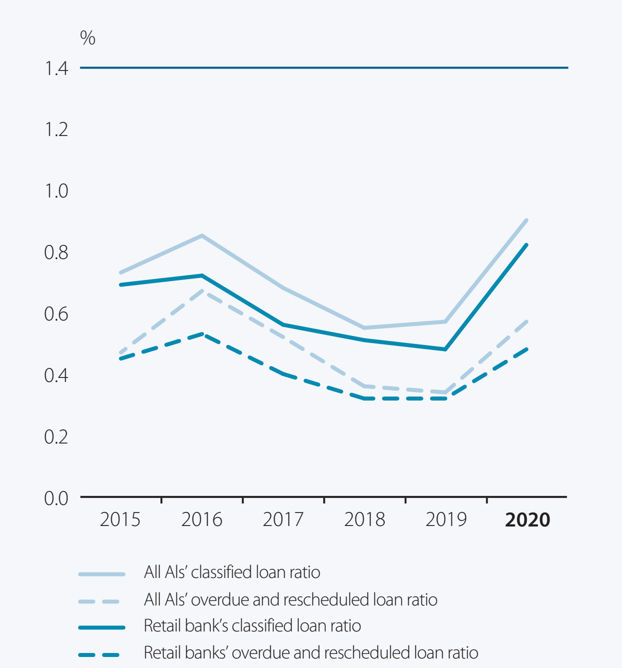


Economic and Financial Environment

Asset quality

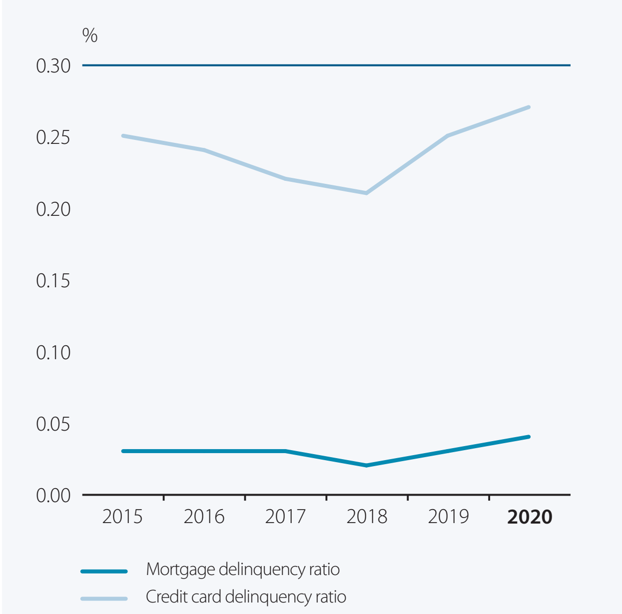
Reflecting the impact of the COVID-19 pandemic, asset quality deteriorated modestly during the year, but remained at a healthy level by historical and international standards. The classified loan ratio increased to 0.90% at the end of 2020, compared with 0.57% at the end of 2019, while the overdue and rescheduled loan ratio increased to 0.57% from 0.34% during the same period (Chart 10). As for Mainland-related lending, the banking sector's classified loan ratio increased to 0.96% at the end of 2020 from 0.75% at the end of 2019. The delinquency ratios of residential mortgage lending and credit card lending remained low at 0.04% and 0.27% respectively (Chart 11).

Chart 10 Asset quality of the banking sector



Note: Figures covered Hong Kong offices, overseas branches and major overseas subsidiaries.

Chart 11 Delinquency ratios of residential mortgages and credit card lending



Economic and Financial Environment

Profitability trends

The low interest rate environment, together with a modest deterioration in asset quality, compressed the profits of the banking sector. The aggregate pre-tax operating profit of retail banks declined by 29.4% in 2020 (Chart 12), mostly attributable to a contraction in net interest income (-21.9%) and a surge in loan impairment charges (+61.3%). The net interest margin narrowed to 1.18% in 2020 from 1.63% in 2019 (Chart 13).

Driven by the decrease in income, retail banks' cost-to-income ratio increased to 46.8% in 2020 from 39.5% in 2019 (Chart 14).

Chart 12 Retail banks' performance

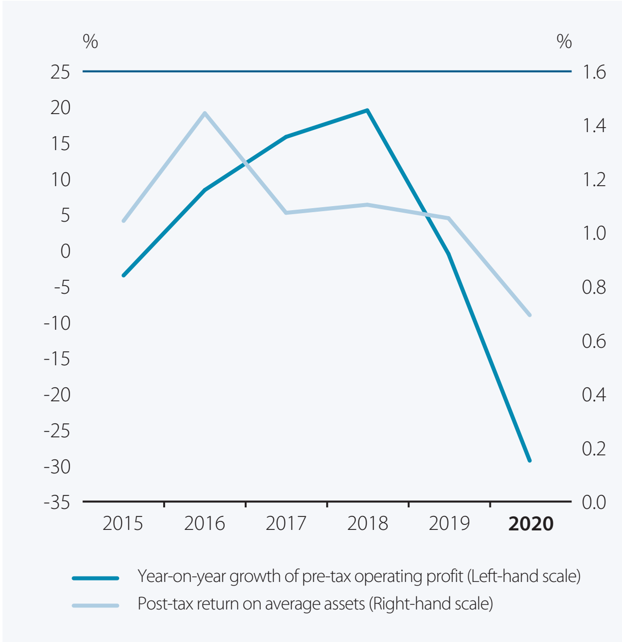


Chart 13 Retail banks' net interest margin

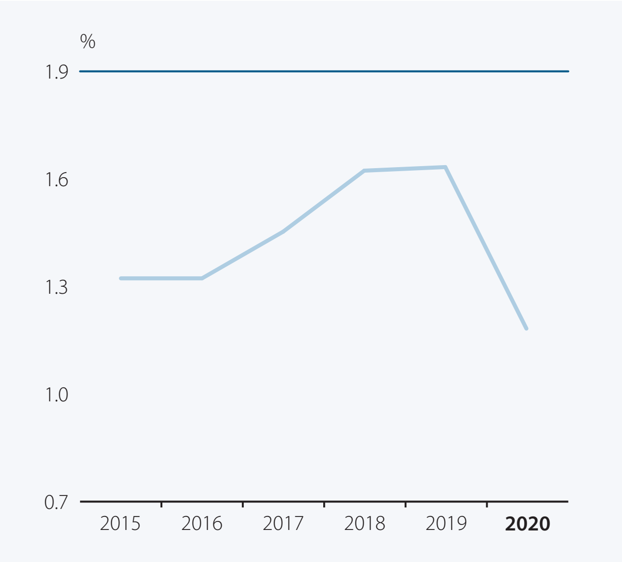
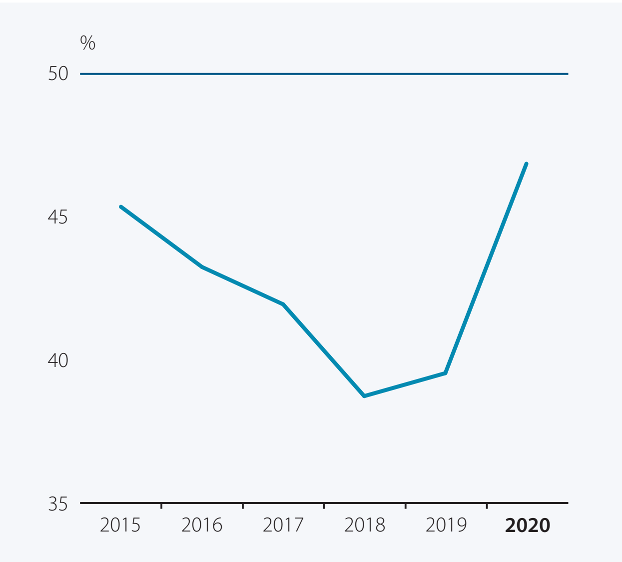
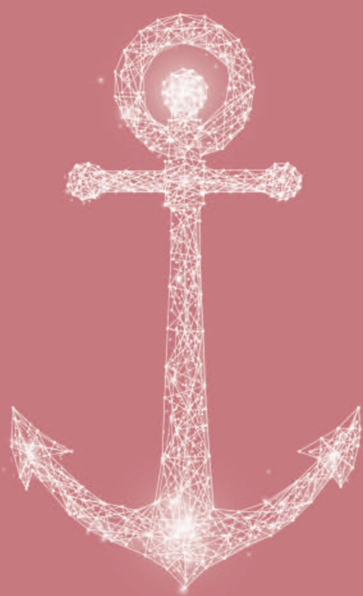


Chart 14 Retail banks' cost-to-income ratio



Monetary Stability

Notwithstanding the heightened uncertainty created by the COVID-19 pandemic, the Hong Kong dollar foreign exchange and money markets traded in a smooth and orderly manner. Underpinned by strong equity-related inflows, the Hong Kong dollar firmed throughout most of 2020, with repeated triggering of the strong-side Convertibility Undertaking. As the cornerstone of Hong Kong's financial system, the Linked Exchange Rate System has shown its strength and resilience to shocks.



Monetary Stability

OBJECTIVES

The overriding objective of Hong Kong's monetary policy is currency stability. This is defined as a stable external exchange value of Hong Kong's currency, in terms of its exchange rate in the foreign exchange market against the US dollar, within a band of HK$7.75–7.85 to US$1. The structure of the monetary system is characterised by Currency Board arrangements, requiring the Monetary Base to be at least 100% backed by US dollar reserves held in the Exchange Fund, and changes in the Monetary Base to be 100% matched by corresponding changes in US dollar reserves.

The Monetary Base (Table 1) comprises:

- Certificates of Indebtedness, which provide full backing to the banknotes issued by the three note-issuing banks
- Government-issued currency notes and coins in circulation
- the Aggregate Balance, which is the sum of clearing account balances kept with the HKMA
- Exchange Fund Bills and Notes (EFBNs) issued by the HKMA on behalf of the Government.

Table 1 Monetary Base

HK$ million	**31 December 2020**	31 December 2019
Certificates of Indebtedness[1]	**559,515**	516,605
Government-issued currency notes and coins in circulation[1]	**12,920**	13,001
Balance of the banking system[2]	**457,466**	54,288
EFBNs issued[3]	**1,069,180**	1,078,748
TOTAL	**2,099,081**	1,662,642

1. The Certificates of Indebtedness and the government-issued currency notes and coins in circulation shown here are stated at Hong Kong dollar face values. The corresponding items shown in the balance sheet of the Exchange Fund in this Annual Report are in Hong Kong dollars equivalent to the US dollar amounts required for their redemption at the prevailing exchange rates on the reporting date. This arrangement is in accordance with the accounting principles generally accepted in Hong Kong.

2. Balance of the banking system shown here is the carrying value before the amount advanced to the banks under the Discount Window Operations. In accordance with the accounting principles generally accepted in Hong Kong, the corresponding item shown in the balance sheet of the Exchange Fund in this Annual Report includes the amount of these advances.

3. The amount of EFBNs shown here refers to their fair value. In accordance with the accounting principles generally accepted in Hong Kong, the EFBNs held by the HKMA on behalf of the Exchange Fund in relation to its trading of the EFBNs in the secondary market are offset against the EFBNs issued, and the net amount is recorded in the balance sheet. The EFBNs allotted on tender dates but not yet settled are included in the balance sheet but excluded from the Monetary Base. Therefore, the amount of EFBNs shown here is different from that in the balance sheet of the Exchange Fund in this Annual Report.

The stability of the Hong Kong dollar exchange rate is maintained through an automatic interest rate adjustment mechanism and the firm commitment by the HKMA to honour the Convertibility Undertakings (CUs). With the HKMA standing ready to sell (or buy) Hong Kong dollars to (or from) banks in exchange for US dollars upon request at 7.75 (or 7.85) per US dollar, when the strong-side (or weak-side) CU is triggered, the Aggregate Balance will expand (or contract) to push down (or up) Hong Kong dollar interest rates that would help move the Hong Kong dollar back to within the Convertibility Zone of 7.75 to 7.85.

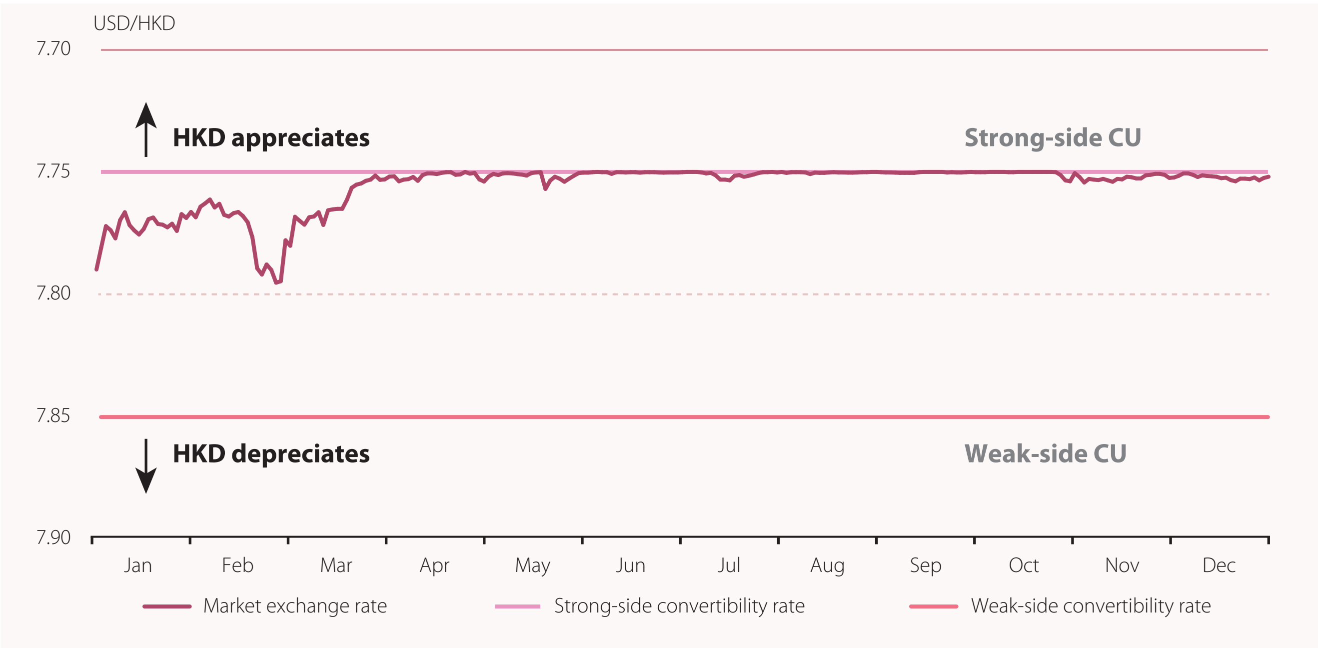
Monetary Stability

REVIEW OF 2020

Exchange rate stability

Amid the global COVID-19 outbreak in March, global investors sought more US dollars under risk-off sentiment, leading to a notable tightening in US dollar funding conditions. Under the Linked Exchange Rate System (LERS), as Hong Kong dollar interest rates are influenced by their US dollar counterparts, the strain in US dollar liquidity led to a tightening of the monetary conditions in Hong Kong. While US dollar funding pressure subsequently eased along with the implementation of the US Federal Reserve's liquidity programmes, Hong Kong's monetary conditions remained tight due to equity-related demand and the quarter-end effect. The strong demand for Hong Kong dollars, together with carry trade activities spurred by the positive Hong Kong dollar-US dollar interest rate spreads, led to the strengthening of the Hong Kong dollar exchange rate towards the strong-side CU (Chart 1). The strong-side CU was eventually triggered in April. Thereafter, equity-related inflows stemming from vibrant initial public offering (IPO) activities and the southbound Stock Connects kept the Hong Kong dollar close to the 7.75 level and led to a series of triggering of the strong-side CU throughout 2020. In total, the strong-side CU was triggered 85 times between 21 April and 28 October, with aggregate inflows of HK$383.5 billion. Overall, the Hong Kong dollar foreign exchange market functioned normally throughout 2020.

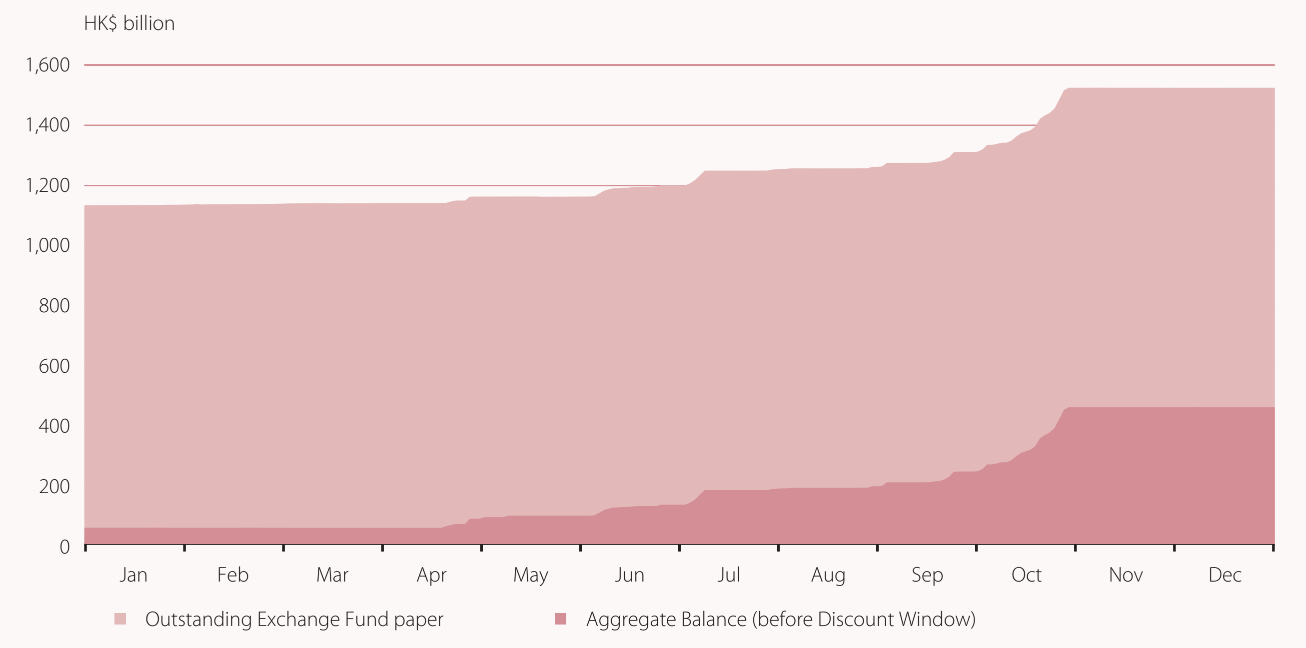
Chart 1 Market exchange rate in 2020



The sum of the Aggregate Balance (before Discount Window) and outstanding EFBNs increased from HK$1,133.0 billion at the end of 2019 to HK$1,526.6 billion at the end of 2020 (Chart 2). Following the triggering of the strong-side CU, the HKMA sold a total of HK$383.5 billion at the request of banks. To provide additional Hong Kong dollar liquidity amid a volatile global macro environment due to the COVID-19 pandemic, the HKMA also gradually reduced the issuance of Exchange Fund Bills in late April and early May by a total of HK$20 billion[1]. Taking into account the triggering of the strong-side CU and the reduced issuance of Exchange Fund Bills, the Aggregate Balance (before Discount Window) expanded from HK$54.3 billion at the end of 2019 to HK$457.5 billion at the end of 2020. The outstanding EFBNs decreased slightly from HK$1,078.7 billion to HK$1,069.2 billion during the year, reflecting the reduced issuance of Exchange Fund Bills, which more than offset the issuance of EFBNs to absorb EFBNs' interest payments according to the established practice. The Monetary Base as a whole remained fully backed by foreign exchange reserves.

Total Aggregate Balance (before Discount Window) and outstanding Exchange Fund Bills and Notes at **HK$1,526.6 billion** at end-2020.

Chart 2 Aggregate Balance (before Discount Window) and outstanding Exchange Fund papers in 2020



[1] To help ensure continued smooth operation of the Hong Kong dollar interbank market amid a volatile global macro environment stemming from the COVID-19 pandemic, the HKMA made available more Hong Kong dollar liquidity in the banking system by reducing the issue size of 91-day Exchange Fund Bills by HK$5 billion in each of the four regular tenders on 21 April, 28 April, 5 May and 12 May 2020. The issuance of the Bills was reduced by HK$20 billion in total and the Aggregate Balance increased by the same amount. The reduced issuance of Exchange Fund Bills simply represents a change in the component of the Monetary Base, with a shift from the Exchange Fund Paper to the Aggregate Balance. As the Monetary Base remains fully backed by US dollars, such operations are consistent with the Currency Board principles.

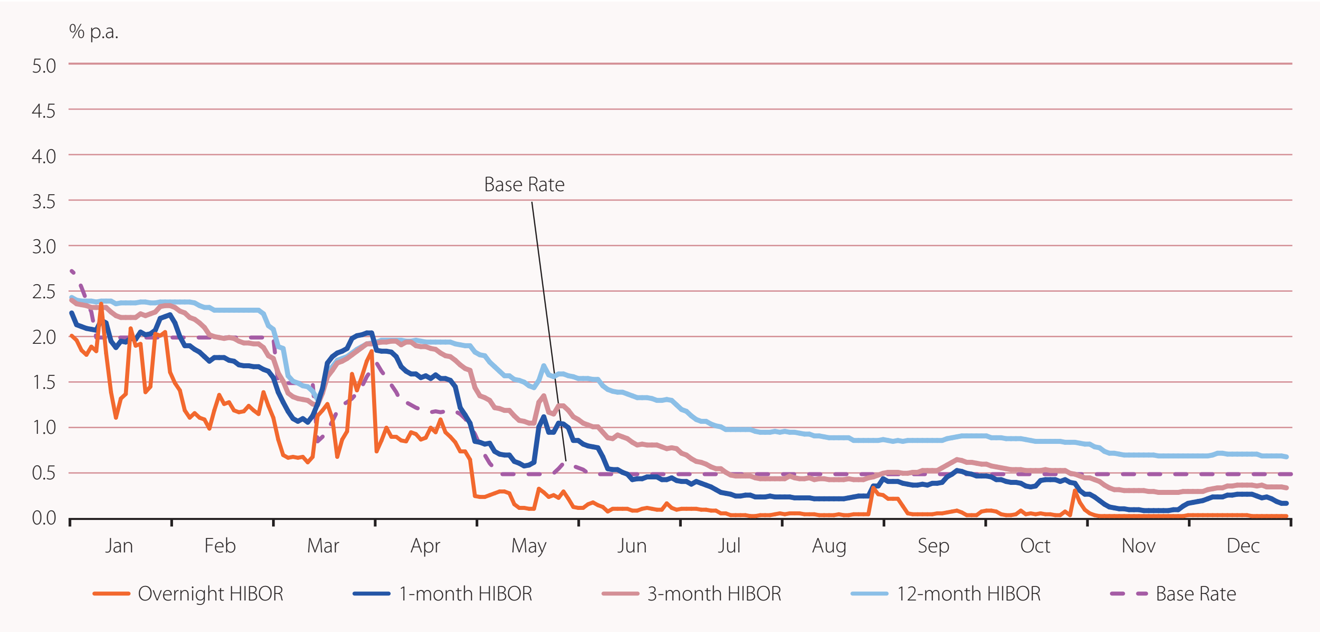
Monetary Stability

Money market

The Hong Kong dollar interbank interest rates generally softened in February as liquidity demand receded after the Chinese New Year holiday (Chart 3). Stepping into March, the Hong Kong dollar interbank interest rates were once elevated amid the US dollar funding stress and local factors such as IPO-related and quarter-end funding demand. Thereafter, Hong Kong dollar liquidity conditions gradually eased along with the expansion of the Aggregate Balance due to the triggering of the strong-side CU and reduced issuance of Exchange Fund Bills.

Reflecting two downward shifts in the target range for the US federal funds rate in March and the movements in overnight and one-month Hong Kong Interbank Offered Rates (HIBORs) during the year, the Base Rate decreased from 2.73% at the beginning of the year to close at 0.50%[2]. On the retail front, banks kept their Best Lending Rates unchanged despite the lower target range for the US federal funds rate. Overall, Hong Kong's money markets continued to function normally. Discount Window borrowing decreased to HK$9.1 billion in 2020 from HK$38.3 billion in 2019.

Chart 3 **Hong Kong dollar interbank interest rates in 2020**



2 The adjustment of the Base Rate was in accordance with the revised formula announced on 26 March 2009, which sets the Base Rate at either 50 basis points above the lower bound of the prevailing target range for the US federal funds rate or the average of the five-day moving averages of the overnight and one-month HIBORs, whichever is higher.

Monetary Stability

The Linked Exchange Rate System

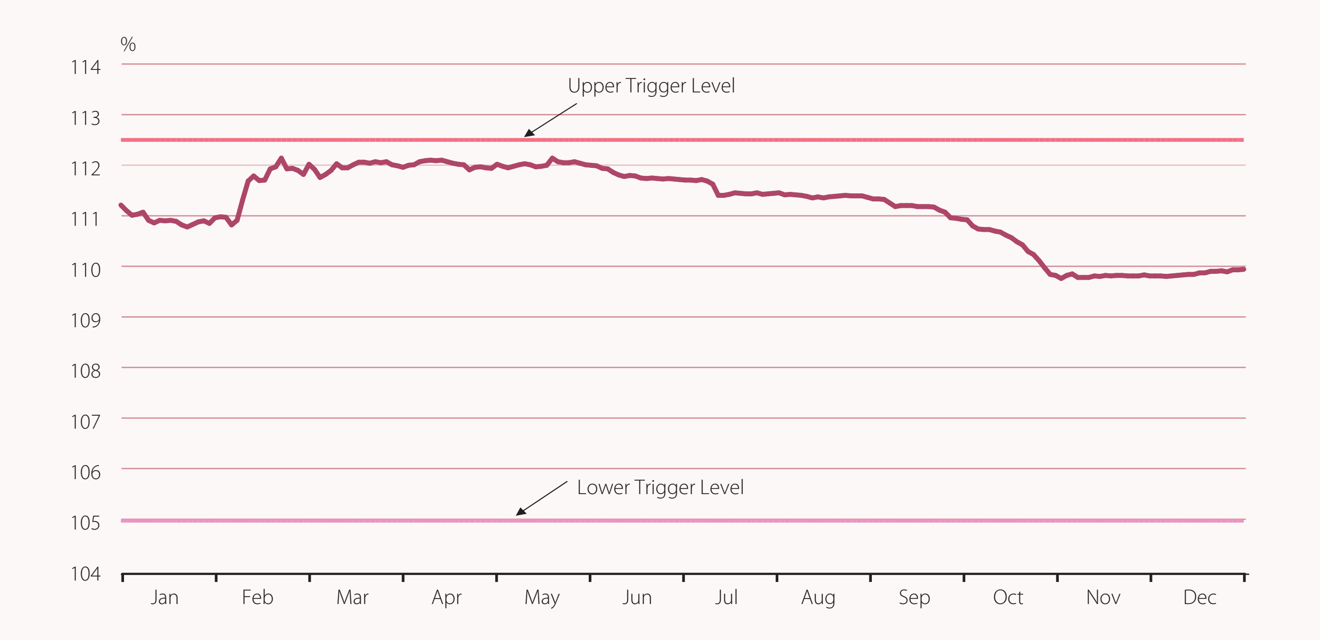
The LERS has been the cornerstone of Hong Kong's financial system for more than three decades and has shown its strength and resilience to shocks. Despite the challenges of 2020, the normal functioning of the Hong Kong dollar foreign exchange and money markets once again proved the robustness of the LERS. In the face of unfounded rumours casting doubt on the LERS and financial stability of Hong Kong during the year, the HKMA acted swiftly to reassure the public that the LERS would remain in place and the free flow of capital and free convertibility of the Hong Kong dollar is safeguarded by Article 112 of the Basic Law. The HKMA also published a number of articles providing facts that Hong Kong's financial system continued to display strong resilience against adversity. The Government is also firmly committed to the LERS. These efforts were effective in maintaining public confidence in the LERS, as evidenced by the orderly functioning of the markets and continued use of the Hong Kong dollar as a means of payment and storage of value. The International Monetary Fund in its *External Sector Report 2020* reiterates that the credibility of the LERS is assured by the transparent set of rules, ample fiscal and foreign reserves, strong financial regulation and supervision, a flexible economy, and a prudent fiscal framework.

A robust banking system is crucial to the normal functioning of the LERS. Despite the negative impact of the COVID-19 pandemic, Hong Kong's banking sector continued to operate smoothly with liquidity positions and capitalisation faring very well by international standards. To ensure the resilience of the banking sector, the HKMA has been closely monitoring banks' management of credit, liquidity and interest rate risks and stress-test results and has maintained its supervisory efforts on bank lending. Meanwhile, the HKMA also made available more liquidity to the banking system to safeguard monetary and financial stability. Apart from reducing issuance size of Exchange Fund Bills to increase Hong Kong dollar liquidity, the HKMA has a range of liquidity facilities in place for banks. Furthermore, the HKMA communicates with banks to ensure that banks make use of these liquidity facilities in times of stress. Amid considerable volatilities and uncertainties in the global financial markets brought about by COVID-19, the HKMA introduced a temporary US Dollar Liquidity Facility to make available US dollar liquidity assistance for licensed banks and help alleviate tightness in the global US dollar interbank money markets.

Monetary Stability

To improve the transparency of the Currency Board Account, a specific portion of Exchange Fund assets has been allocated to back the Monetary Base since October 1998. The Backing Ratio (defined as the Backing Assets divided by the Monetary Base) moved within a range of 109.8–112.1% during 2020, without touching the Upper or Lower Trigger Level. The ratio closed at 109.9% on 31 December (Chart 4). Under the LERS, while specific Exchange Fund assets have been designated for the Backing Portfolio, all Exchange Fund assets are available to support the Hong Kong dollar exchange rate. The ample financial resources of the Exchange Fund, together with the sound banking system, provide a powerful backstop to Hong Kong's monetary and financial stability.

Chart 4 Daily movement of the Backing Ratio in 2020



Monetary Stability

Other activities

The Currency Board Sub-Committee (CBC) of the Exchange Fund Advisory Committee monitors and reviews issues relevant to monetary and financial stability in Hong Kong. In 2020, the CBC considered issues including a scenario analysis of the Hong Kong economy, assessment of the Hong Kong property market, a conceptual framework for understanding cross-border fund flows, and understanding Hong Kong's interbank market. Records of the CBC's discussions on these issues and reports on Currency Board operations submitted to the CBC are published on the HKMA website.

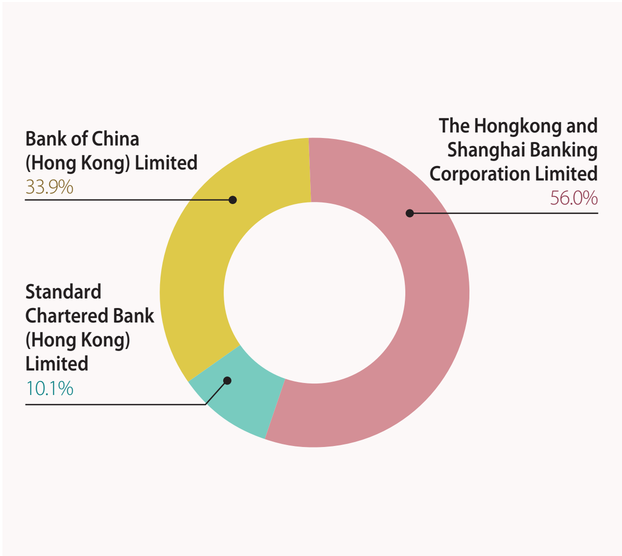
Monetary research

The Hong Kong Institute for Monetary and Financial Research (HKIMR) maintained steady research output in 2020 despite the ongoing pandemic. In 2020, the HKIMR released 20 Working Papers that covered a wide range of topics including monetary policy, banking stability, market microstructure and fintech development. Several of them have been accepted or under review for publication in professional journals. With social distancing and travel restrictions in place due to the pandemic, major events organised by the HKIMR such as conferences, seminars and the Visiting Research Programmes were postponed to later dates and will resume when the public health and travel situations normalise.

Notes and coins

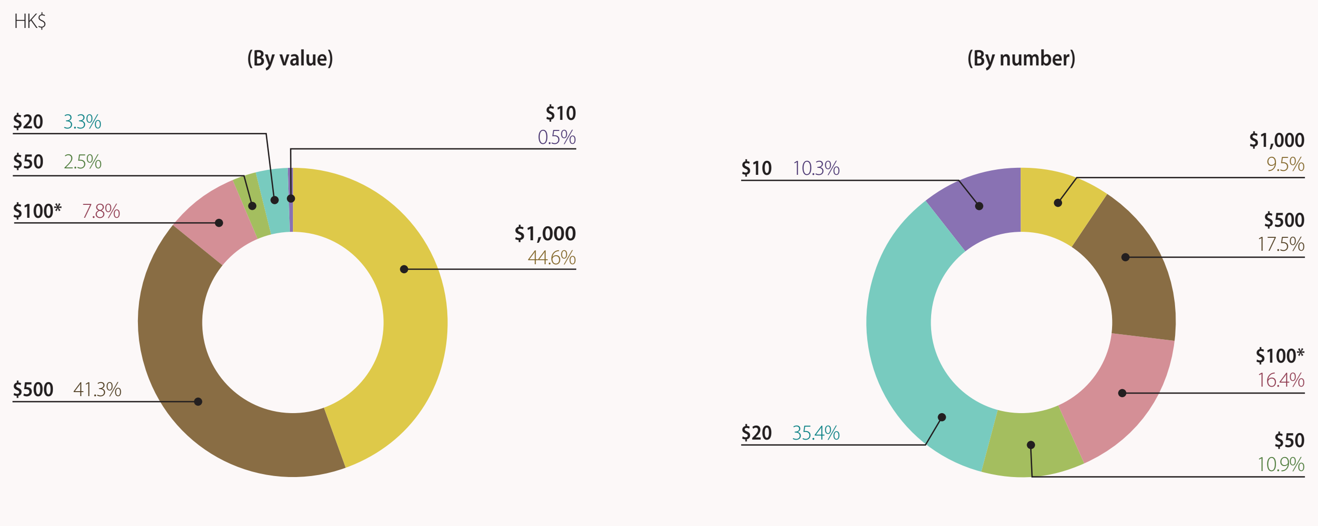
At the end of 2020, the total value of banknotes (notes issued by note-issuing banks) in circulation was HK$559.5 billion, an increase of 8.3% from a year earlier (Charts 5, 6 and 7). The total value of government-issued currency notes and coins in circulation amounted to HK$12.7 billion, down 0.6% (Charts 8 and 9). Among the government-issued currency notes and coins, the value of HK$10 notes in circulation amounted to HK$4.6 billion, 79% of which were polymer notes.

Chart 5 Banknotes in circulation by note-issuing banks at the end of 2020



Monetary Stability

Chart 6 Distribution of banknotes in circulation at the end of 2020



* Includes 0.1 percentage point contributed by HK$150 banknote.

Chart 7 Banknotes in circulation at the end of 2020

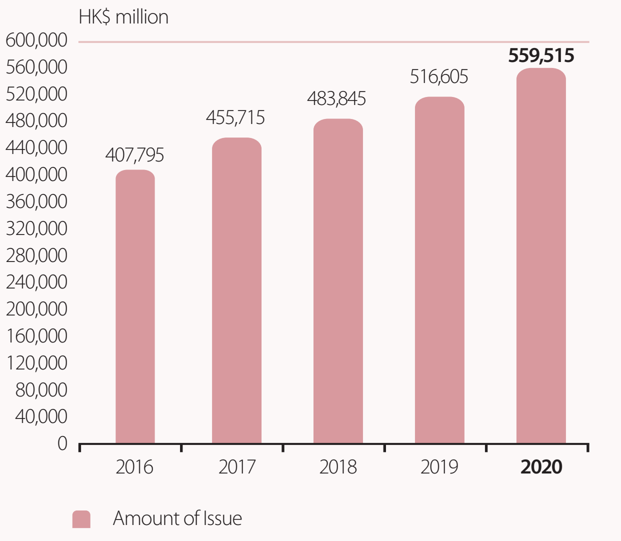
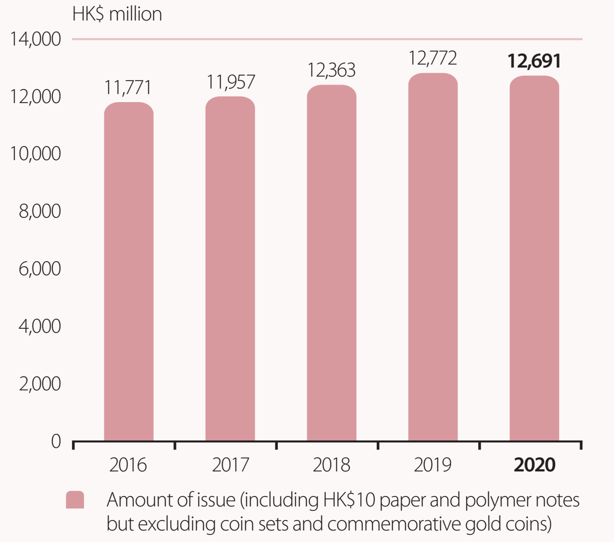
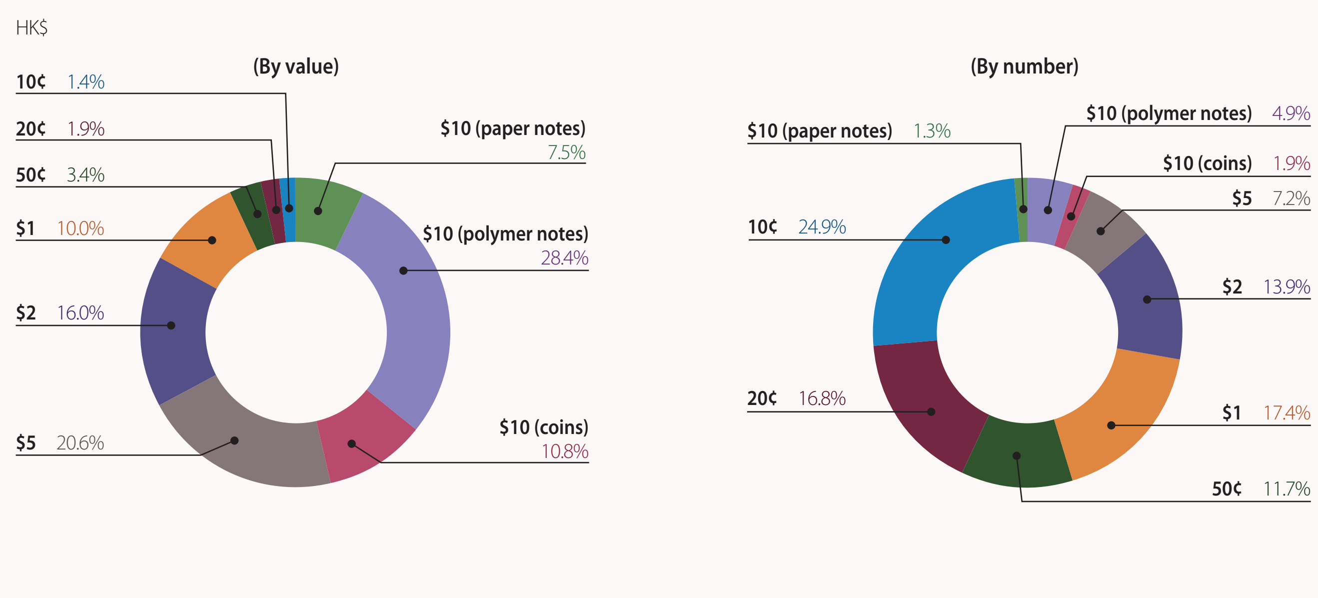


Chart 8 Government-issued currency notes and coins in circulation at the end of 2020



Monetary Stability

Chart 9 Breakdown of government-issued currency notes and coins in circulation at the end of 2020



Hong Kong banknotes

With the issuance of the new HK$20 and HK$50 banknotes in January 2020, all the five denominations of the latest 2018 Series are in circulation. The 2018 Series, which carry robust and easy-to-use security features, are well received by the public and gradually replacing the old version banknotes.

During the year, the HKMA continued to provide seminars on the design and security features of Hong Kong banknotes. Eight seminars were arranged, including online sessions, for over 2,000 bank tellers, retailers and students to raise public awareness.

Monetary Stability

Coin Collection Programme

The Coin Collection Programme, launched in October 2014, continued to be well received by the public. It is the world's first structured coin collection scheme, with two mobile trucks, known as Coin Carts, visiting the public across all 18 districts of Hong Kong on a rotational basis. Each Coin Cart is equipped with two high-speed coin counting machines. The public may choose to exchange their coins for banknotes, top up their stored value facilities such as Octopus cards or e-wallets, or donate the coins to the Community Chest box on board. Collaborating with the Hong Kong Council of Social Service, the Coin Carts collected coins on flag days for non-governmental organisations. The Coin Carts also visited schools to raise students' awareness of the programme. Over the years, the Coin Collection Programme has won several local and international awards in recognition of its innovative and green approach.

Details of the programme and its up-to-date information, including the service schedule, are available on a designated page of the HKMA website (coincollection.hkma.gov.hk).

By end-2020, the two Coin Carts had served about **778,000** people and collected **631 million** pieces of coins with a total face value of **HK$932 million** since inception.

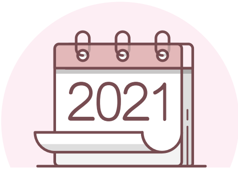
Exchange Fund Bills and Notes

The EFBN Programme continued to operate smoothly. The HKMA reduced the issuance size of Exchange Fund Bills by a total of HK$20 billion in April and May to increase liquidity in the interbank market amidst a volatile global macro environment brought about by COVID-19. At the end of 2020, the nominal amount of outstanding Exchange Fund papers stood at HK$1,068.1 billion (Table 2).

Table 2 Outstanding issues of EFBNs

HK$ million	2020	2019
Exchange Fund Bills (by original maturity)		
28 days	**0**	1,800
91 days	**630,430**	644,362
182 days	**361,000**	357,600
364 days	**51,700**	51,700
Sub-total	**1,043,130**	1,055,462
Exchange Fund Notes (by remaining tenor)		
1 year or below	**6,400**	6,400
Over 1 year and up to 3 years	**9,800**	8,600
Over 3 years and up to 5 years	**4,000**	5,600
Over 5 years and up to 10 years	**4,800**	6,000
Sub-total	**25,000**	26,600
Total	**1,068,130**	1,082,062

PLANS FOR 2021 AND BEYOND



While the global economy is expected to recover in 2021 with the rollout of the COVID-19 vaccines and the release of pent-up demand, the outlook remains highly uncertain and much will depend on the pandemic development and the availability and reach of the vaccines. While these uncertainties, together with the lingering China-US tension, may lead to higher volatility in the flow of funds, Hong Kong's financial system is able to withstand adverse shocks given the resilience and buffers built up over the years. The HKMA has the capability, resources and commitment to safeguard monetary and financial stability.

The HKMA will continue to closely monitor risks and vulnerabilities in the domestic and external environments and stand ready to deploy appropriate measures where necessary to maintain Hong Kong's monetary and financial stability. Research programmes in 2021 will study issues affecting the Hong Kong economy and assess their potential risks. The CBC will continue to examine issues relevant to Hong Kong's monetary and financial stability, review the technical aspects of the Currency Board arrangements and, where appropriate, recommend measures to strengthen them.

Banking Stability

The banking sector in Hong Kong remained sound and stable in 2020, notwithstanding the outbreak of COVID-19 pandemic causing significant headwinds to the economy. During the year, the HKMA monitored closely and responded in an agile manner to the impact of the pandemic on banking operations and supervisory activities, while maintaining its focus on the supervision of the credit and liquidity risk management of authorized institutions. In view of escalating cyber threats and the industry's growing adoption of technology, the HKMA stepped up the supervision of authorized institutions' technology risk management and operational resilience. The HKMA also worked closely with banks and international bodies to facilitate the transition to alternative reference rates.

On conduct supervision, the HKMA provided regulatory flexibilities and guidance to facilitate banks' operations and continued services to customers, while safeguarding protection to investors and consumers amid the pandemic. Together with relevant authorities, the HKMA developed and consulted the industry on the proposed implementation details for the cross-boundary wealth management connect pilot scheme. Working with the Securities and Futures Commission, guidance was provided on streamlining the selling processes for family offices and high net worth investors with financial sophistication. In addition, the HKMA enhanced consumer protection in digital financial services and continued to promote a customer-centric corporate culture.

On anti-money laundering and counter-financing of terrorism (AML/CFT), the HKMA has acted swiftly to clarify how the risk-based approach and technology could help authorized institutions better respond to the COVID-19 situation, while also carefully managing the impact of rising geopolitical tensions on the banking sector. The HKMA continued to champion initiatives to enhance the effectiveness and efficiency of AML/CFT work, including expanding the number of authorized institutions involved in information sharing in the public-private partnership, as well as supporting Regtech adoption in the banking industry. The HKMA has also embarked on a programme to further enhance AML/CFT surveillance capability to respond to the international trend of leveraging technology and data.

Meanwhile, the HKMA has worked closely with the banking industry in optimising supervisory policies and processes and in carrying out capacity-building initiatives to facilitate talent development. Good progress was made on the local implementation of international supervisory standards, including capital adequacy standards and disclosure standards. On promoting green and sustainable banking, the HKMA has moved forward with phase two of the three-phased approach in formulating relevant supervisory requirements. The HKMA also continued to advance its work to ensure a credible resolution regime for authorized institutions, including developing new resolution standards and implementing rules on loss-absorbing capacity requirements to enhance authorized institutions' resolvability.

Banking Stability

OBJECTIVES

The HKMA has a general objective to promote the safety and stability of the banking system. Achieving this objective is contingent upon the financial system being highly resilient and capable of providing the critical financial services the Hong Kong economy needs.

Banks can affect the stability of the system through the way they carry out their businesses and, in extremis, by failing in a disorderly manner. The Monetary Authority, as a supervisory authority, plays a key role in safeguarding financial stability by ensuring banks are resilient to shocks and able to recover their positions in response to crises, ultimately helping to prevent failures. The Monetary Authority is responsible for the prudential supervision of banks in Hong Kong. It is tasked with the authorization of licensed banks, restricted licence banks and deposit-taking companies in Hong Kong, which are collectively known as authorized institutions (AIs). The Monetary Authority is also responsible for the designation and oversight of certain financial market infrastructures (FMIs).

However, the Monetary Authority cannot ensure, nor is the Hong Kong prudential regulatory framework designed to ensure, a zero-risk financial system. Instead, the Monetary Authority, as a resolution authority, seeks to ensure that, in the event of an AI becoming non-viable, its failure can be managed in an orderly manner. To this end, a resolution regime for financial institutions in Hong Kong has been established, under which the Monetary Authority is the resolution authority for AIs, amongst other types of institutions. To operationalise the resolution regime in Hong Kong, it is important to lay down resolution rules and policy standards, undertake resolution planning to remove impediments to AIs' resolvability and develop the HKMA's operational capability to resolve a failing AI. In order to carry out these tasks effectively, the HKMA adopts an internationally harmonised and coordinated approach.

REVIEW OF 2020

Overview of supervisory activities

In 2020, 186 off-site reviews were conducted covering a broad range of issues, including CAMEL rating assessment[1], corporate governance, risk management and fintech strategies. As part of the HKMA's continued efforts to promote stronger risk governance, 30 meetings were held with the boards of directors, independent non-executive directors or board-level committees of AIs. Furthermore, 30 tripartite meetings were held among the HKMA, the AIs and their external auditors.

Apart from off-site activities, the HKMA conducts regular on-site examinations supplemented with thematic reviews on areas assessed to be of higher risk. A total of 610 on-site examinations and thematic reviews were conducted during the year. Credit risk management remained a key focus of these examinations and reviews. Another major focus was operational risk and technology risk management under COVID-19. The HKMA also increased the number of on-site examinations and thematic reviews targeted at liquidity and market risk management. At the same time, specialist teams performed on-site examinations and thematic reviews of AIs' activities in securities, investment products, insurance and Mandatory Provident Fund (MPF)-related businesses.

Despite the pandemic, the HKMA maintained its supervisory intensity by adopting flexible methods in an agile manner to discharge its supervisory duties in an effective manner, including exercising flexibility around submission of returns and conduct of onsite examinations, stepping up collection of data to supplement onsite examinations, and making use of virtual meeting platforms.

1 Comprising the **C**apital adequacy, **A**sset quality, **M**anagement, **E**arnings and **L**iquidity components.

Banking Stability

Table 1 contains an overall summary of the HKMA's supervisory activities in 2020.

Table 1 Summary of supervisory activities

	2020	2019
1 Off-site reviews and prudential interviews	**186**	196
2 Meetings with boards of directors, independent non-executive directors or board-level committees of AIs	**30**	26
3 Tripartite meetings	**30**	32
4 Culture dialogues	**7**	4
5 On-site examinations	**99**	104
Operational risk and technology risk management	25	12
AML/CFT controls	14	17
Liquidity risk management	6	0
Implementation of Basel capital adequacy framework	8	9
Capital planning	3	6
Market risk, counterparty credit risk and treasury activities	13	6
Securities, investment products, insurance and MPF-related businesses	17	23
Consumer protection	2	2
Deposit Protection Scheme (DPS)-related representation	10	12
Overseas examinations	1	17
6 Thematic reviews	**511**	301
Credit risk management and controls	50	50
Operational risk and technology risk management	108	76
AML/CFT controls	74	61
Model Risk Management	11	4
Sale of investment, insurance and MPF products	180	30
Consumer protection	51	42
Liquidity risk	25	23
Market risk	12	15
Total	**863**	663

Supervision of credit risk

Credit growth and asset quality

Total loans increased by 1.2% in 2020, compared with a growth of 6.7% in 2019. Table 2 shows the breakdown of growth in loans and advances.

Table 2 Growth in loans and advances

% change	2020	2019
Total loans and advances	**1.2**	6.7
Of which:		
– for use in Hong Kong	**2.2**	7.7
– trade finance	**-6.2**	-0.7
– for use outside Hong Kong	**0.1**	5.8

Mainland-related lending decreased slightly by 0.2% to HK$4,553 billion in 2020 (Table 3).

Table 3 Growth in Mainland-related lending

% change	2020	2019
Total Mainland-related lending	**-0.2**	7.4
Of which:		
– Mainland-related lending (excluding trade finance)	**0.5**	7.1
– trade finance	**-10.8**	11

The asset quality of AIs deteriorated modestly, reflecting the impact of the COVID-19 pandemic. The banking industry's classified loan ratio increased from 0.57% to 0.90% during the year, remaining at a healthy level well below the long-run historical average of 1.8% since 2000. In terms of Mainland-related lending, the ratio also rose to 0.96% from 0.75% a year ago.

In view of the uncertainties arising from the COVID-19 pandemic causing significant headwinds to the economy, the HKMA conducted a deep-dive review of AIs' asset quality to assess emerging trends of deterioration. In particular, the HKMA stepped up its surveillance of large borrowers as well as vulnerable sectors in the current environment through collecting more granular data on banks' credit exposures at sectoral- and borrower-levels. An ad-hoc stress test analysis confirmed banks' resilience to the economic stress caused by the COVID-19 outbreak.

During the year, targeted and thematic examinations were conducted to evaluate the credit risk management practices of AIs in different areas, such as Mainland-related lending, interbank lending, and collateralised lending to private banking and wealth management customers.

Measures to alleviate cash flow pressure faced by customers

In response to the COVID-19 outbreak, the Banking Sector Small and Medium-sized Enterprise (SME) Lending Coordination Mechanism, established by the HKMA in October 2019, rolled out several rounds of relief measures for both corporate and retail customers with a view to encouraging banks to continue to support borrowers' financing needs to the extent permitted by prudent risk management principles. Most notably, the Mechanism launched the Pre-approved Principal Payment Holiday Scheme in May to defer all loan principal payments of eligible corporates by six months. After a six-month extension in November, the Scheme was further extended by six months in March 2021 to end-October 2021. Around 100 banks participated in the Scheme, covering 120,000 eligible corporate customers. By end-December, banks had approved over 58,000 cases for loan tenor extension and other forms of relief, involving an aggregate amount of over HK$740 billion. For personal customers, banks rolled out principal payment holiday programmes for residential mortgages, including those related to subsidised housing under the Home Ownership Scheme. Banks also offered relief loans to employees in hard-hit sectors, extended loan tenor for personal lending, and reduced charges on various forms of personal credit. As at end-December, banks had approved more than 28,000 cases of principal payment holiday for residential mortgages and other personal relief loans, amounting to over HK$44 billion.

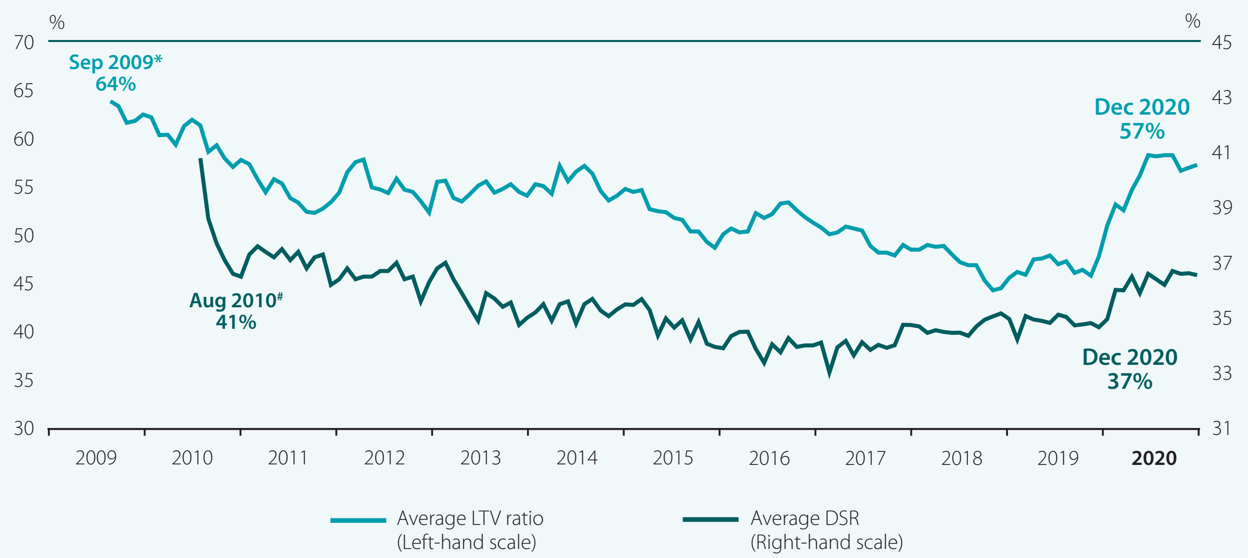
Banking Stability

Property mortgage lending

The successive rounds of countercyclical macroprudential measures introduced by the HKMA since 2009 have strengthened the risk management of banks and the resilience of the Hong Kong banking sector to cope with a possible abrupt downturn in the local property market. The average loan-to-value (LTV) ratio of new residential mortgage loans (RMLs) approved in December 2020 was 57%, compared with 64% in September 2009 before the countercyclical measures were first introduced. The increase in the average LTV ratio of newly approved RMLs in 2020 was primarily due to a larger proportion of RMLs with mortgage insurance, which generally had a higher LTV ratio. The average debt servicing ratio (DSR) of new mortgages remained low at 37% in December, compared with 41% in August 2010 when a cap on DSR was first applied (Chart 1).

In August, the HKMA relaxed the countercyclical macroprudential measures for mortgage loans on non-residential properties after taking into account factors such as the price trends and transaction volumes of these properties, economic fundamentals, and the external environment. The applicable LTV ratio caps for mortgage loans for these properties were adjusted upward by 10 percentage points, from 40% to 50% for typical cases.

Chart 1 Average LTV ratio and DSR of new RMLs approved



* Before the introduction of the first round of the HKMA's countercyclical measures on property lending

\# Introduction of a cap on DSR

Supervision of operational and technology risk

In response to the outbreak of COVID-19 in early 2020, the HKMA undertook a series of steps to mitigate the outbreak's impact on banking operations. These steps included requiring AIs to review their business continuity plans (BCPs) and take appropriate precautionary measures to safeguard the health of their staff and customers, while maintaining essential banking services. The HKMA also reminded AIs to enhance communication with staff and customers, prepare for the possibility of infection cases at their premises, and develop BCPs for more severe but plausible risk scenarios. The HKMA maintained close dialogue with the industry and asked AIs to stay vigilant and keep their BCPs under review, having regard to the development of the COVID-19 pandemic and the Government's social distancing measures.

Following a holistic review of the Cybersecurity Fortification Initiative (CFI) and extensive industry consultation, the HKMA introduced CFI 2.0 in November. The CFI was enhanced to reflect the latest developments in overseas cyber practices. Specifically, recent international sound practices on cyber incident response and recovery were incorporated into the Cyber Resilience Assessment Framework (C-RAF). As regards the Professional Development Programme under the CFI, the certification list was expanded to include equivalent qualifications in major overseas jurisdictions. The HKMA also put forward a series of recommendations to the Hong Kong Association of Banks (HKAB) to make the Cyber Intelligence Sharing Platform more user-friendly. CFI 2.0 came into effect on 1 January 2021.

Smart Banking

All the eight virtual banks which obtained a banking licence in 2019 launched their business during the year, after rigorous testing and pilot trials in the Fintech Supervisory Sandbox. They adopted innovative technologies to provide new customer experience. One example is the use of big data analytics in the credit assessment of SME loans to expedite the loan approval process. To increase customer engagement and build brand loyalty, some virtual banks introduced gamification in their services such as time deposits and reward schemes.

As of the end of 2020:

8 virtual banks were in operation

A total of **420,000** accounts were opened with the virtual banks

Aggregate customer deposits with the virtual banks: **HK$15 billion**

Banking Stability

Supervision of liquidity and market risk

The HKMA introduced a series of measures in April to ensure the continued smooth operation of the interbank market and the banking system amid the pandemic. These measures included clarifying the operational parameters of the HKMA Liquidity Facilities Framework, launching a temporary US dollar liquidity facility and reiterating the flexibility in the usage of liquidity buffers under the regulatory framework. The HKMA performed drills with AIs to ensure they were ready for utilising these measures when needed.

During the year, a round of thematic reviews was conducted to evaluate the robustness of AIs' contingency funding management for coping with liquidity shocks. The HKMA also assessed AIs' compliance with the regulatory requirements on the calculation of the Liquidity Coverage Ratio to ensure the prudence and accuracy of the inputs used for the calculation.

The HKMA conducted a round of thematic reviews to evaluate the effectiveness of AIs' risk management controls over treasury activities under remote booking arrangements. As algorithmic trading gained popularity in the banking industry, the HKMA promulgated a set of sound risk management practices for these activities based on the observations from earlier reviews.

On the transition away from the London Interbank Offered Rate (LIBOR), the HKMA continued to engage AIs in getting them prepared for the adoption of alternative reference rates (ARRs) and to request them to work closely with their counterparties to ensure a smooth transition. Apart from providing updates to the industry and conducting a regular survey to monitor the readiness of banks for the transition, the HKMA required AIs to endeavour to observe a set of transition milestones. Having regard to AIs' preparedness including their compliance with the transition milestones, the HKMA maintained bilateral dialogues with individual AIs to ensure that they were making reasonable progress. The HKMA also worked with industry associations to develop tools to facilitate AIs' preparation and help them impress upon their customers the need to make early preparations. Additionally, the HKMA took steps to raise public awareness of the need for transition through various channels including participating in speaking engagements as well as utilising electronic platforms such as the HKMA's website and social media.

Combating money laundering and terrorist financing (ML/TF)

The HKMA has acted quickly to reallocate supervisory resources and activities to minimize the impact of COVID-19 on AIs' AML/CFT work while also addressing the risks. Guidance was issued to AIs in April and July, in line with that of the global standard setter, the Financial Action Task Force (FATF), to clarify existing risk-based flexibility in our AML/CFT requirements, including the use of remote customer on-boarding, while reminding the need for vigilance to COVID-related financial crime risks. Case studies and alerts were shared globally (including cases provided by Hong Kong) in an FATF report in December.

Remote On-boarding and Customer Due Diligence

In the light of COVID-19 and the need for social distancing, remote customer on-boarding and digital delivery of financial services have become more important. In June, the HKMA shared with the banking industry key observations and good practices for remote customer on-boarding initiatives including assessment of the ML/TF risks to facilitate risk-based AML/CFT control measures as well as the monitoring of vulnerabilities associated with the product and delivery channel.

In September, the HKMA articulated key principles on remote on-boarding of corporate customers, on top of the guidance provided in relation to individual customers in February 2019.

The HKMA continues to engage with AIs closely on remote customer on-boarding including 26 discussions held in the Fintech Supervisory Chatroom and 17 pilot initiatives conducted through the Fintech Supervisory Sandbox during the year. To date, about 90% of retail banks have either fully launched or are planning to launch remote customer on-boarding, with more than 540,000 personal accounts opened remotely in 2020, compared with about 18,000 in 2019, a notable growth.

Banking Stability

The HKMA continued to collaborate closely with other stakeholders in Hong Kong's AML eco-system through the Fraud and Money Laundering Intelligence Taskforce (FMLIT)[2], which is similar to initiatives in other international financial centres. In 2020, FMLIT expanded its membership to reach 15 AIs from 10, and introduced short-term operational priorities, namely COVID-19 related deception and telephone deception. The FMLIT shared six alerts and typologies (e.g. face mask scams) with AIs and stored value facility (SVF) licensees to help enhance preventive measures as appropriate.

Amid growing geopolitical risks, the HKMA issued a circular in August to clarify its regulatory expectations in relation to financial sanctions. It also maintained close dialogue with AIs over business operational matters relating to the newly enacted National Security Law, and updated the industry Frequently Asked Questions (FAQs) in September.

The HKMA's risk-based supervision has been adapted to meet the challenges of remote working, new and emerging ML/TF risks arising from COVID-19 and new business models of virtual banks. During the year, the HKMA conducted 14 on-site examinations, including reviews of AIs' handling of data and information received from FMLIT; and 74 off-site reviews, including those of virtual banks.

COVID-19 has provided additional impetus to the industry Regtech adoption for AML/CFT. Follow-up work to the HKMA's 2019 AML/CFT Regtech Forum has continued unabated. The HKMA hosted a peer-to-peer sharing session on the use of network analytics to tackle mule account networks. It also issued the report "AML/CFT Regtech: Case Studies and Insights" jointly with an international consultant in January 2021 detailing case studies from a number of AIs that were early adopters of Regtech for AML/CFT applications, in order to provide comprehensive and end-to-end experience sharing to AIs at various stages of AML/CFT Regtech adoption.

AML/CFT Supervision in the Age of Digital Innovation

Proactive and targeted supervisory responses

Use of horizon scanning,
data visualisation and analytics

Data-driven

Upgrade data governance and storage
to improve data quality

Collaborative

Facilitate AIs and SVF licensees to
accelerate AML/CFT Regtech adoption
and results-oriented collaboration

People focused

Talent development in the right culture
and upskilling with data and analytic
capabilities

2 FMLIT is a public-private partnership for information sharing established in Hong Kong in May 2017. Since its launch and up to the end of December 2020, FMLIT delivered 638 intelligence-led suspicious transaction reports, leading to 299 arrests, HK$692 million being restrained or confiscated, and HK$106 million in losses prevented.

Banking Stability

The HKMA continued to enhance its approach in line with international standards and issued "AML/CFT Supervision in the Age of Digital Innovation" in September, setting out the objectives of the AML/CFT Surveillance Capability Enhancement Project and how the HKMA intended to strengthen the use of data and supervisory technology (Suptech) to make AML/CFT supervision more proactive, targeted and collaborative.

Supervision of wealth management and MPF-related businesses

The HKMA cooperates closely with other financial regulators in Hong Kong to provide guidance on and supervise AIs' practices in the sale of securities, investment products, insurance products and MPF schemes. The HKMA also maintains regular dialogue with other regulators through bilateral and multilateral meetings, as well as under the auspices of the Council of Financial Regulators, to ensure coordinated and effective supervisory actions. During the year, the HKMA conducted 17 on-site examinations, 180 thematic reviews and 14 analyses of surveys and returns of AIs, covering the sale of investment, insurance and MPF products, focusing in particular on high risk investment products, leveraged products as well as retirement planning and health insurance products enjoying tax benefits (Qualifying Deferred Annuity Policies, Voluntary Health Insurance Schemes and MPF Tax-deductible Voluntary Contributions). The HKMA and the Securities and Futures Commission (SFC) conducted concurrent thematic reviews of intermediaries' spread charges and disclosure of trading capacity and monetary benefits. The HKMA and the Insurance Authority (IA) held joint inspections on selected AIs, insurers and insurance intermediaries regarding their premium financing businesses. To better identify risks associated with the selling activities and areas of concern, the HKMA and the SFC refined the annual joint survey on the sale of non-exchange traded investment products.

To facilitate AIs' digital communication with customers, the HKMA worked with the SFC to provide guidance to the industry in September on the provision of trade documents and product documents to clients by electronic means. The HKMA also reviewed Supervisory Policy Manual (SPM) module SB-2 on "*Leveraged Foreign Exchange Trading*" and incorporated general principles on expected business conduct.

In the light of the development of the private wealth management industry, the HKMA worked with the SFC to provide guidance to the industry in September on the treatment for family offices in the assessment of the corporate structure and investment process of Corporate Professional Investors for exemption from the suitability and disclosure requirements. The HKMA and the SFC provided further guidance in December to streamline product due diligence and clarified a proportionate and risk-based approach in suitability assessment and disclosure processes especially for high-net-worth investors who are financially sophisticated. The HKMA also provided guidance, in the form of FAQs, to AIs in December to facilitate their implementation of the refined investor protection measures on the sale of investment, insurance and MPF products promulgated in 2019. In line with the spirit of enhancing customer experience while according protection to customers, and following a risk-based approach, the HKMA provided guidance to registered institutions (RIs) in July to streamline the sale and distribution process for eligible plain vanilla and low-risk retail bonds issued by government and related organisations. Furthermore, the HKMA launched an industry consultation in July on a proposal to enhance the regulation and supervision of trust business in Hong Kong, including a Code of Practice for Trust Business, to promote treating customers fairly and customer-centric culture in trust business.

In respect of the insurance-selling activities of AIs, the HKMA worked closely with the IA to facilitate selling of insurance products via non-face-to-face (non-F2F) channels while safeguarding protection to customers. Guidance was also provided in October to AIs on expected standards in handling life insurance policy replacement in light of supervisory experience. Following the completion of a mystery shopping programme, the HKMA shared with the industry in September the key observations and good practices noted on retail banks' selling practices in respect of investment and insurance products.

During the year, the HKMA processed seven applications for registration as an RI and addition of regulated activities under the Securities and Futures Ordinance (SFO). It granted consent to 209 executive officers responsible for supervising the securities activities of RIs and conducted background checks on 5,006 individuals whose information was submitted by RIs for inclusion in the register maintained by the HKMA.

Moreover, pursuant to the new Memorandum of Understanding (MoU) between the Monetary Authority and the IA under the new regulatory regime for insurance intermediaries that came into operation in September 2019, the HKMA put in place procedures and provided comments to the IA on the application of one AI for an insurance agency licence. The HKMA also provided comments on eight AIs which are deemed licensed insurance agencies to facilitate the IA's assessment of their insurance agency licence applications during the year.

Following the joint announcement in June by the People's Bank of China, the HKMA and the Monetary Authority of Macao on the launch of the Wealth Management Connect Pilot Scheme (WMC Scheme) in the Guangdong-Hong Kong-Macao Greater Bay Area, the HKMA together with the relevant authorities developed and consulted the industry on the proposed implementation details.

Other supervisory activities

The Banking Supervision Review Committee considered three cases concerning the granting of banking licences in 2020 (see Table 4 for details).

During the year, the HKMA commissioned 18 reports under section 59(2) of the Banking Ordinance (BO), which required AIs to appoint external professional firms to report on the effectiveness of their controls in specified areas of operation. Seven of these reports covered credit risk management, another four covered the institution's overall risk governance framework, and the remaining reports were related to areas such as compliance with the BO and AML/CFT controls.

In 2020, there were no incidents reported by AIs involving a breach of the requirements in the BO relating to the capital adequacy or liquidity ratio. There were 50 breaches of other provisions of the BO, mostly related to AIs' reporting obligations under the legislation. These breaches did not affect the interests of depositors and were promptly rectified by the AIs.

During the year, the CAMEL Approval Committee completed a review of the CAMEL ratings of all the 194 AIs. No AIs appealed against the Committee's decisions.

Table 4 Summary of other supervisory activities

		2020	2019
1	Cases considered by the Banking Supervision Review Committee	**3**	18
2	Reports commissioned under section 59(2) of the BO	**18**	18
3	Approval of applications to become controllers, directors, chief executives or alternate chief executives of AIs	**226**	282

Banking Stability

International cooperation

Cooperation with overseas supervisors

The HKMA participated in 49 college-of-supervisors meetings organised by the home supervisors of 20 banking groups with significant operations in Hong Kong. Most of these meetings were held in the form of virtual meetings amid the COVID-19 pandemic. Apart from the regular exchange of supervisory issues, the meetings focused on the impact of the COVID-19 pandemic on banks' financial positions and operational resilience.

The HKMA is a member of each of the Crisis Management Groups (CMGs) for 12 global systemically important banks (G-SIBs) attended by the relevant home and host authorities. At the regional level, the HKMA organises the Asia CMG for a G-SIB with its Asia-Pacific headquarters in Hong Kong and is a member of the Asia-Pacific Recovery and Resolution Planning College for two other G-SIBs where resolution-related topics are addressed.

Bilateral meetings were held during the year with banking supervisors from Australia, the European Union, India, Japan, Mainland China, Malaysia, Singapore, Switzerland, Thailand, the UK and the US. There were also regular exchanges with authorities in other jurisdictions on institution-specific issues and developments in financial markets.

Participation in international and regional forums

The HKMA participates in a range of international and regional forums for banking supervisors. It is a member of the Basel Committee on Banking Supervision (Basel Committee) and its governing body, the Group of Governors and Heads of Supervision. In 2020, the HKMA was represented on various Basel Committee working groups, including the Policy Development Group (PDG), the Macroprudential Supervision Group, the Supervision and Implementation Group (SIG), the high-level Task Force on Climate-related Financial Risks (TFCR) and the AML/CFT Expert Group. The HKMA was also a member of several Expert Groups under the (i) PDG, including the Working Group on Capital, the Credit Risk Group, the Market Risk Group, the Operational Resilience Working Group, the Working Group on Liquidity, the Large Exposures Group and the Working Group on Disclosure; and (ii) SIG, including the Stress Testing Network, the Task Force on Financial Technology and the Colleges Monitoring Network. In addition, the HKMA served as the chair of the SIG. The HKMA also participated in the joint Working Group on Margin Requirements formed by the Basel Committee and the International Organization of Securities Commissions (IOSCO).

Following the Basel Committee's revised organisation structure which took effect from January 2021, the HKMA serves as a co-chair of the Policy and Standards Group and the chair of the Pillar 2 Expert Group. The HKMA is a member of the Risks and Vulnerabilities Assessment Group, Supervisory Cooperation Group, and Policy and Standards Group. The HKMA is also a member of the TFCR and various Expert Groups, including Accounting and Audit, Anti-money Laundering, Capital and Leverage Ratio, Credit Risk and Large Exposures, Disclosure, Financial Technology, Liquidity, Margin Requirements, Market Risk, Operational Resilience, Pillar 2 and Stress Testing. The HKMA also participates in the Regulatory Consistency Assessment Programme (RCAP) Review Task Force, which is set up to consider whether further improvements to RCAP should be made to ensure that the objective of full, timely and consistent implementation of Basel standards is met in the coming years.

Banking Stability

The HKMA is a member of the Network of Central Banks and Supervisors for Greening the Financial System and joined the International Platform on Sustainable Finance in December, representing Hong Kong jointly with the SFC. It also participates in the Financial Stability Board (FSB) LIBOR Drafting Team which focuses on supervisory issues associated with LIBOR transition.

On Financial Consumer Protection, HKMA participates actively in the work of the G20/OECD Task Force on Financial Consumer Protection, which supports the implementation of the G20 High-level Principles on Financial Consumer Protection and develops the Effective Approaches for the applications of these principles, taking into account operations in an increasingly digital environment.

On AML/CFT, in addition to the AML/CFT Expert Group of the Basel Committee, the HKMA continues to participate actively in the FATF and the Asia/Pacific Group on Money Laundering and draw AIs' attention to the latest international regulatory development. In February, the HKMA commenced a two-year co-chairmanship in the Evaluation and Compliance Group of the FATF, overseeing its mutual evaluation programme and also contributed a financial expert assessor to the evaluation of New Zealand.

At the regional level, the HKMA is a member of the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)[3], the South East Asia, New Zealand and Australia Forum of Banking Supervisors, and the South-East Asian Central Banks group.

As part of its work in the EMEAP Working Group on Banking Supervision (WGBS), the HKMA is the champion of the Interest Group on Liquidity (IGL). During the year, the IGL exchanged views and shared experience regarding the implementation of Basel III liquidity standards in the EMEAP jurisdictions amid the COVID-19 pandemic. The HKMA is also the champion of the Interest Group on Sustainable Finance, which aims to promote information sharing on the management of climate-related risks faced by banks in the region. In addition, during the year the HKMA was the chair and served as the secretariat of the Focused Meeting on Resolution (FMR), a resolution-specific forum under the WGBS. The FMR supported knowledge sharing and discussion among regional authorities in relation to resolution in a cross-border context. The HKMA is now the chair of the Study Group on Resolution (SGR) which builds on the work of the FMR. See "*International policy and regional cooperation*" on page 87 for more details.

Basel Committee Regulatory Consistency Assessment Programme

The Basel Committee conducts an RCAP to monitor, assess and evaluate its members' implementation of the Basel standards. The HKMA participated in the assessment of Japan's large exposures standards which has been put on hold since early 2020 due to COVID-19.

3 EMEAP is a cooperative organisation of central banks and monetary authorities in the East Asia and Pacific region.

Banking Stability

Implementation of Basel Standards in Hong Kong

Capital standards

In 2020, the Banking (Capital) (Amendment) Rules 2020 were made to implement, with effect from 30 June 2021, *The Standardised Approach for Measuring Counterparty Credit Risk Exposures* (SA-CCR) and *Capital Requirements for Bank Exposures to Central Counterparties* (CCP standard).

Consequential changes to the leverage ratio framework and disclosure requirements were also being made to reflect the implementation of SA-CCR and CCP standard, together with other updates issued by the Basel Committee, such as those in relation to the revised treatment of collateral in client cleared derivatives for leverage ratio calculation.

Regarding *Capital Requirements for Banks' Equity Investments in Funds* (EIF standard), further to the consultation conducted in 2019, the HKMA issued in November for consultation another set of proposed provisions covering all approaches for credit risk calculation. The proposed provisions also contain refinements made in light of the comments received in the 2019 consultation and subsequent updates from the Basel Committee on the EIF standard.

Preparatory work was also in progress for implementing the revised capital standards contained in the *Basel III: Finalising Post-crisis Reforms* published by the Basel Committee in December 2017 (Basel III final reform package), covering those in relation to credit risk, operational risk, output floor, and the leverage ratio. To provide additional capacity for banks and supervisors to respond to the immediate financial stability priorities resulting from the impact of COVID-19 on the global banking system, the implementation of the Basel III final reform package was deferred internationally by one year to 1 January 2023. Nevertheless, to allow more time for the required policy deliberation and rule-making, the HKMA initiated industry consultation of detailed implementation proposals in November, as informed by a local quantitative impact study (QIS) conducted in 2019.

Further to the industry consultation in 2019 on Hong Kong's proposed local implementation approach for the revised "*Minimum Capital Requirements for Market Risk*", a local QIS was launched in March 2020 to assess the impact of the revised market risk framework on AIs and to inform policy decisions on local implementation.

On 8 July 2020, the Basel Committee issued the final revision of the CVA risk framework "*Targeted Revisions to the Credit Valuation Adjustment Risk Framework*". The HKMA published a consultation paper on its implementation proposal for Hong Kong on 15 December 2020.

On 16 March 2020, the HKMA reduced the jurisdictional Countercyclical Capital Buffer for Hong Kong from 2.0% to 1.0% with immediate effect to allow banks to be more supportive of the domestic economy, in particular those sectors and individuals expected to be most affected by COVID-19.

In line with the Basel Committee's framework for dealing with domestic systemically important banks (D-SIBs), the HKMA announced in December an updated list of D-SIBs for 2021 and their corresponding higher loss-absorbency capital requirements.

Improving Supervisory Policy Framework

Regulation of over-the-counter (OTC) derivatives transactions

The HKMA has implemented the global margin and risk mitigation standards since 1 March 2017 for AIs involved in non-centrally cleared OTC derivatives transactions. Following the announcement made by the Basel Committee and IOSCO on 3 April 2020 to alleviate the impact of COVID-19 on the banking system, the HKMA revised SPM module CR-G-14 on *"Non-centrally Cleared OTC Derivatives Transactions — Margin and Other Risk Mitigation Standards"* to defer the commencement dates of the final two implementation phases of initial margin requirements by an additional year to 1 September 2021 and 1 September 2022 respectively, on top of the one-year extension announced by the Basel Committee and IOSCO in July 2019 to support a smooth and orderly implementation of the margin requirements. The HKMA will continue to monitor AIs' implementation of the remaining phases and coordinate with other member jurisdictions of the Basel Committee and IOSCO Working Group on Margin Requirements on implementation and market developments.

Updating other supervisory policies and risk management guidelines

The HKMA pressed ahead with various policies and guidelines in 2020, including:

- In June — finalised and issued the revised SPM modules RE-1 on *"Recovery Planning"* and CA-G-1 on *"Overview of Capital Adequacy Regime for Locally Incorporated Authorized Institutions"* as statutory guidelines under section 7(3) of the BO. The revisions to RE-1 serve to reflect developments in international and local standards and practices in the recovery planning of AIs, and the revisions to CA-G-1 mainly serve to reflect the current capital regime in Hong Kong, particularly in relation to the HKMA's supervisory practices and expectations concerning institutions' self-assessment of proposed capital instruments to be included within their capital base.

- In August — finalised and gazetted the revised SPM module LM-1 on *"Regulatory Framework for Supervision of Liquidity Risk"*, mainly to reflect changes consequential to the commencement of the Banking (Liquidity) (Amendment) Rules 2019.

- In October — consulted the industry on some proposed revisions to SPM module CA-B-2 on *"Systemically Important Banks"* with the aim of improving the assessment of AIs' complexity in our D-SIBs identification process and updating various sections of the SPM module to reflect recent developments.

- In December — issued for industry consultation the proposed revisions to SPM module CS-1 on *"Group-wide approach on supervision of locally incorporated authorized institutions"*. The revisions primarily sought to reflect the HKMA's latest supervisory practices and incorporate relevant principles in international standards concerning the supervision of financial conglomerates.

Banking Stability

Compliance with regulatory regime for over-the-counter derivatives market

The HKMA monitors closely the compliance of AIs and approved money brokers (AMBs) based on the mandatory reporting, clearing, and related record-keeping requirements on OTC derivatives transactions as stipulated in the SFO. Close dialogue is maintained with AIs, AMBs and other industry participants on various reporting issues to facilitate their compliance with the relevant requirements arising from OTC derivatives market developments and evolving international standards.

Balanced and responsive supervision

Since its introduction in 2017, the Balanced and Responsive Supervision initiative has facilitated the HKMA's engagement with the banking industry to optimise supervisory policies and processes for an appropriate balance between supervisory effectiveness and sustainable market development. In 2020, the HKMA clarified its supervisory expectations on AIs' outsourcing arrangements and remote customer on-boarding initiatives, and provided an update on the proposed mandatory reference checking scheme to mitigate the risk of hiring individuals with a history of misconduct. Taking into account the banking sector's views on balancing compliance effectiveness, market developments and customer experience, the HKMA also provided guidance on banks' compliance efficiency in cross-sector fintech projects. In response to the increasing use of technology in providing banking services, particularly amid COVID-19, the HKMA initiated rounds of interactive dialogue with the banking sector on managing the associated operational challenges, especially in the selling of investment and insurance products via non-F2F channels. The discussions have deepened the understanding between the HKMA and banks for the sustainable development of the banking sector.

Accounting standards

Regular dialogues were conducted between the HKMA and the Banking Regulatory Advisory Panel of the Hong Kong Institute of Certified Public Accountants on topics of common interest. These included approaches adopted by AIs on expected credit losses estimation under COVID-19 and the related responses of AIs' external auditors, international and domestic developments on new or revised accounting, auditing and financial reporting standards and their implications for banks, as well as major international and domestic banking regulatory developments.

Green and sustainable banking

During the year, in accordance with the three-phased approach to promote green and sustainable banking, the HKMA developed a common assessment framework with the banking industry to assess the greenness baseline of banks, and the first round of assessment covering 47 AIs was completed. Insights from the assessment were published in the *HKMA Quarterly Bulletin* in September.

As part of Phase II of the approach, a white paper was published in June, which outlined the HKMA's initial thinking on supervisory expectations and formed the basis for further engagement with the industry. Following a series of discussions with selected major banks, the HKMA issued a circular in July to share with AIs a range of practices for managing climate risks, to provide AIs with reference for developing their climate risk management framework.

The HKMA invited AIs to participate in a pilot exercise on climate risk stress test (CRST) to be undertaken in 2021. The CRST aimed to assess the climate resilience of the banking sector and to facilitate the capacity building of AIs for measuring and managing climate risks. A set of guidelines for the exercise was shared with interested AIs for their preparation for the exercise.

For more details about the HKMA's policy framework for green and sustainable banking, see the *Corporate Social Responsibility* chapter.

Resolution

In 2020, the HKMA continued to advance work to operationalise the Hong Kong resolution regime for banks. Progress has been made in establishing resolution standards, undertaking resolution planning and developing resolution execution capability. Throughout the year, the HKMA continued to contribute to cross-border cooperation on resolution through institution-specific engagements such as the CMGs for G-SIBs as well as through international and regional fora including the FSB Resolution Steering Group (ReSG) and the EMEAP FMR and SGR.

Resolution standards

The HKMA continues to formulate policy standards with which AIs need to comply in order to enhance their resolvability. One of the potential impediments to resolvability on which the HKMA has been working is the risk to cross-border effectiveness of resolution arising from the early termination of financial contracts that are governed by non-Hong Kong law. To this end, the HKMA consulted on the policy proposals for making rules under the Financial Institutions (Resolution) Ordinance (FIRO) on contractual stays for AIs on 22 January. In line with the relevant FSB principles in this regard, the proposals require the adoption of an appropriate provision in certain financial contracts governed by non-Hong Kong law, such that the parties to the contract agree to be bound by a suspension of termination rights (a "stay") that may be imposed by the Monetary Authority as a resolution authority under the FIRO. On 31 December, the HKMA released the conclusion of the consultation and consulted the industry on the draft text of the rules. Following industry consultation, the rules are expected to be introduced into the Legislative Council for negative vetting in the 2020/2021 Legislative Session.

Operational continuity in resolution (OCIR) is another potential impediment to resolvability on which the HKMA made progress during the year towards policy development. On 1 February 2021, the HKMA issued for industry consultation a draft of the FIRO Code of Practice (CoP) chapter OCIR-1 on "*Resolution Planning — Operational Continuity in Resolution*". The draft chapter explains the Monetary Authority's policy in relation to OCIR and sets out the Monetary Authority's expectations regarding the *ex-ante* arrangements AIs should put in place, in line with the relevant FSB guidance in this regard, to secure the continuity in resolution of services that are essential to the continued performance of critical financial functions as well as to support post-stabilization restructuring in a timely manner.

Advancing Resolution Priorities amid the COVID-19 Pandemic

Resolution planning fosters effective crisis preparedness for maintaining financial stability including continuity of critical financial functions performed by banks. In times of uncertainty, it is particularly important for the ongoing work to enhance resolvability of AIs and cross-border coordination to continue.

Despite the COVID-19 pandemic, the HKMA carried on with its resolution priorities at a steady pace. Flexibility, for example extension of information submission deadlines, was offered to AIs as part of resolution planning programmes as appropriate to alleviate their temporary operational burden without losing impetus. The CMGs and Resolution Colleges for G-SIBs conducted meetings virtually and continued to be fora for timely and effective cross-border coordination and information exchange.

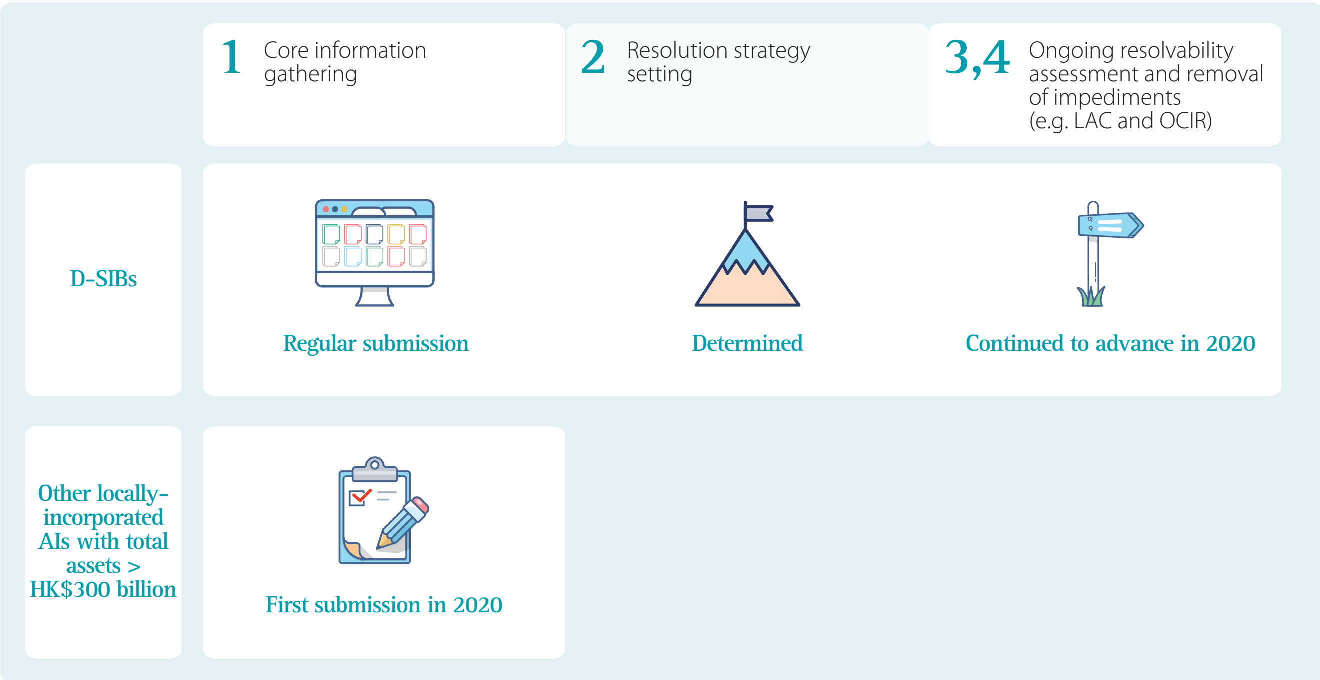
In addition, the HKMA has contributed to the related international responses and discussions, including the FSB's regular monitoring of the impact of COVID-19-linked market disruption on the issuance, receptivity and pricing of total loss-absorbing capacity (TLAC) eligible instruments; the ReSG-Standing Committee on Supervisory and Regulatory Cooperation joint meeting on crisis management preparedness; and the Bank for International Settlements' Committee on the Global Financial System workshop on bail-inable debt.

Banking Stability

Resolution planning

The HKMA continued to advance resolution planning for each of the six D-SIBs and engaged other locally-incorporated AIs with total consolidated assets above HK$300 billion to provide the core information required for resolution planning (Chart 2), marking the commencement of resolution planning for banks beyond D-SIBs.

Chart 2 Status of the HKMA's key resolution planning programmes with AIs



Through resolution planning programmes, the HKMA works with the D-SIBs to implement the changes needed to address identified impediments to their orderly resolution. In particular, the D-SIBs are building up a new layer of loss-absorbing capacity (LAC) resources by the issuance of capital and non-capital LAC debt instruments to facilitate their loss absorption and recapitalisation in case of failure. Some D-SIBs are progressing their approaches to non-pre-positioned LAC resources, and all D-SIBs are now making periodic public disclosures of their LAC positions and instruments.

Some of the D-SIBs are also developing new capabilities as part of group-wide programmes to enhance resolvability. This has involved a wide spectrum of actions, such as functional design and development of models and processes for valuations in resolution, assessment of the criticality of and relationship with financial market infrastructure and review of capabilities for estimating and reporting liquidity needs in resolution. The operational readiness of some of the arrangements has been demonstrated by means of scenario testing of operational services, mapping and playbooks as well as cross-border drills of contingency arrangements for access to payment clearing.

Cross-border cooperation is an important component of resolution planning for G-SIBs given the international nature of their businesses and operations. The HKMA led the regional resolution planning for a G-SIB with its Asia-Pacific headquarters in Hong Kong, organising the Asia CMG and driving the work to enhance resolvability for the G-SIB's Asia resolution group.

During the year, the HKMA participated in the cross-border resolution planning of 14 G-SIBs through CMGs and Resolution Colleges. As part of this work, the HKMA shared updates on policy development, contributed to the FSB's sixth resolvability assessment process for these G-SIBs and worked with the relevant authorities to operationalise home-host coordination arrangements. For example, the HKMA took part in the initial discussions on the management and deployment of unallocated TLAC resources within groups and the development of playbooks on resolution execution.

HKMA's resolution execution capability

The HKMA continued to enhance its capability to execute resolution. This included work to refine its internal frameworks for effective cross-departmental coordination in managing at-risk AIs, operationalise the Contingent Term Facility and Resolution Facility under the HKMA's Liquidity Facilities Framework for banks, and develop local mechanics to execute transfer stabilization options.

In addition, the HKMA made progress with the establishment of a Resolution Advisory Framework, executing a number of framework agreements for specific services and continuing discussions with the other successful tenderers. It also advanced the development of cross-sectoral coordination arrangements for crisis management and resolution under FIRO.

International policy and regional cooperation

The HKMA is actively involved in the implementation of resolution reforms through its membership of the FSB. In the FSB's *2020 Resolution Report: "Be prepared"*, the FSB states that G-SIBs' progress towards resolvability was broadly satisfactory, while highlighting that important work remains on technical aspects. See *"HKMA's Involvement in International Resolution Policy Work in 2020"* on page 88 for more details.

At the regional level, as the Chair and Secretariat of the EMEAP FMR, the HKMA supported a review which examined whether a more permanent resolution forum could be usefully established within EMEAP. The 25th EMEAP Governors meeting endorsed the FMR's review proposal to establish the SGR. The SGR is a resolution-specific forum within EMEAP and builds on the good work of the FMR. The SGR supports knowledge sharing and discussion among regional authorities in relation to resolution in a cross-border context. The HKMA was subsequently appointed as the Chair of the SGR (see page 81 for further information on EMEAP work). The HKMA continued to engage with relevant stakeholders with a view to promoting better understanding of the resolution regime and the related operational arrangements in Hong Kong. In 2020, the HKMA took part in a number of virtual events, for example those organised by the Bank for International Settlements' Financial Stability Institute and the South-East Asian Central Banks Centre, and provided speakers on a range of topics such as liquidity and funding in resolution and crisis preparedness.

Banking Stability

HKMA's Involvement in International Resolution Policy Work in 2020

Effective resolution requires internationally harmonised resolution policies and standards, given the cross-border nature of many large financial institutions. This is pertinent to Hong Kong as a material host of operations of all G-SIBs[4].

To reflect Hong Kong's unique role as a key host jurisdiction of G-SIBs and internationally active banking groups as well as a regional home for the resolution entities of some of these banking groups, the HKMA takes an active part in formulating and implementing international resolution policy standards. It has been contributing primarily through its membership of the FSB ReSG and the FSB ReSG's Cross-Border Crisis Management (CBCM) Group for Banks.

The HKMA is a member of a number of workstreams of the FSB ReSG's CBCM Group for Banks, including:

- The TLAC Technical Expert Group, which aims to ensure continued effective implementation of the FSB TLAC Standard[5];
- The Bail-in Execution workstream, which is developing a practices paper to identify good practices based upon stocktake of mechanisms across jurisdictions and engagement with relevant market infrastructure and authorities; and
- The CMG Good Practices workstream, which aims to draw on the ReSG's stocktake of CMG operations in 2020 and members' experiences during the COVID-19 pandemic to identify good practices as regards the efficient operation of CMGs, coordination to enhance banks' resolvability, and operationalisation of home-host coordination arrangements.

In 2020, the HKMA also participated as a member of the FSB's working group to evaluate the effects of the "too-big-to-fail" reforms for systemically important banks. This work aims to examine the extent to which post-crisis reforms, including resolution policies and planning, have had the effect of reducing the systemic risk and moral hazard associated with SIBs. A report of this evaluation was published for consultation in June, with the final report published in April 2021.

4 See https://www.fsb.org/wp-content/uploads/P111120.pdf for the 2020 list of G-SIBs.

5 For more detail on the FSB's latest progress and technical work on TLAC, in particular on unallocated TLAC, see Section 2 of the FSB's *2020 Resolution Report: "Be prepared"* (https://www.fsb.org/wp-content/uploads/P181120.pdf).

Bank consumer protection

Code of Banking Practice

The industry's overall compliance with the Code of Banking Practice remains satisfactory. According to the results of the self-assessment exercise covering 2019, almost all AIs as well as their subsidiaries and affiliated companies reported full or nearly full compliance[6], while a few AIs have taken prompt remedial actions to rectify areas of non-compliance. In December, at the HKMA's request, the Code of Banking Practice Committee commenced a review of the Code to enhance protection to consumers, particularly in the light of the increasingly digitalised channels for delivering financial services.

Consumer protection in the digital age

In order to strike a balance between innovation and consumer protection, AIs should adopt a risk-based approach and implement consumer protection measures that are commensurate with the risks involved. The HKMA introduced in September enhanced disclosure measures in the form of a "double reminder" in respect of the digital platforms where retail individual customers and SMEs apply for AIs' unsecured loan and credit card products, in order to provide borrowers with prominent and adequate information as well as adequate chance to consider the implications of their borrowing.

Consumer protection in respect of reform of interest rate benchmarks

Further to earlier reminders on the need for early preparations for the transitions to ARRs, the HKMA issued a circular in October to remind AIs to uphold customer protection principles in line with the Treat Customers Fairly Charter and other applicable requirements (e.g. Code of Banking Practice) throughout the processes of the reform and transition of interest rate benchmarks, and to develop robust customer communication programmes for consumer education and outreach.

[6] With five or fewer instances of non-compliance.

Banking Stability

Investor and Consumer Protection under COVID-19

The COVID-19 pandemic and the associated social distancing measures has increased the willingness of bank customers to make use of digital banking channels on the one hand while posing great challenges to the banking industry in ensuring protection to customers using such channels on the other hand. In response, the HKMA has provided various supervisory guidance and regulatory flexibilities to banks to facilitate their operations and continued services to customers while safeguarding protection to investors and consumers.

In line with the social distancing measures to avoid personal contacts during the selling process of investment and insurance products while ensuring customers' interests are protected, the HKMA worked closely with the IA to introduce two phases of temporary facilitative measures in February and March to allow non-F2F distribution of certain insurance products with compensating measures implemented. The HKMA also collaborated with the IA in reviewing various proposals on non-F2F distribution of insurance products involving AIs under Insurtech Sandbox of the IA. In view of the increasing popularity in the use of video conferencing tools for the sale of long-term insurance products during the pandemic, the HKMA issued a circular in August to remind AIs about the relevant regulatory requirements. As regards the distribution of investment products, the HKMA provided supervisory guidance and clarifications in February to March on the use of non-F2F channels for providing investment services (such as the taking of client orders under work-from-home arrangements of staff), and reminded banks to put in place compensating measures and controls. In view of the market volatility amid COVID-19, the HKMA issued reminders of important investor protection measures, especially those relating to higher risk products and leveraged transactions.

Taking into account the difficulties faced by customers being affected by the economic downturn amid the pandemic, the HKMA issued guidance to remind banks to be responsive and flexible in considering the needs of these customers, and to provide prominent information about the specific relief measures to the customers concerned. In addition, the HKMA reminded AIs to allocate adequate resources to support the handling of customer enquiries and complaints. In view of the possible delay in AIs' delivery of account statements and other communications to customers due to disruptions in postal services, the HKMA provided supervisory guidance in the first quarter of the year, requiring AIs to provide flexibility to customers who may need more time to respond to delayed customer communications, particularly those involving financial charges. The HKMA also reminded the AIs to liaise with the affected customers to arrange alternative delivery channels where appropriate.

Amid a rise of scams and other cyber security threats globally during the pandemic, the HKMA stepped up consumer education through issuing four posts on social media platforms like Facebook and LinkedIn from June to August, urging members of the public to stay vigilant to possible fraud scenarios where victims are induced to open files with malicious programmes, transfer funds to third party accounts, and/or provide digital keys (e.g. bank account number and e-banking login credentials) and sensitive personal information.

An example of educational message through social media reminding members of the public of possible fraud scenarios.

Last but not least, as AIs have activated their BCPs (including split team and work-from-home arrangements) under the pandemic, the HKMA has taken a pragmatic approach regarding AIs' submission of supervisory returns and surveys, as well as their compliance with certain regulatory and licensing requirements.

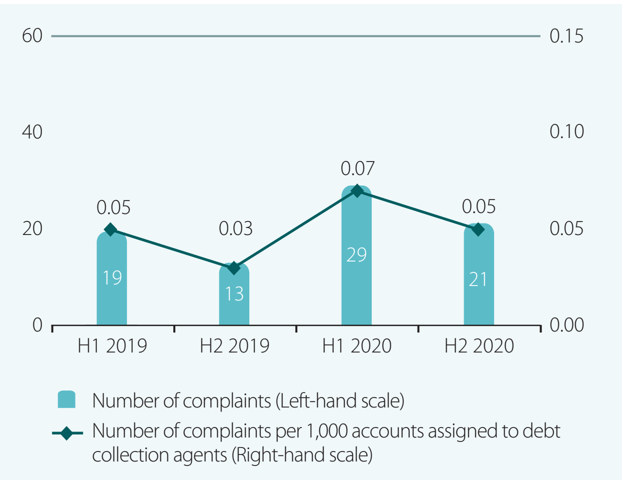
Engagement of intermediaries by authorized institutions

Various measures were introduced to further protect the interests of bank customers and reduce potential risks to the reputation of the banking industry arising from possible malpractices undertaken by fraudulent lending intermediaries. In particular, the HKMA reminded the public to stay alert to bogus phone calls. Retail banks' hotlines have been widely and effectively used by the public to verify callers' identities, with a total of over 18,000 enquiries received during the year.

Customer complaints relating to debt collection agents employed by authorized institutions

The number of complaints received by AIs about their debt collection agents increased to 50 from 32 in 2019 (Chart 3). The HKMA will continue to monitor AIs' engagement with debt collection agents.

Chart 3 Complaints received by AIs about their debt collection agents



Credit data sharing

The HKMA continued to follow up on a security incident that took place in November 2018 concerning security loopholes in the online credit reference enquiry service offered by TransUnion, a consumer credit reference agency (CRA) in Hong Kong. The suspended online service was resumed by phases in 2020 after TransUnion enhanced its information security arrangement in compliance with the requirements in the enforcement notice issued by the Privacy Commissioner for Personal Data (PCPD) and completed independent assessments on its online authentication and data security system at the request of the HKMA and HKAB.

Meanwhile, the HKMA continued to work with HKAB, the DTC Association (DTCA) and the Hong Kong S.A.R. Licensed Money Lenders Association Ltd. on the proposal to introduce more than one consumer CRA in Hong Kong, with a view to enhancing the service quality of consumer CRA and reduce the operational risk of having only one commercially run service provider in the market, particularly the risk of single point of failure.

Addressing the risks of hiring of individuals with misconduct

The HKMA conducted a consultation on the proposed implementation of a Mandatory Reference Checking Scheme to address the "Rolling Bad Apples" phenomenon (i.e. individuals who engaged in misconduct during their previous employment but subsequently managed to obtain employment elsewhere without disclosing their earlier misconduct to the new employer) in the local banking sector. The industry generally considered the consultation proposals useful in addressing the issues. Responses received from the consultation will provide the basis for developing more detailed proposals for the implementation of the Scheme.

Banking Stability

Bank Culture

The HKMA continued to proceed with the "Bank Culture Reform" which was initiated in March 2017, with a view to cultivating sound culture and values in banks. The HKMA first commenced a self-assessment exercise of bank culture in 2019, which covered 30 banks (including all major retail banks and selected foreign bank branches). Based on observations from this exercise, the HKMA published a *"Report on Review of Self-assessments on Bank Culture"* in May 2020.

As there is no one-size-fits-all approach when it comes to culture, all AIs are encouraged to pay attention to the common themes identified in the Report; to make reference to the range of practices; and to consider whether these practices are effective in driving cultural changes based on their desired culture, values and behavioural standards.

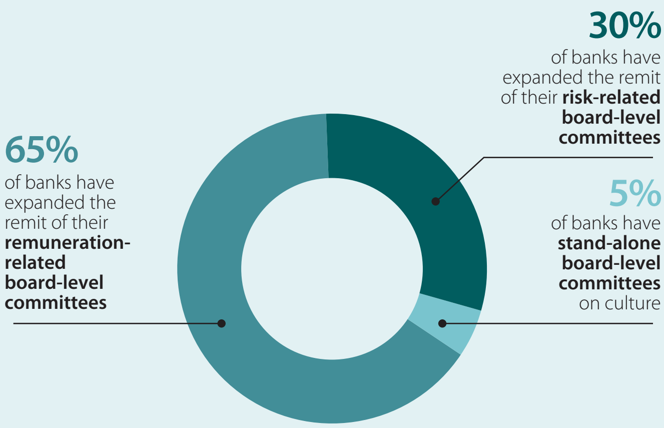
The Report set out a range of practices across the selected banks under each of the three pillars: (1) governance, (2) incentive systems, and (3) assessment and feedback mechanisms as a handy reference for AIs to further devise their own culture enhancement measures. See Table 5 for examples.

Table 5 Examples of practices adopted by banks in promoting sound culture

Governance

- All locally incorporated banks covered in the self-assessment exercise have a board-level committee, chaired by an independent non-executive director, to oversee culture-related matters.

Figure 1 Use of board-level committees to oversee culture



- Common methods of "tone-from-the-top" communications include town hall meetings by management; newsletters to staff; and training exercises (classroom or e-learning). Some banks use methods such as guidance for staff dealing with "grey areas", creative videos, and summary sheets that can be an effective means of ensuring the bank's desired culture, values and behavioural standards flow through the different levels of staff.

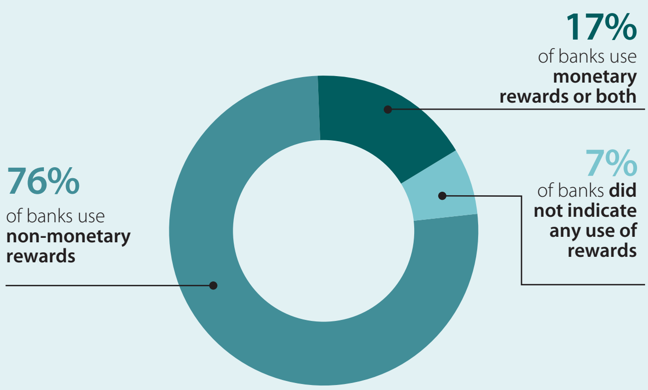
Incentive systems

- There was a greater use of a balanced scorecard approach by banks that would consider "what" (financial factors) and "how" (non-financial factors) when determining variable remuneration for staff. All banks have incorporated certain non-financial indicators (including behavioural indicators) as part of the performance assessment of staff.

Figure 2 Use of non-financial indicators to assess staff performance

- Most banks have implemented employee recognition schemes in promoting positive behaviours, such as through monetary and non-monetary rewards for staff who demonstrate exemplary behaviours. Some banks use interesting peer-to-peer recognition schemes through which the staff can nominate, be nominated by, recognise and reward each other.

Figure 3 Use of rewards to promote positive behaviours



Banking Stability

Assessment and feedback mechanisms

- 90% of banks have set up their culture dashboard. Many of the banks have also utilised other tools such as employee surveys to assess their culture.
- While all banks have certain "speak up" mechanisms in place, only some banks have incorporated measures to ensure confidentiality of their "speak up" mechanisms and to protect the staff who choose to speak up from retaliation.

The HKMA also identified seven common themes to which AIs are encouraged to pay more attention:

(i) Further work is needed to ensure that incentive systems are designed to promote sound culture and prevent incidents of misconduct;

(ii) Stronger links are required to connect banks' Hong Kong operations with the culture efforts of their headquarters or upstream entities as well as their downstream operations;

(iii) Deeper analysis is expected to benchmark themselves against the findings from the reviews of the major overseas misconduct incidents;

(iv) More focus is needed to facilitate the continuous professional development of staff;

(v) More effort is needed to tackle the key challenge of culture assessment to identify gaps between the current progress and the desired culture;

(vi) More work is needed in promoting an environment which provides "psychological safety" to encourage staff to speak up without fear of adverse consequences; and

(vii) Sustained effort is required in driving cultural changes and banks should be mindful of "culture fatigue".

Insights drawn from the self-assessments had informed the HKMA's future work on bank culture. Meanwhile, the HKMA conducted seven culture dialogues with AIs during the year to discuss the effectiveness of their culture enhancement efforts, and to provide supervisory feedback, including observations gathered through the HKMA's ongoing supervision. The HKMA will conduct a focused review of incentive systems of front offices in the business of distributing banking, investment and/or insurance products in retail banks.

Financial inclusion

The HKMA continues to promote financial inclusion and encourage banks to pay special attention to customers in need. Further to the issuance of the Practical Guideline on Barrier-free Banking Services by HKAB in March 2018, the HKMA worked closely with HKAB to further enhance the accessibility to banking services by persons with intellectual impairment. Having consulted the Equal Opportunities Commission, Commissioner for Rehabilitation and Hong Kong Council of Social Service, HKAB and the DTCA jointly published the Guideline on Banking Services for Persons with Intellectual Disabilities in December. Endorsed by the HKMA, the Guideline sets out the principles and good practices recommended for the industry in providing banking services to, and establishing communication channels with, customers in need. The HKMA also issued a circular in December setting out the supervisory expectations for AIs providing retail banking services to implement recommendations in the Guideline and to provide proper training to frontline staff to ensure they can understand, communicate with and provide appropriate services to address the needs of customers.

Meanwhile, the HKMA continued to monitor the industry's implementation of the Practical Guideline on Barrier-free Banking Services. The industry continued to make good progress during the year. For example, over 95% of bank branches were wheelchair accessible; 99% of bank branches had posted notices at the main entrance stating that guide dogs are welcome; 1,180 voice navigation automated teller machines (ATMs) and over 1,200 ATMs with suitable height for wheelchair users were in operation; and assistive listening systems were available at over 850 bank branches.

The HKMA also continued to encourage banks to enhance accessibility to banking services for residents in public housing estates (PHEs) and remote areas. During the year, the coverage of mobile bank branches further expanded, bringing the total number of PHEs in Hong Kong being served by mobile bank branches to 30.

More details of the progress made in enhancing accessibility to banking services can be found in the *Corporate Social Responsibility* chapter.

Banking Stability

Opening and Maintaining Bank Accounts

The HKMA works closely with the banking industry and the business community to tackle the issues associated with opening and maintaining bank accounts in Hong Kong. While banks in Hong Kong have generally strengthened their AML/CFT controls in line with international standards, the HKMA has issued guidance to remind banks of the needs of bona fide businesses for basic banking services and to adopt a risk-based approach to the customer due diligence (CDD) process in account opening and maintenance. Banks are also required, throughout the CDD process, to maintain proper communication with customers, to be transparent, reasonable and efficient, and to observe the principle of "treating customers fairly".

The HKMA also continues to encourage banks to launch the Simple Bank Account (SBA) service that provides basic banking services with less extensive CDD measures to eligible corporate customers. Altogether four banks are now offering SBA service. Since the launch of SBA service in early 2019, over 6,000 SBAs have been opened successfully.

The HKMA's dedicated email account and hotline are made available for the public as well as the local and overseas business communities to lodge related enquiries and provide feedback. All enquiries and feedback received are handled and followed up by the HKMA's dedicated Account Opening and Maintenance Team.

The HKMA monitors the situation of bank account opening. The average unsuccessful rate of account opening applications is less than 5%, representing a significant improvement from around 10% in early 2016. The HKMA aims to maintain a robust AML/CFT regime in Hong Kong which would not undermine access by legitimate businesses and ordinary residents to basic banking services.

Banking Stability

Deposit protection

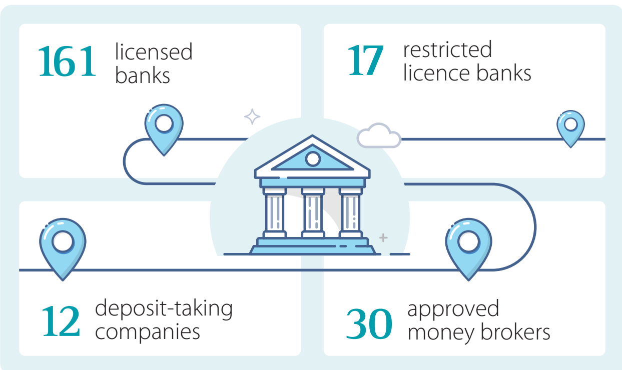
The DPS continued to provide protection to each depositor up to a limit of HK$500,000 per bank.

The Hong Kong Deposit Protection Board (HKDPB) has entered the final stage of implementing electronic payment channels, following completion of system development and a comprehensive drill test with the banking sector. The use of safe and faster electronic payment channels, including Faster Payment System (FPS), will supplement traditional paper cheque payments for DPS compensation.

A new advertising campaign themed "Bank Deposits Always Come with Protection" was launched in 2020 to bring out the key message of "DPS as the Guardian of Deposits". With the surge of online and social media consumption by the general public during the pandemic, "DPS Kung Fu Duo" and "DPS Saving Duo Comics" social media campaigns were also implemented along the same theme to reinforce public awareness and understanding of the DPS.

Licensing

At the end of 2020, Hong Kong had:



During the year, the HKMA granted banking licences to three non-local banks to operate a branch in Hong Kong. The authorizations of six licensed banks and one deposit-taking company were revoked during the year.

Enforcement

Banking complaints

The HKMA received 2,524 complaints against AIs and/or their staff members in 2020, representing an increase of 29% from 2019. Despite the rising trend, the HKMA completed the handling of 2,363 complaint cases, a 20% increase year-on-year, with 551 outstanding cases at the end of the year (Table 6). The HKMA handled each complaint in accordance with established procedures and followed up on issues of supervisory and disciplinary concern as identified during the handling process.

Table 6 Banking complaints received by the HKMA

	2020			2019
	Conduct-related issues	General banking services	Total	Total
In progress on 1 January	92	298	390	414
Received during the year	315	2,209	2,524	1,950
Completed during the year	225	2,138	2,363	1,974
In progress on 31 December	182	369	551	390

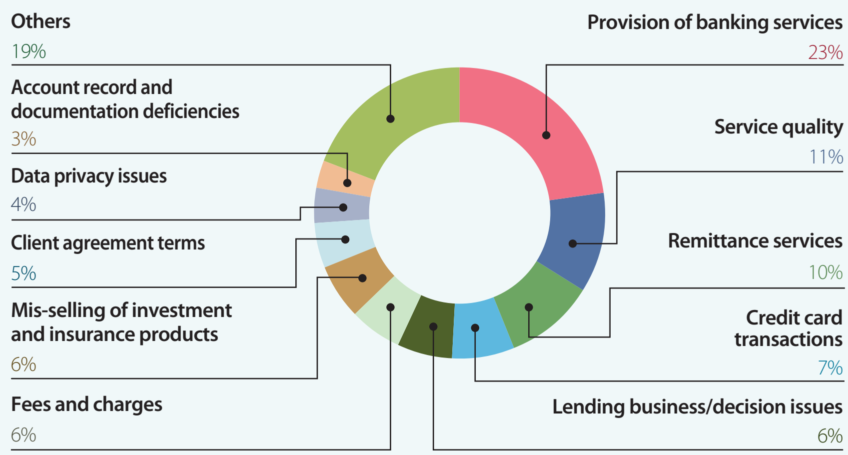
Issues concerning the provision of banking services continued to be the most common type of complaints, increased by 53% from 377 cases in 2019 to 576 cases in 2020. The majority of complaints in this category concerned the relevant AIs' practice in account opening and maintenance processes, such as delays in services and unclear communication with customers. In response to issues identified from complaints, the HKMA provided guidance to the AIs concerned to improve their customer interfacing capability.

Banking Stability

Complaints concerning fund transfers, card transactions and service quality rose by 38% from 510 cases in 2019 to 705 cases in 2020. These complaints included cross-border remittance service alleging fraud or investment scams, disputes over credit card transactions due mainly to undelivered services or goods, suspension or reduction in the scope and scale of banking services provided under the COVID-19 situation.

With the economic challenges presented by COVID-19, complaints about lending business/decision issues surged by 168% from a year ago to 158 cases in 2020. They included allegations of credit facility termination or denial of credit applications by companies and individuals. In addition, the HKMA received 460 informant reports against AIs and/or their staff members in 2020, compared to 493 cases in 2019. 43% of these reports implicated bank accounts in suspected fraud and cybercrime, and the HKMA has reminded the AIs concerned to cooperate with and extend assistance to law enforcement agencies on any investigations of suspected offences in relation to the informer cases and handle customers' requests in a pragmatic manner.

Chart 4 Types of services or products concerned in banking complaints received by the HKMA



Enforcement

To achieve consistent enforcement outcomes and deliver coherent deterrent messages to the industry, the HKMA collaborates closely with other financial regulators to investigate or follow up on possible compliance and fitness and properness concerns arising from AIs' self-reports, banking complaints and supervisory examinations of wealth management business conducted by AIs.

During 2020, the HKMA referred 29 cases to the SFC and shared with it the results of the HKMA's investigations and assessments of these cases under the MoU. Following referral by the HKMA, disciplinary sanctions were imposed on two RIs and three former relevant individuals pursuant to the SFO. The two RIs concerned were publicly reprimanded and fined HK$7 million and HK$4.2 million over internal system and control failures in relation to the sale of collective investment schemes, and failure to segregate client securities from proprietary securities in custodian accounts respectively. In other cases, three former RelS were banned from re-entering the industry for different time periods due to their misconduct, including conviction of fraud case, false declaration of personal securities dealings and fabrication of client's instruction, one for life, one for 21 months, and another for eight months.

Regulatory cooperation between the HKMA and the IA continued to strengthen in 2020. The two authorities maintained regulatory dialogues on matters of mutual interests. Based on the established collaborative arrangements under the MoU, the HKMA completed the handling of 106 cases and shared the results with the IA. Meanwhile, the IA referred 25 insurance-related cases concerning AIs to the HKMA for appropriate actions.

In close communication with the PCPD, the HKMA reminded AIs to stay alert to and manage the business risks in relation to theft of customers' personal information in unauthorised credit applications, and to assist affected bank customers and handle their requests in a reasonable and pragmatic manner.

During the year, the HKMA issued 30 compliance advice letters to AIs, as well as their staff members who were found to have not acted in full compliance with the relevant regulatory requirements, to address areas of concern identified and remind the AIs concerned about the importance of upholding standards of conduct and compliance.

Complaints Watch

As a continuing initiative to promote proper standards of conduct and prudent business practices among AIs, two issues of Complaints Watch were published in 2020. The newsletters have drawn AIs' attention to good practices in handling customer enquiries on long-established/closed accounts and treatment of joint bank accounts in the case where an account holder is diagnosed with mental incapacity. The HKMA also reminded AIs and their staff about effectively preventing and detecting conflicts of interest and market malpractices, in areas such as fabrication of client signature and staff concealment of personal securities accounts and transactions.

Electronic complaint form

The electronic complaint form was launched on 21 March to provide an additional digital channel for lodging complaints on banking products and services by members of the public. A total of 1,423 complaints were received through this channel, accounting for 56% of the total cases received in 2020.

Banking Stability

Capacity building in the banking sector

With fintech and green banking profoundly reshaping the banking sector, it is crucial for banks to develop, retain and attract talent to leverage the business opportunities and respond to challenges during the transformation. The HKMA has been working closely with the industry and other stakeholders to upskill existing practitioners, and train up the younger generation to enlarge the talent pool.

Creating talent pipeline for the banking sector

Capacity Building for Future Banking

To prepare for future talent demand, the HKMA, HKAB and the Hong Kong Institute of Bankers (HKIB) jointly undertook an industry-wide "Capacity Building for Future Banking" exercise to assess potential talent gaps in the banking sector in the next five years. The findings, released in June, revealed talent gaps in areas including technological and data skills, new banking business knowledge, and specific soft skills. This exercise helped provide a roadmap for banks to enhance the skill sets of their staff and expand the talent pool of the industry to meet the needs for future banking.

Banking Talent Programme

In view of the challenging job market conditions induced by the pandemic, the HKMA and the banking sector jointly launched the Banking Talent Programme in June. The programme was designed to provide fresh university graduates with short-term work opportunities in the financial industry and industry-related professional training. A series of seminars on various financial topics was arranged for the graduates, in addition to professional training courses and examinations. The programme also helped ensure that the supply of banking talent would not be disrupted by the pandemic. A total of 370 fresh graduates from local universities were offered job opportunities under the programme.

Financial Industry Recruitment Scheme for Tomorrow

The HKMA also supported the Financial Industry Recruitment Scheme for Tomorrow commissioned by the Financial Services and the Treasury Bureau and administrated by the Financial Services Development Council. In September, a circular was issued to the banking sector and stored value facility operators, encouraging them to provide job opportunities under the scheme to those who have an aspiration to develop a banking career.

Pilot Apprenticeship Programme for Private Wealth Management

2020 also saw the graduation of the third batch of apprentices under an apprenticeship programme for private wealth management. The programme was a joint initiative of the HKMA and the Private Wealth Management Association to develop future talent for the private banking industry. In light of the overwhelming response from students and participating private wealth management firms since the inception of the programme, another round of recruitment was conducted in November.

Upskilling banking practitioners

During the year, the HKMA continued to work closely with the banking industry and relevant professional bodies to develop new modules under the Enhanced Competency Framework (ECF) to facilitate talent development and enhancement of the professional competencies of banking practitioners. An ECF module on operational risk management which had taken into account feedback from the industry consultation was launched in December. The HKMA is making good progress in developing new ECF modules on compliance and fintech.

Since the ECF modules were first rolled out in 2016, about 13,000 banking practitioners had obtained recognised certifications by the end of 2020 to meet ECF benchmarks in various professional areas. This raises the overall level of professional competence in the banking industry in order to meet the growing demand for qualified banking practitioners.

Enhanced Competency Framework

2016	☑ Anti-Money Laundering and Counter-Financing of Terrorism (core level)
	☑ Cybersecurity
2017	☑ Treasury Management
	☑ Retail Wealth Management
2018	☑ Anti-Money Laundering and Counter-Financing of Terrorism (professional level)
2019	☑ Credit Risk Management
2020	☑ Operational Risk Management
Upcoming	☐ Fintech
	☐ Compliance

To accommodate potential operational difficulties caused by the COVID-19 outbreak, the HKMA provided banking practitioners with flexibility in fulfilling their continued professional development requirements. Banking practitioners were also given an alternative option to classroom training through FLEX Learning, an online training platform launched by the HKIB in response to the pandemic.

Oversight of financial market infrastructures

The policy objectives of the HKMA in overseeing FMIs are to promote their general safety and efficiency, limit systemic risk, and foster transparency. The HKMA aims to make FMIs more resilient to financial crises and protect the monetary and financial systems in Hong Kong from possible destabilising effects arising from disruption to the FMIs. The approach taken by the HKMA in overseeing the FMIs under its purview is set out in a policy statement published on the HKMA website.

The Payment Systems and Stored Value Facilities Ordinance (PSSVFO) empowers the Monetary Authority to designate and oversee clearing and settlement systems that are material to the monetary and financial stability of Hong Kong, and to the functioning of Hong Kong as an international financial centre. The purposes of the PSSVFO include promoting the general safety and efficiency of the designated clearing and settlement systems: the Central Moneymarkets Unit, the Hong Kong dollar Clearing House Automated Transfer System (CHATS) (including the Hong Kong dollar FPS), the US dollar CHATS, the euro CHATS, the renminbi CHATS (including the renminbi FPS), and the Continuous Linked Settlement (CLS) System. The PSSVFO also provides statutory backing to the finality of settlement for transactions made through the designated clearing and settlement systems by protecting the settlement finality from insolvency laws and any other laws.

The HKMA is also responsible for overseeing the OTC Derivatives Trade Repository ("HKTR"). While the HKTR is not a clearing or settlement system and is thus not designated as such under the PSSVFO, the Monetary Authority will ensure that the HKTR is operated in a safe and efficient manner, which is in line with one of the functions of the Monetary Authority to maintain the stability and integrity of the monetary and financial systems of Hong Kong. All the designated clearing and settlement systems and the HKTR are treated as FMIs in Hong Kong.

The HKMA oversees local FMIs under its purview through off-site reviews, continuous monitoring, on-site examinations, and meetings with FMIs' management. In doing so, the HKMA adopts international standards in its oversight framework. The Committee on Payments and Market Infrastructures (CPMI) of the Bank for International Settlements and the IOSCO Technical Committee published the Principles for Financial Market Infrastructures (PFMI). The PFMI constitutes the latest international standards for the oversight of FMIs, including systemically important payment systems, central securities depositories, securities settlement systems, central counterparties and trade repositories. The requirements under the PFMI are incorporated in the relevant guidelines on designated clearing and settlement systems and trade repositories issued by the HKMA.

The HKMA has completed the PFMI assessments on the FMIs under its oversight. All the FMIs have published Disclosure Frameworks, which is a key requirement under the PFMI to improve transparency by disclosing system arrangements principle by principle. The PFMI assessment results and Disclosure Frameworks are available on the HKMA website.

In light of the outbreak of COVID-19, the HKMA has been closely monitoring the operations of the FMIs under its oversight and the sufficiency and appropriateness of the contingency arrangements implemented by the FMIs. Throughout the year, the HKMA participated in virtual CPMI meetings which, among other things, discussed issues related to the oversight of clearing and settlement systems amid COVID-19, as well as on enhancing cross-border payments. The HKMA also continued to work with FMIs to strengthen their endpoint security in accordance with CPMI guidance.

Banking Stability

International participation

The HKMA is a member of the CPMI and participates in meetings, working groups and forums on FMI oversight matters. It also participates in the CPMI-IOSCO Implementation Monitoring Standing Group, which is responsible for monitoring and assessing the implementation of the PFMI by different jurisdictions.

The HKMA is also a member of the Oversight Forum of the global message carrier SWIFT, which discusses relevant oversight matters and shares SWIFT-related information. Hong Kong's AIs and FMIs, which commonly use SWIFT's services, may be exposed to risks in the event of any disruption to SWIFT's operations. During the year, the HKMA attended virtual meetings and teleconferences to discuss matters of interest, in particular the customer security framework developed by SWIFT and cybersecurity issues.

The HKMA participates in the international cooperative oversight of the CLS System through the CLS Oversight Committee. The CLS System is a global clearing and settlement system operated by the CLS Bank to handle cross-border foreign exchange transactions. It enables foreign exchange transactions involving CLS-eligible currencies, including the Hong Kong dollar, to be settled on a payment-versus-payment basis. During the year, the HKMA attended various virtual meetings of the CLS Oversight Committee to discuss operational, developmental, and oversight matters.

The HKMA has established cooperative oversight arrangements with the relevant authorities, both at the domestic and international levels, to foster efficient and effective communication and consultation, in order to support one another in fulfilling their respective mandates with respect to FMIs.

Independent tribunal and committee

An independent Payment Systems and Stored Value Facilities Appeals Tribunal hears appeals against decisions of the Monetary Authority on licensing and designation matters under the PSSVFO. There has been no appeal since the establishment of the tribunal. An independent Process Review Committee, whose members are appointed by the Chief Executive of the Hong Kong Special Administrative Region, reviews processes and procedures adopted by the HKMA in applying standards under the PSSVFO to systems in which the HKMA has a legal or beneficial interest. The Committee assesses whether the HKMA has applied the same procedures to all designated clearing and settlement systems. The Committee held two meetings and reviewed four regular reports and 36 accompanying oversight activities management reports in 2020. The Committee concluded that it was not aware of any case where the HKMA had not duly followed internal operational procedures, or where the HKMA had not been procedurally fair in carrying out its oversight activities. Under its terms of reference, the Committee submitted its annual report to the Financial Secretary, and the report is available on the HKMA website.

PLANS FOR 2021 AND BEYOND

Supervisory focus

Supervision of credit risk

In 2021, the HKMA will undertake thematic reviews and examinations focusing on AIs' credit risk management practices, including assessing their connected lending practices and loan classification system. In addition, as SMEs are generally more vulnerable to the uncertainties stemming from the global and domestic environment, the HKMA will collaborate with the banking industry to support SMEs' financing needs to the extent consistent with prudent risk management principles.

Supervision of operational and technology risk

The HKMA will strengthen the capability of the banking sector to address existing and emerging operational and technology risks amid the trend of accelerated digitalisation. In light of the COVID-19 experience, additional resources will be devoted to assessing the operational resilience of AIs, including their capability to respond to extreme scenarios and escalating cyber risk. The HKMA has set out its supervisory expectations with regard to the implementation of C-RAF 2.0 and will monitor AIs' progress in this respect.

Adoption of supervisory technology

Leveraging on the rapid development of financial technologies in both the local and global financial markets, and the increasing availability of data, the HKMA will explore the adoption of Suptech solutions to enhance the effectiveness and forward-looking capability of its supervisory processes. Following a three-year roadmap developed earlier, a series of proof-of-concept exercises will be undertaken to evaluate the suitability of the technologies concerned before proceeding to production. The technologies under consideration include, but are not limited to, knowledge management systems, tools that serve to digitalise and automate workflows (such as speech-to-text and robotic process automation), as well as advanced analytics techniques, which include the use of natural language processing and machine-learning algorithms.

Supervision of liquidity and market risk

The HKMA will focus on the supervision of AIs' liquidity and market risk management in 2021. Apart from conducting on-site examinations and thematic reviews of AIs' risk management systems, the HKMA will monitor AIs' readiness to the transition from LIBOR to ARRs.

Combating money laundering and terrorist financing

In 2021, the HKMA's AML/CFT work will continue to focus on the industry's response to COVID-19, as well as offering guidance and engagement in response to increased geopolitical risks. The HKMA will continue to work closely with the Government, AIs and the SVF sector to finalise the next Hong Kong ML/TF Risk Assessment and to amend the Anti-Money Laundering and Counter-Terrorist Financing Ordinance to align with the latest international standards. The amendments seek to introduce increased risk-based flexibility, such as facilitating wider adoption of remote on-boarding.

The HKMA will continue to benchmark the banking and SVF sectors' response to ML/TF risks against international expectations, following recognition of the HKMA's AML/CFT supervision by the FATF Mutual Evaluation in 2019, while seeking to increase cooperation with other parts of Hong Kong's AML/CFT eco-system in mitigating these risks. We will support the work of FMLIT through efforts to promote information sharing, and continue to actively participate in global standard setting and policy deliberation.

Banking Stability

The HKMA will continue to promote AIs' adoption of Regtech following the 2019 AML/CFT RegTech Forum and publication of the report *AML/CFT Regtech: Case Studies and Insights* in January 2021. We will provide guidance and clarification on regulatory expectations, facilitate innovation in areas such as transaction monitoring and screening, and enhance the industry's collective ability to reduce the risk of money laundering networks through data analytics, information sharing and collaboration.

The HKMA's project to digitally transform its AML/CFT supervision will continue with a focus on upskilling, particularly in monitoring and analytics capabilities to deepen understanding of new and emerging ML/TF risks and facilitate agile responses.

Smart banking

As part of the Banking Made Easy initiative, the HKMA will continue to promote the adoption of Regtech and foster a larger and more diverse Regtech ecosystem in Hong Kong. The HKMA will implement a two-year roadmap published in November 2020 to accelerate Regtech adoption in the banking sector. A series of events and activities will be rolled out, including:

- hosting a large-scale event to raise the banking sector's awareness of the potential of Regtech;
- launching a Regtech Adoption Index;
- organising a Global Regtech Challenge to stimulate innovation;
- publishing a "Regtech Adoption Practice Guides" series;
- creating a centralised "Regtech Knowledge Hub" to encourage information sharing; and
- establishing a Regtech skills framework to develop talent.

Supervision of wealth management and MPF-related businesses

In 2021, the HKMA will carry out on-site examinations and off-site surveillance of AIs' conduct in the sale of securities, MPF and other investment and insurance products, with focus on the implementation of the WMC Scheme, high-risk investment products and non-investment-linked long-term insurance products.

In the supervisory process, the HKMA will communicate closely with other regulators and the banking industry to provide guidance on regulatory standards in relation to the sale of investment, insurance and MPF products, and issue further guidance regarding investor protection for the sale of investment and insurance products through non-F2F channels. The HKMA will also continue to collaborate with the SFC and the IA in conducting joint examinations on matters of mutual interest.

The HKMA will work with relevant authorities and the banking industry to finalise the implementation details and supervisory framework for the launch of the WMC Scheme. Moreover, the HKMA will also finalise the Code of Practice for Trust Business and related supervisory framework for implementation.

Implementation of Basel Standards in Hong Kong

Capital standards

The HKMA is working towards submitting to the Legislative Council for negative vetting during the second half of 2021 a set of amendments to the Banking (Capital) Rules for implementing the EIF standard, targeting to be effected by the end of 2021 or early 2022.

The HKMA will proceed with the preparatory work for implementing the Basel III final reform package and the revised market risk standards, having regard to industry feedback, as well as the implementation timelines adopted by other major financial centres.

Exposure limits

The HKMA intends to propose amendments to the Banking (Exposure Limits) Rules to better clarify policy intent, implement recommendations from international peer review and incorporate changes consequential to amendment of related capital rules.

Disclosure standards

The Basel Committee released the "Pillar 3 Disclosure Requirements — Updated Framework" in 2018 to incorporate revisions to the Pillar 3 framework, mainly to reflect disclosure requirements associated with the revised capital standards set out in the Basel III final reform package. These requirements constitute the third and final phase of the revised Pillar 3 disclosure requirements, and are currently scheduled to be implemented concurrently with the Basel III final reform package (i.e. 1 January 2023). The HKMA will consult the industry on its proposed approach to implementing these requirements.

Banking Stability

Other supervisory policies and risk management guidelines

To reflect developments in related regulatory requirements and international standards, the HKMA plans to update certain SPM modules, including those on "Stress-testing", "Foreign Exchange Risk Management", "Countercyclical Capital Buffer — Approach to Its Implementation", "Interest Rate Risk in the Banking Book" and "Code of Conduct". The HKMA will continue to work on the revised SPM modules on "Guideline on a Sound Remuneration System" and "Reporting Requirements Relating to Authorized Institutions' External Auditors under the Banking Ordinance", aiming to finalise the revisions within 2021.

Balanced and responsive supervision

Amid the fast-changing banking environment and risk landscape, the HKMA will continue to communicate closely with the banking sector to explore the scope of further refining and streamlining supervisory policies and practices with a view to promoting sustainable development of the banking sector without compromising supervisory effectiveness.

Accounting standards

Further to the first-phase amendments issued in September 2019 to provide relief from potential effects of the uncertainties caused by the interest rate benchmark reform, the International Accounting Standards Board published the second-phase amendments in August 2020 to address the financial reporting issues that may arise when an existing interest rate benchmark is replaced with an ARR. The HKMA will continue to monitor the financial reporting impact of interest rate benchmark reform and the implementation of International Financial Reporting Standard 9 by AIs in Hong Kong. The HKMA will maintain regular dialogue with AIs' external auditors and assess the implications of other impending accounting standards for the existing prudential requirements on AIs.

Green and sustainable banking

The HKMA will step up its effort in promoting green and sustainable banking. The HKMA is planning to consult the industry on the supervisory requirements for climate change risk management in the first half of 2021. This will include mandating climate-related disclosures that are aligned with the Task Force on Climate-related Financial Disclosures recommendations no later than 2025. With a view to enhancing climate risk resilience of the banking sector, the HKMA will launch the pilot CRST in 2021 and engage the participating AIs throughout the process to ensure they are progressing in the right direction. The HKMA will seek to play a leading role internationally via active participation in various international and regional forums to share experiences and coordinate efforts on the international front to tackle climate change-related risks.

Resolution

The HKMA will continue its multi-year programme to build an operational resolution regime for AIs. For 2021, the HKMA will prioritise the following topics within its three core objectives (see Table 7 for details).

Table 7 HKMA's forward priorities on resolution in 2021

Resolution Standards	Resolution Planning	International Policy, Regional Cooperation and Execution Capability
◆ Finalise rules on contractual stays and consult on related CoP chapter ◆ Consult on and finalise a CoP chapter on OCIR ◆ Consult on a CoP chapter on AIs' liquidity reporting and estimation capabilities ◆ Develop a CoP chapter on continuity of access to FMIs	◆ Advance bilateral resolution planning programmes with D-SIBs, assessing resolvability and working with banks to address impediments to an orderly resolution ◆ Continue implementation of LAC requirements for D-SIBs and start implementing OCIR standards and rules on contractual stays ◆ Commence development of preferred resolution strategies for locally incorporated AIs other than D-SIBs, with total consolidated assets above HK$300 billion ◆ Coordinate with relevant authorities via CMGs and Resolution Colleges on cross-border resolution planning for G-SIBs and crisis preparedness	◆ Continue to contribute to international policy developments and implementation monitoring ◆ Chair and provide secretariat function for the EMEAP's resolution forum, the SGR ◆ Advance the development of local mechanics to execute bail-in and transfer stabilization options ◆ Advance the development of an inter-agency crisis management framework with other Hong Kong authorities

Banking Stability

Bank consumer protection

The HKMA will participate in, and provide advice to, the Code of Banking Practice Committee of HKAB in 2021 to review the Code in the light of the growing digitalisation of financial services. The HKMA will also continue to monitor AIs' compliance with the Code through various means, including via AIs' self-assessment and handling of relevant complaints against them.

With the aim of promoting a sound bank culture, the HKMA will conduct a focused review in 2021 to identify industry-wide insights and practices for sharing with the banking industry and will continue to have culture dialogues with AIs. The HKMA will also explore other culture initiatives taking into account overseas experience and emerging themes that may arise while maintaining dialogue with overseas regulators on the development of bank culture.

The HKMA is working closely with the industry associations to introduce more than one consumer CRA in Hong Kong to enhance the service quality of consumer CRAs and address the risk of single point of failure of having only one CRA. The industry associations aim to select the CRAs through a tender process. The selected CRAs will then undergo system development and testing, and the new multiple CRAs model is expected to be in operation by the end of 2022.

The HKMA is developing the implementation details of the Mandatory Reference Checking Scheme with the industry to address the "Rolling Bad Apples" phenomenon in the local banking sector, taking into account the responses received from the consultation, to pave the way for the subsequent industry-led effort to implement the Scheme.

Financial inclusion

The HKMA will carry on its engagement with the banking industry, business community and relevant stakeholders to further enhance financial inclusion in Hong Kong, taking into account market developments and opportunities in the digital age.

The HKMA will also monitor the industry's implementation of measures recommended in the Practical Guideline on Barrier-free Banking Services and the Guideline on Banking Services for Persons with Intellectual Disabilities.

Deposit protection

The HKDPB will conduct a review of the DPS in 2021-2022 primarily to assess the adequacy of the DPS Fund and the scope of deposit insurance coverage in Hong Kong. Such a review is conducted periodically to ensure that the public policy objectives of the DPS are met. To maintain its readiness to payout, HKDPB will conduct a payout rehearsal with a focus on using electronic payment channels, which will be made ready in 2021, to compensate depositors. Annual self-assessments and on-site examinations will continue to be conducted to ensure that DPS member banks make appropriate representations to depositors in respect of the protection status of deposits. In addition, the HKDPB will roll out multimedia publicity and social media campaigns that resonate the affinity of money-saving to promote the DPS in light of its 15th anniversary.

Banking Stability

Enforcement

The HKMA will continue to assess or investigate cases coming to its attention on possible breaches of requirements under the various statutory regimes relevant to AIs and stored value facility licensees in order to achieve the objectives of market integrity and bank customer protection. The full range of supervisory and enforcement measures will be considered and deployed as appropriate. The HKMA will maintain close collaboration with other local financial regulators to achieve effective and coordinated enforcement outcomes. It will also maintain close communication with the banking industry and share with them the latest complaint trends and good practices in order to promote proper standards of conduct and prudent business practices among AIs.

Capacity building in the banking sector

Creating talent pipeline for the banking sector

The "Capacity Building for Future Banking" exercise has demonstrated the commitment of the HKMA and the banking sector to addressing future talent needs. The HKMA will embark on a more holistic talent development strategy in order to promote talent development in a more structured and coordinated manner. In particular, the HKMA will reach out to relevant stakeholders, including universities, to enhance their awareness of the knowledge and skills required by the banking sector, which will help increase the supply of quality talent for the banking sector in the future.

Upskilling banking practitioners

The HKMA will maintain close collaboration with the banking industry and relevant professional bodies to develop new ECF modules that match industry needs and will review the effectiveness of the ECF modules in promoting professional development of banking practitioners. The HKMA will also continue its efforts in empowering the existing banking practitioners through the provision of training in collaboration with industry bodies and other stakeholders.

Oversight of financial market infrastructures

The HKMA will continue to promote the safety and efficiency of the FMIs under its oversight in accordance with the PSSVFO and the PFMI and the various guidance issued by the CPMI. It will also fine-tune the FMI oversight framework taking into account the latest developments including the COVID-19 situation.

The HKMA will work with the FMIs on their observance of the PFMI. Assessments will be conducted and updated as required, and the HKMA will continue to participate in the CPMI-IOSCO PFMI implementation monitoring and assessment exercise. The HKMA will also participate in the work of international standard setting bodies and will strengthen its oversight requirements to reflect international practices or in response to market and technology developments. In particular, the HKMA will focus on the operational and cyber resilience of the FMIs under its purview. Furthermore, the HKMA will work with relevant authorities to further strengthen cooperative oversight arrangements where appropriate.

International Financial Centre

Hong Kong continues to be a globally competitive international financial centre. During the year, various initiatives were taken forward to facilitate the development and use of fintech in the banking and payment industries. The Faster Payment System has seen a surge in turnover during the year amid the COVID-19 pandemic.

Hong Kong is also a centre of action for capitalising on opportunities from the opening up of the Mainland financial markets. Thanks to world-class market infrastructure and the Connect schemes, Hong Kong is both the favoured platform of Mainland corporates raising funds and the window for international investors seeking exposure to the fast-growing Mainland markets. Headway was made during the year to promote financial collaboration in the Guangdong-Hong Kong-Macao Greater Bay Area, especially in helping Hong Kong residents access financial and banking services in the Area more easily.

At the same time, great effort went into opening up new opportunities for enhancing the competitiveness of Hong Kong's financial platform, in areas including asset and wealth management, corporate treasury centres and sustainable finance. The HKMA also stepped up market outreach to promote Hong Kong's financial services to overseas and Mainland stakeholders. At a global level, the HKMA is playing a leadership role in a number of regional and international committees, which is a clear recognition of Hong Kong's expertise and commitment to international work.

International Financial Centre

OVERVIEW

To strengthen Hong Kong's position as a fintech hub in Asia, the HKMA continued to put great effort into implementing various initiatives to facilitate the development and use of technology in the banking and payment industries. The key progress during the year included:

- expanding the adoption of the Faster Payment System (FPS);
- facilitating the implementation of Open Application Programming Interface (Open API) in the banking sector;
- facilitating the digitalisation of trade finance by connecting eTradeConnect and the People's Bank of China (PBoC) Trade Finance Platform;
- researching the application of Central Bank Digital Currency (CBDC) to cross-border payments;
- facilitating small and medium-sized enterprise (SME) financing by studying the technical feasibility of the Commercial Data Interchange (CDI) and researching into alternative credit scoring;
- further promoting Regtech adoption by publishing a two-year roadmap to foster a larger and more diverse Regtech ecosystem;
- enhancing talent development; and
- stepping up cross-border collaboration in fintech.

The HKMA Fintech Facilitation Office (FFO), together with the banking departments of the HKMA, plays a pivotal role in driving the implementation of these initiatives.

Inflow into renminbi assets continued to gather pace as major financial market indices started to include or increase weightings in onshore securities. Hong Kong plays an indispensable role in facilitating international investors' increased allocation in renminbi assets, with its unparalleled access under the Mainland-Hong Kong Connect schemes to the onshore capital markets. In 2020, daily turnover under Bond Connect increased 82% to around RMB19.3 billion. New initiatives were launched to improve Bond Connect operations, including a new special settlement cycle service, extended trading hours, and new arrangements designed to give investors more flexibility in choosing the banks to conduct currency conversion and foreign exchange hedging. Following the success of Northbound Bond Connect, the HKMA has formed a working group with the PBoC to study the framework of Southbound Bond Connect.

Continued efforts were also devoted to enhancing financial facilitation between Hong Kong and Mainland cities in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). The Mainland authorities promulgated a series of initiatives to support financial development in the region. In June, the PBoC, the HKMA and the Monetary Authority of Macao (AMCM) jointly announced the decision to implement the cross-boundary Wealth Management Connect (WMC) scheme. The HKMA has been working closely with the Mainland and local authorities as well as the industry to formulate the implementation details. The HKMA also engaged with the Mainland authorities on other initiatives, so as to expand room for banks in Hong Kong to broaden their scope of cross-boundary businesses. During the year, Hong Kong continued to maintain its role as the global offshore renminbi business hub. Average daily turnover of Hong Kong's renminbi Real Time Gross Settlement (RTGS) system reached a record high of RMB1.2 trillion.

International Financial Centre

Great effort went into creating new opportunities to enhance the competitiveness of Hong Kong's financial platform. To promote the development of the fund business in Hong Kong, the HKMA worked closely with the Government and industry to provide a more favourable tax and regulatory environment for fund formation. Significant effort was also made to continue elevating Hong Kong's position as a regional green and sustainable finance hub. At the same time, the HKMA stepped up market outreach to promote Hong Kong's financial services to overseas and Mainland stakeholders.

In the central banking community, the HKMA plays a leadership role in a number of regional and international committees. For example, the HKMA chairs the Policy and Standards Group (PSG) of the Basel Committee on Banking Supervision (Basel Committee)[1] , and the Working Group on Financial Markets (WGFM) established under the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)[2]. The HKMA also co-chairs the Non-Bank Monitoring Experts Group (NMEG) and the Financial Innovation Network (FIN) of the Financial Stability Board (FSB)[3], and leads a team that looks into supervisory issues associated with benchmark transition.

The safe and efficient operation of Hong Kong's financial infrastructure lays a solid foundation for Hong Kong's role as an international financial centre. The four interbank RTGS systems, the Central Moneymarkets Unit (CMU) and the Hong Kong Trade Repository (HKTR) achieved 100%[4] system availability in 2020, outperforming the target of 99.95%. Through its accounts set up with the two Mainland central securities depositories (CSDs), the CMU continued to facilitate the settlement of Bond Connect transactions conducted under Bond Connect Northbound Trading and holding of Mainland debt securities on behalf of relevant CMU members.

Adoption of the FPS continued to increase in 2020. The number of registrations reached 6.9 million at the end of 2020 and the transaction volume for the year rose by two times from 2019. The Government's acceptance of FPS payment and greater merchant adoption were the key drivers for the marked increase in transaction volume on top of the steady growth in person-to-person payments.

To ensure the general safety and efficiency of the local retail payment industry, the HKMA has designated and oversees six retail payment systems (RPSs) under the Payment Systems and Stored Value Facilities Ordinance (PSSVFO). The HKMA also continues to supervise 18 stored value facility (SVF) licensees.

1 The Basel Committee is the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions.

2 The EMEAP is a cooperative forum of 11 central banks and monetary authorities in the East Asian and Pacific region, comprising the Reserve Bank of Australia, the People's Bank of China, the Hong Kong Monetary Authority, Bank Indonesia, the Bank of Japan, the Bank of Korea, Bank Negara Malaysia, the Reserve Bank of New Zealand, Bangko Sentral ng Pilipinas, the Monetary Authority of Singapore, and the Bank of Thailand.

3 The FSB was established in April 2009 as the successor to the Financial Stability Forum to address vulnerabilities in global financial systems, and to develop and promote the implementation of effective regulatory, supervisory and other policies in the interest of financial stability. Its membership comprises senior representatives of national financial authorities (central banks, regulatory and supervisory authorities, and ministries of finance), international financial institutions, standard-setting bodies, and committees of central bank experts.

4 About 99.98% if including downtime caused by external factors.

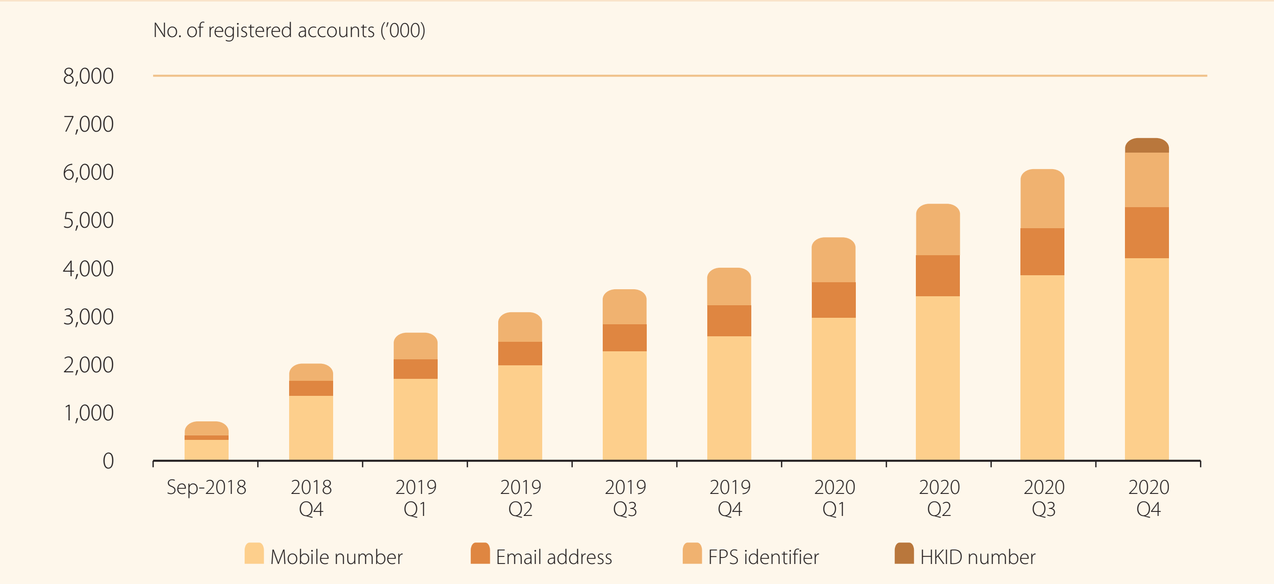
REVIEW OF 2020

Hong Kong as a Fintech Hub in Asia

Faster Payment System

Since the launch of the FPS in September 2018, the number of participants has grown to 35 banks and 12 SVFs with the addition of five banks and one SVF in 2020. The usage of the FPS has also grown steadily. As of 31 December, the FPS had recorded 6.9 million registrations (Chart 1). To facilitate institutions' payments to the general public, the system was enhanced to introduce the Hong Kong Identity Card (HKID) number as an account proxy starting from 6 December. More than 110,000 registrations were recorded in less than a month after the introduction of this enhancement. This new function is not intended for making person-to-person payments and will only be used by institutions which already possess the HKID number of the recipients in making payments (for example, disbursing salaries). As the HKID number is a unique identifier for each Hong Kong citizen, such an account proxy can ensure correct payment is made to a recipient without requiring the recipient to disclose the bank account number.

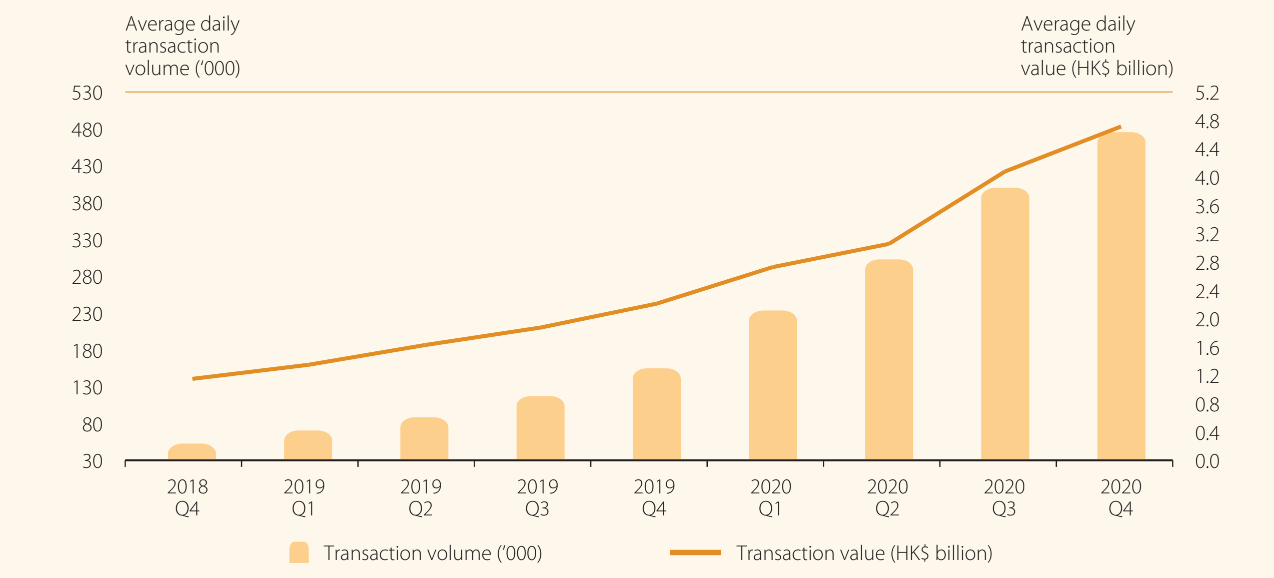
Chart 1 **Registration of FPS proxy identifiers**



The COVID-19 pandemic and social distancing measures have given new impetus to the use of electronic payment service. The turnover of the FPS rose particularly fast during the year (Chart 2). The average daily turnover reached 505,000 real-time transactions (worth HK$5.2 billion and RMB95 million) in December 2020, three times of the 168,000 transactions in December 2019 and tenfold of that in October 2018, the first full month of operation after the launch of the FPS. The increased use of the FPS has also been spurred by steady growth of adoption and a gradual extension in the scope of usage, from primarily person-to-person payments at the initial stage to bill, retail and business payments, including Government bill payments.

International Financial Centre

Chart 2 Average daily turnover of Hong Kong dollar real-time payments



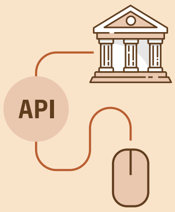
The HKMA has been working with various government departments and the banking industry to extend the usage of the FPS from person-to-person payments to bill payments and other merchant payments. The Government has adopted the FPS for bill payments since November 2019, with a view to promoting the FPS and facilitating the public. The public can easily scan the QR code printed on the bills with supporting mobile banking or SVF e-wallet apps to pay taxes, rates and government rent, water charges and General Demand Notes issued by the Government. As of December 2020, 1.8 million government bill payment transactions involving HK$2.2 billion had been made through the FPS. Riding on the successful launch of the government bill payments, four additional government departments have started accepting FPS QR code payments at designated counters and self-help kiosks starting 21 December 2020. Online payment via the FPS is also being explored.

In another positive development, an increasing number of both large and small merchants have adopted FPS to support their business operations. Merchant payments surged to average 100,000 transactions a day in December 2020, 38 times more than in December 2019. The FPS is commonly used to pay bills, make in-app direct debits and complete other online purchases. The increasing popularity of SVF e-wallets also contributed to a surge in account top-up transactions via the FPS. Average daily top-up transactions in December 2020 was sevenfold of that in December 2019.

To continue raising public awareness of the FPS, the HKMA has developed a selection of education and publicity materials, such as Announcements in the Public Interest on television and a series of smart tips on social media platforms. The HKMA also organised a Whatsapp stickers design competition for secondary school students to raise their awareness of e-payments. Outreach efforts were also made to various charity organisations and operators of wet markets to promote the adoption of FPS for making and receiving payments. Some FPS participating banks and SVFs also launched promotional campaigns, including offers of incentives, to encourage customer registration with the FPS and the use of FPS for fund transfer and bill payment. Building on the progress made in 2020, the HKMA worked with banks and SVFs to promote giving e-laisee via FPS in early 2021. The HKMA launched a publicity campaign on e-laisee while banks and SVFs offered incentives to encourage their customers to give e-laisee so as to go green and support the anti-pandemic efforts.

International Financial Centre

Open Application Programming Interface



The HKMA continued to facilitate the development and adoption of Open API by the banking sector in line with the four-phase approach of the Open API Framework. Banks have launched Phases I and II Open APIs and are using them to collaborate with third-party service providers on various innovative services that improve customer experience. Separately, the HKMA has been conducting a study on the implementation of Phases III and IV Open APIs. A leaflet was published in November to present the findings of the survey in the study.

Leaflet published by the HKMA to highlight the key facts and figures of an industry survey on Open API Phases III and IV.

eTradeConnect

With the goal of providing importers and exporters with more convenient trade finance services, a proof-of-concept study was initiated to explore connecting eTradeConnect[5] and the PBoC Trade Finance Platform. The first phase of the proof-of-concept study was completed in the fourth quarter of the year. A pilot run was subsequently launched. Banks in Hong Kong and Mainland China have used the connection to execute cross-border trade finance transactions.

[5] eTradeConnect is a blockchain-based trade finance platform officially launched in October 2018 under the facilitation of the HKMA. It is fully funded by a consortium of 12 major banks in Hong Kong.

Cross-border payments

On CBDC, the HKMA and the Bank of Thailand continued their joint research project to study the application of CBDC to cross-border payments, with a view to facilitating HKD-THB payment-versus-payment (PvP) among banks in Hong Kong and Thailand. The first phase of the project was completed, with a joint report published in January to present the key findings, and a blockchain-based cross-border corridor network prototype developed to raise the efficiency and lower the cost of cross-border payments. The second phase of the project has begun, with a focus on exploring business use cases in cross-border trade settlement and capital market transactions. The project also attracted the interest of other members of the central banking community. The Bank for International Settlements (BIS), the Central Bank of the United Arab Emirates, and the Digital Currency Institute of the PBoC announced their participation in the project in early 2021.

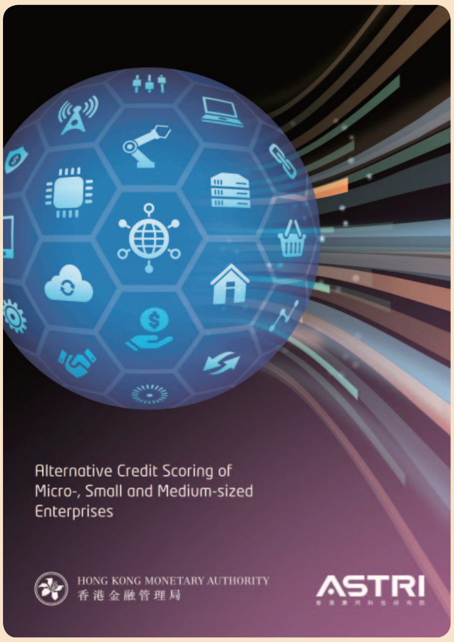
Furthermore, the HKMA is supporting the Digital Currency Institute of the PBoC on technical pilot testing of using e-CNY for making cross-boundary payments in Hong Kong. The e-CNY will further improve the efficiency and user experience of cross-boundary payment services, and also help promote interconnection within the GBA.

HKMA Deputy Chief Executive, Mr Edmond Lau (right), and Deputy Governor of the Bank of Thailand, Mr Mathee Supapongse, announce the publication of the joint research report on the application of CBDC to cross-border payments.

International Financial Centre

Commercial Data Interchange

To facilitate SME financing, the HKMA initiated a proof-of-concept study in collaboration with banks to examine the technical feasibility of building the CDI, a consent-based financial infrastructure that would enable more secure and efficient data flow between banks and commercial data owners. With the CDI, SMEs can use their own data to enhance their access to financial services. To develop the related technology for alternative credit scoring, the HKMA also commissioned the Hong Kong Applied Science and Technology Research Institute to study the use of artificial intelligence (AI) in SME loan applications, and a white paper titled "Alternative Credit Scoring of Micro-, Small and Medium-sized Enterprises" was published in November to report on the findings.



White paper titled "Alternative Credit Scoring of Micro-, Small and Medium-sized Enterprises".

Talent development

To expand the fintech talent pool, the HKMA continued to run the Fintech Career Accelerator Scheme 2.0 in collaboration with its strategic partners to nurture young talent at various stages of their career development. A total of 250 students benefitted from the programme in 2020.

Cross-border collaboration

Considerable efforts were made to further strengthen cross-border fintech collaboration. For example, the HKMA regularly attended summits and conferences held by other jurisdictions.

HKMA Deputy Chief Executive, Mr Edmond Lau, delivers opening remarks at the 2020 China (Shenzhen) Fintech Global Summit.

Together with other members of the Global Financial Innovation Network[6], the HKMA opened applications for the Cross-Border Testing (CBT) in October, providing an environment for firms to trial and scale new technologies, products or business models in multiple jurisdictions. The CBT allowed participating firms to gain insight into how a product or service might operate in the market.

[6] By the end of December, the network consisted of over 60 organisations.

The HKMA and the BIS Innovation Hub Centre in Hong Kong co-organised a competition called "TechChallenge — Digitising Trade Finance" in August to highlight the potential for new technologies to enhance trade finance mechanisms. A total of 103 solution proposals from 19 cities were received. The top proposals were announced and showcased during the Hong Kong FinTech Week 2020.

Example of promotional materials of TechChallenge.

Fintech Supervisory Sandbox (FSS)

Use of the FSS increased steadily during the year. As of end-2020, a total of 193 pilot trials of fintech initiatives had been allowed in the FSS since its launch in 2016, compared with 103 as of end-2019. As of end-2020, the HKMA had also received in total 533 requests to access the FSS Chatroom for supervisory feedback at the early stage of fintech projects since the introduction of Chatroom in 2017. Around 70% of the requests were made by technology firms.

Virtual banking

As at the end of 2020, all the eight virtual banks officially launched businesses to the public. A total of 420,000 accounts were opened with the virtual banks, which attracted customer deposits amounting to HK$15 billion in aggregate.

Banking Made Easy initiative

As part of the Banking Made Easy initiative, the HKMA continued its work to foster a larger and more diverse Regtech ecosystem in Hong Kong. To raise industry awareness of Regtech applications, a total of four issues of the Regtech Watch newsletter series were issued to share Regtech use cases with the industry. The HKMA also published a white paper entitled "Transforming Risk Management and Compliance: Harnessing the Power of Regtech" in November, which included a two-year roadmap to accelerate the adoption of Regtech in the banking sector.

Industry liaison and outreach

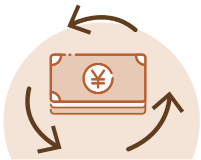
Since its establishment in March 2016, the FFO has been playing a crucial role in reaching out to, and liaising with, fintech market players to facilitate the exchange of ideas among stakeholders. During the year, the FFO organised 14 events, including six panel discussions and presentations during the Hong Kong FinTech Week 2020. The events and the FinTech Week attracted over 1.2 million participants and viewers. The FFO also spoke at 47 fintech-related events and held 911 meetings with other regulatory authorities, industry organisations, financial institutions, technology firms and startups, and handled 150 enquiries from market participants.

HKMA Chief Executive, Mr Eddie Yue, gives a keynote speech at the Hong Kong FinTech Week 2020.

HKMA Chief Executive, Mr Eddie Yue, moderates a panel discussion at the Hong Kong FinTech Week 2020.

International Financial Centre

Hong Kong as the dominant gateway to Mainland China and the global offshore renminbi business hub



Hong Kong is the global offshore renminbi hub, underpinned by its deep pool of offshore renminbi liquidity, efficient financial infrastructure and multitude of cross-border portfolio flow channels. During the year, offshore renminbi businesses recorded steady growth, including bank deposits, trade settlement and RTGS payments. Hong Kong also maintained its lead in processing global renminbi payments. The HKMA designated nine authorized institutions in October as Primary Liquidity Providers for the offshore renminbi market. In November, the PBoC and the HKMA renewed the currency swap agreement for a term of five years and expanded its size from RMB400 billion (HK$470 billion) to RMB500 billion (HK$590 billion), which facilitated the HKMA's provision of liquidity to the market when necessary.

- **RMB1.2 trillion** daily turnover of RMB RTGS system, reaching a historical high
- **RMB6.3 trillion** RMB trade settlement handled by banks in Hong Kong
- **RMB757.2 billion** RMB customer deposits and outstanding certificates of deposit
- **RMB58.6 billion** offshore RMB bond issuance
- **70%+** of global RMB SWIFT payment

Bond Connect serves as a major channel for international investors to trade in the Mainland bond market using market infrastructures and financial services in Hong Kong. Driven by the inclusion of renminbi bonds into multiple major fixed income indices, 2,352 investors had registered under Bond Connect by end-2020, up 47% from end-2019. Daily turnover under Bond Connect averaged RMB19.3 billion in 2020, increasing 82% from 2019 and accounting for over 52% of overall trading turnover by foreign investors.

During the year, Bond Connect was enhanced with the introduction of a special settlement cycle service to cater for different holiday schedules between the Mainland and other markets, and with the extension of trading hours. A new measure was proposed to enhance flexibility for investors to engage additional banks to conduct onshore currency conversion and foreign exchange hedging. These enhancements offered more convenience and flexibility for investors under Bond Connect, and drove further inclusion of onshore assets in major financial indices. In view of the success of Northbound Bond Connect, the HKMA began studying a framework for Southbound Bond Connect with the PBoC.

In May, the Mainland authorities promulgated a high-level policy document[7] setting out a blueprint for financial market development in the GBA. The document contained a series of cooperation initiatives to support financial development in the region, presenting new opportunities to Hong Kong's financial sector. Building on the announced initiatives, the HKMA is working closely with the Mainland counterparts to formulate details to facilitate residents' living and working in the GBA and support corporates and financial institutions to develop their businesses across the boundary. In June, the PBoC, the HKMA and the AMCM jointly announced the decision to implement the WMC. Since then, the HKMA has been in close dialogue with regulatory counterparts in the three jurisdictions and engaging industry stakeholders to formulate detailed implementation arrangements.

[7] The "Opinion on Providing Financial Support for the Development of the GBA" was jointly promulgated in May by the PBoC, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission and the State Administration of Foreign Exchange.

International Financial Centre

Hong Kong as an asset and wealth management centre

The HKMA seeks to reinforce Hong Kong's status as an asset and wealth management hub through platform building and outreach.

Hong Kong is Asia's largest private equity (PE) hub outside the Mainland, with around US$170 billion in capital under management and around 580 PE firms as of end-2020. The HKMA works with stakeholders to enhance Hong Kong's PE platform. A legal vehicle for privately offered investment funds, the Limited Partnership Fund (LPF) regime, came into effect on 31 August. By end of March 2021, 171 LPFs had been registered. The HKMA is also working with the Government to introduce a tax concession regime for carried interest, which, coupled with the fund-level tax exemption regime rolled out last year, shall provide a competitive tax environment to facilitate the development of PE funds.

With its unique advantage as the dominant gateway to Mainland China, and unparalleled access to investment opportunities, Hong Kong is also well positioned as a family office (FO) hub. The HKMA is constantly working to meet the needs of FOs, for example, by launching WMC in the GBA, and by undertaking initiatives with various Government agencies and the industry to provide a facilitating environment for FOs to set up and operate in Hong Kong.

Hong Kong as an international bond hub

Supported by various initiatives introduced by the Government and the HKMA, Hong Kong has grown into the international bond hub in Asia. According to International Capital Market Association, in 2020, Hong Kong was the largest centre for arranging Asian international bond issuance, capturing 34% (or US$196 billion) of the market. Hong Kong's lead was even more pronounced in terms of arranging first-time bond issuance, capturing 75% (or US$18 billion) of the Asian market. In terms of bond listing, a common albeit less relevant metric given that bonds tend to be traded off-exchange, Hong Kong came a close second, capturing 28% of Asian international bond issuance.

Hong Kong as a green and sustainable finance hub

One of the HKMA's priorities in recent years is to continue elevating Hong Kong's position as a regional green and sustainable finance hub by facilitating and providing the necessary infrastructure and catalyst for market development, while supporting international initiatives and alignment. In May, the HKMA collaborated with the Climate Bonds Initiative to release the second edition of the Hong Kong Green Bond Market Briefing Report, which showed that green bonds arranged and issued in Hong Kong totalled US$10 billion in 2019, resulting in a cumulative US$26 billion by end-2019. In November 2020, the International Finance Corporation (IFC) and the HKMA launched the Alliance for Green Commercial Banks to address climate change challenges. In December, the IFC and the HKMA's Centre for Green Finance co-hosted a two-day IFC Climate Business Webinar, which showcased best practices in sustainable business and climate finance. Around 1,500 participants worldwide joined the event.

In May, the HKMA co-initiated the establishment of the Green and Sustainable Finance Cross-Agency Steering Group (CASG) with the Securities and Futures Commission (SFC) to coordinate the financial sector's management of climate and environmental risks, accelerate the growth of green and sustainable finance in Hong Kong and support the Government's climate strategies. Under the HKMA-SFC co-chairmanship and following extensive industry engagement, the CASG launched a green and sustainable finance strategy for Hong Kong in December. Together with the launch of the strategy, the CASG announced five key action points to enhance transparency on the way forward for Hong Kong and address some of the most pressing issues that were hindering development of the sector, including to be the first in Asia to mandate climate-related disclosures aligned with the FSB's Task Force on Climate-related Financial Disclosures (TCFD) recommendations across relevant sectors no later than 2025.

International Financial Centre

The HKMA has been working with like-minded peers globally to promote best practices in green and sustainable finance by supporting and participating in international bodies such as the Network of Central Banks and Supervisors for Greening the Financial System, the TCFD and the United Nations-supported Principles for Responsible Investment. The HKMA also became a member of the International Platform on Sustainable Finance in 2020.

Hong Kong as a hub for corporate treasury centres (CTCs)

Hong Kong's role as gateway to Mainland China and wide-ranging strengths as an international financial centre provide corporates with unparalleled access to talent as well as financial and professional services. Since the introduction of the CTC tax regime in June 2016, the HKMA has been actively promoting and engaging with the industry to raise the awareness of Hong Kong's value proposition as a CTC hub. The effort has resulted in a growing number of multinational and Mainland corporates setting up CTCs in Hong Kong.

Hong Kong as a financing hub for infrastructure investments

The HKMA Infrastructure Financing Facilitation Office (IFFO) serves as an important financing platform to facilitate infrastructure investments by leveraging Hong Kong's status as an international financial centre. The IFFO has around 100 international partners. They include key industry shareholders such as the multilateral financial agencies and development banks, project developers and operators, public-sector entities and professional service firms.

Full list of IFFO partners:

The IFFO hosted "The Future of Green: Sustainable Infrastructure Financing" panel in the 5th Belt and Road Summit in December. The panel discussed the importance of environmental and resilience considerations in green financing and shared best practices and experience.

The panel on "The Future of Green: Sustainable Infrastructure Financing".

Outreach initiatives

The HKMA proactively engages with industry stakeholders to reach out to the broader financial community locally and overseas, so that decision makers can be better informed about the resilience of Hong Kong's financial system and the growth opportunities it presents.

Between June and December, the HKMA conducted some 50 webinars and speaking engagements, reaching local and international audiences that included over 13,000 senior executives and professionals from central banks, institutional investors, pension funds, insurance companies, corporates, ultra-high-net-worth individuals and FOs.

Market Outreach Event Participant Analysis

Events Hosted

54

~2 events/week since June

Audience Reached

13,000

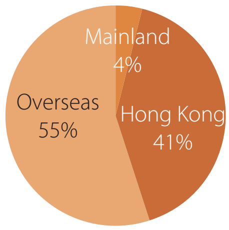
Channelled through:
- Institutional banks
- Industry associations
- Chambers of commerce
- Renowned media

Senior Executives

27%

Whose ripple effect will cascade down their organisations

Participation



Majority dialled in from outside of Hong Kong

Sectors Covered

11

Including but not limited to:
- Banks
- Asset managers / Hedge funds / Private equity funds
- Asset owners
- Professional service providers
- Corporates

Hong Kong's bond market development

Government Green Bond Programme

The first annual Green Bond Report was published in August following the issuance of the inaugural green bond under the Government Green Bond Programme in 2019. The report contains details on the allocation of the proceeds from the inaugural issuance and expected environmental benefits.

Riding on the success of the inaugural issuance and to consolidate and develop Hong Kong's position as a premier green finance hub, the Financial Secretary announced in the 2020–21 Budget a plan to issue green bonds totalling HK$66 billion in the five years from 2020–21. The HKMA has been tasked to assist in the execution of the programme. Following extensive preparatory work done throughout the year, the HKMA successfully helped the Government establish the world's first government Global Medium Term Note Programme dedicated to green bond issuances in early 2021 to facilitate and streamline the Government's regular issuance of green bonds, and issued US$2.5 billion green bonds in February 2021. The issuance comprised three tranches of US$1 billion 5-year, US$1 billion 10-year and US$500 million 30-year green bonds, and saw strong demand from global investors, with the 5-year and the 10-year tranches each attracting orders more than five times their respective issuance sizes, and the 30-year tranche attracting orders more than seven times its issuance size. The three tenors have helped to build a comprehensive benchmark curve for potential issuers in Hong Kong and the region. Apart from being the largest ever US dollar-denominated government green bond deal globally, the 30-year tranche was also the longest tenor issued by the Government and the longest-tenor US dollar-denominated green bond from an Asian government.

International Financial Centre

Government Bond Programme

During the year, the HKMA arranged eight tenders of institutional government bonds amounting to HK$18.2 billion. By the end of 2020, the total amount of outstanding institutional bonds was HK$80.6 billion.

The HKMA arranged in November the issuance of HK$15 billion three-year inflation-linked retail bonds (iBonds) to Hong Kong residents. The issuance attracted more than 456,000 applications with investment monies of over HK$38.3 billion. In December, the HKMA arranged the fifth issuance of a HK$15 billion three-year Silver Bond to Hong Kong senior residents aged 65 or above. It attracted more than 135,000 applications with investment monies of over HK$43.2 billion. The amount of retail bonds outstanding at the end of the year was HK$35.9 billion.

Hong Kong Academy of Finance (AoF)

The AoF was set up in June 2019 to serve as a centre of excellence for developing financial leadership and a repository of knowledge in monetary and financial research, including applied research. On leadership development, while some scheduled events were cancelled or postponed due to the COVID-19 pandemic, the AoF has been utilising virtual platforms to conduct the Leadership Development Programme (LDP). These included live webinars and panel discussions, as well as pre-recorded interviews with distinguished leaders from Hong Kong. Some of these events were also open to non-AoF members and available for public consumption on the AoF's website.

Dean of Medicine, The University of Hong Kong, Professor Gabriel Leung, shares his insights on leadership in the "Navigating through Uncertainties and Chaos" interview series.

Ralph and Claire Landau Professor of Economics, The Chinese University of Hong Kong, Professor Lawrence Lau, delivers a lecture on China-US economic relations.

Group Chief Executive, HSBC Holdings PLC, Mr Noel Quinn, shares his insights on global financial issues in a conversation session with the AoF.

International Financial Centre

On the research front, the Hong Kong Institute for Monetary and Financial Research (HKIMR), the research arm of the AoF, expanded its scope of work to applied research. The new series of applied research reports aims to provide in-depth studies related to the long-term development strategy of Hong Kong's financial services industry, with useful insights for market participants and policymakers. During the year, the HKIMR published three applied research reports that took a deeper look into fintech adoption by banks in Hong Kong, the use of AI in banking and its implications for banking compliance and supervision, and the development of green bond market in Hong Kong. The research findings were disseminated to market participants, regulators and academics, through channels including press briefings and releases, webinars and social media networks. The response from the financial community has been positive and encouraging.

Press briefing on the release of the first Applied Research report titled "Fintech Adoption and Innovation in the Hong Kong Banking Industry" in May.

International and regional cooperation

Participation in international financial community

The HKMA participates actively in central banking and regulatory forums to contribute to global financial stability.

The HKMA is a member of the FSB Plenary Meeting, the FSB Standing Committee on Assessment of Vulnerabilities and the FSB Standing Committee on Supervisory and Regulatory Cooperation (SRC). Under the FSB, the HKMA actively contributes to the work on non-bank financial intermediation (NBFI), financial technology and benchmark transition among other topics. It is a member of the FSB Steering Committee group on NBFI, which is charged with organising and providing strategic direction on NBFI-related initiatives within the FSB, as well as ensuring effective coordination with the standard-setting bodies in this area. The HKMA also co-chairs the NMEG, which publishes the annual Global Monitoring Report on NBFI. The annual report assesses global trends and risks from NBFI and is part of the FSB's policy work to enhance resilience of the NBFI sector. In other areas, the HKMA co-chairs the FIN, which monitors and assesses financial innovations from a financial stability perspective; and leads a drafting team under the FSB SRC to study supervisory issues associated with benchmark transition.

Under the advocacy of the G20, the FSB coordinated with the relevant stakeholders, including the Committee on Payments and Market Infrastructures (CPMI) under the BIS, to begin a comprehensive study on enhancing cross-border payments. The HKMA, as a member of the Task Force on Cross-border Payments set up by the CPMI, contributed to the development of building blocks and roadmap to address the challenges of the existing arrangement of cross-border payments.

Separately, the HKMA assumed the chairmanship of the PSG of the Basel Committee in January 2021. The PSG will lead the work on developing and implementing prudential standards. For details about the HKMA's participation in the Basel Committee, see the *Banking Stability* chapter.

International Financial Centre

Regional cooperation

The HKMA is committed to regional cooperative initiatives to promote financial stability in Asia and harness the region's collective voice in international financial affairs.

The HKMA hosted the 25th EMEAP Governors' Meeting via video conference in August and November, which provided an important forum for regional central bank governors to discuss the coordination of policy responses to the pandemic, longer-term issues arising from the pandemic, and thematic issues such as central banks' digitalisation journey. The HKMA also convened ad hoc conference calls among EMEAP Governors to exchange views on pressing issues and policy challenges facing the region. In August, the HKMA was reappointed chair of the EMEAP WGFM for a two-year term from 2020 to 2022. The WGFM makes policy recommendations on central bank services as well as developments in the foreign exchange, money and bond markets, and has been promoting regional bond market development through the Asian Bond Fund initiative. As part of the WGFM chairmanship, the HKMA steered studies on implications of financial benchmark reforms, and US dollar liquidity and funding dynamics in the EMEAP region, incorporating pertinent market observations after the COVID-19 outbreak. The HKMA was also appointed chair of the Study Group on Resolution, which supports knowledge sharing among regional authorities in relation to resolution in a cross-border context. In addition, the HKMA continued to prepare the Monetary and Financial Stability Committee's half-yearly Macro-Monitoring Report to assess the region's risks and vulnerabilities and the policy implications.

Supporting the Global Financial Safety Net (GFSN)

The pandemic has highlighted the importance of the GFSN in safeguarding financial stability. As a member of the global financial community, Hong Kong maintains its commitment to strengthening the GFSN through participation in the International Monetary Fund (IMF) New Arrangements to Borrow (NAB)[8] and ASEAN+3[9] Chiang Mai Initiative Multilateralisation (CMIM)[10]. During the year, the IMF Executive Board approved doubling the NAB credit arrangement, effective 1 January 2021. Meanwhile, further enhancements were made to optimise the operation of the CMIM.

Hong Kong's credit ratings

The HKMA maintains close dialogue with international credit rating agencies to facilitate a balanced and objective assessment of Hong Kong's credit strength and discuss their concerns about the rating outlook. Hong Kong's rating assigned by S&P was maintained at AA+ during the year. The ratings given by Moody's and Fitch were Aa3 and AA- respectively.

8 The NAB is a stand-by loan facility set up in 1998 to provide supplementary resources to the IMF for lending purposes. Under the NAB, Hong Kong is prepared to extend loans to the IMF when additional resources are needed to deal with exceptional situations that pose a threat to the stability of international financial systems.

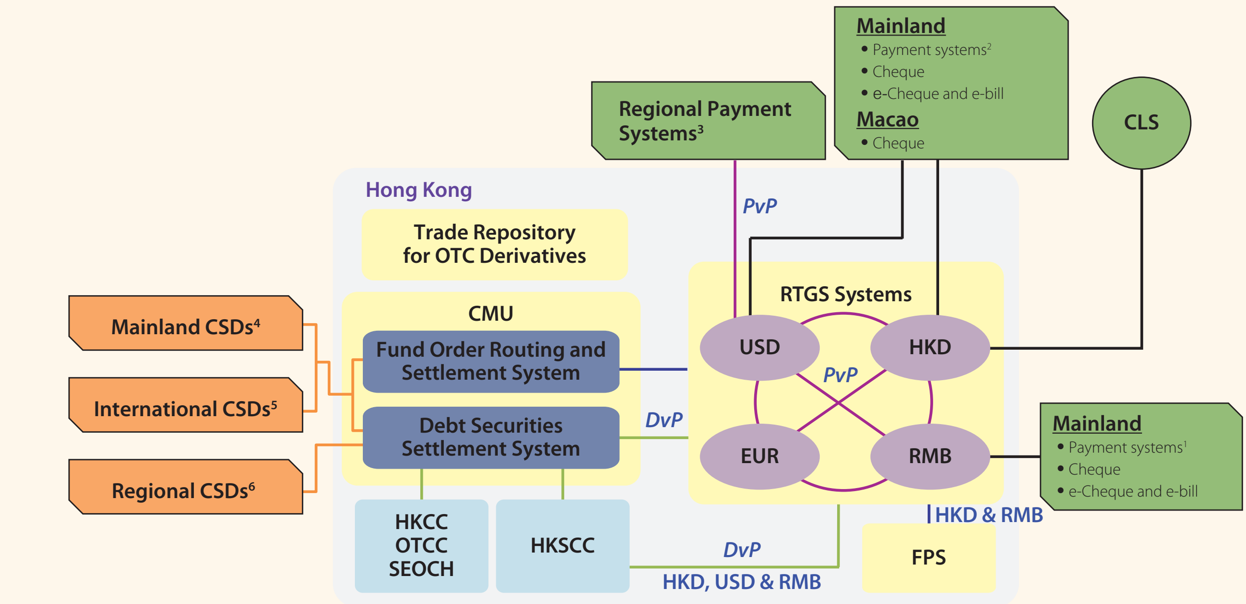
9 ASEAN+3 comprises the 10 ASEAN member countries (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam), together with Mainland China, Japan and South Korea.

10 Effective March 2010, the CMIM became a regional financing mechanism that provides short-term US dollar support to member economies facing liquidity shortages. It has 27 participating parties, including the ministries of finance and central banks of the 13 ASEAN+3 countries plus the HKMA. The total access fund now stands at US$240 billion.

Hong Kong's financial infrastructure

The multi-currency, multi-dimensional payment and settlement platform of the HKMA, with extensive domestic and overseas system linkages, continued to operate smoothly and efficiently, and has helped maintain Hong Kong as a regional hub for payment and settlement of funds and securities (Chart 3).

Chart 3 Hong Kong's multi-currency financial infrastructure



1: CNAPS, CIPS and SZFSS
2: CDFCPS, RTGS links with Shenzhen and Guangdong
3: PvP links with Malaysia, Thailand and Indonesia
4: Cross-boundary links with CCDC and SHCH (Bond Connect) and CSDC (Mutual Recognition of Funds)
5: Cross-border links with Clearstream and Euroclear
6: Cross-border links with Austraclear (Australia), KSD (South Korea) and TDCC (Taiwan)

CCDC – China Central Depository & Clearing Co., Ltd. (settlement system for fixed income securities in China)
CSDC – China Securities Depository and Clearing Corporation Limited
CDFCPS – China's Domestic Foreign Currency Payment System (RTGS system for foreign currency payment in China)
CIPS – Cross-Border Interbank Payment System in China
CLS – Continuous Linked Settlement (global multicurrency cash settlement system)
CMU – Central Moneymarkets Unit (settlement system for debt securities)
CNAPS – China National Advanced Payment System (RMB RTGS system in China)
FPS – Faster Payment System
HKCC – HKFE Clearing Corp Ltd (central counterparty providing clearing and settlement for futures)
HKSCC – HK Securities Clearing Co Ltd (central counterparty providing clearing and settlement for securities)
KSD – Korean Securities Depository (Korea's central securities depository)
OTCC – OTC Clearing Hong Kong Limited (central counterparty providing clearing and settlement for OTC derivatives)
SEOCH – SEHK Options Clearing House Ltd (central counterparty providing clearing and settlement for options)
SHCH – Shanghai Clearing House (settlement system for fixed income securities in China)
SZFSS – Shenzhen Financial Settlement System
TDCC – Taiwan Depository and Clearing Corporation (Taiwan's securities settlement system)

DvP – Delivery-versus-Payment
PvP – Payment-versus-Payment

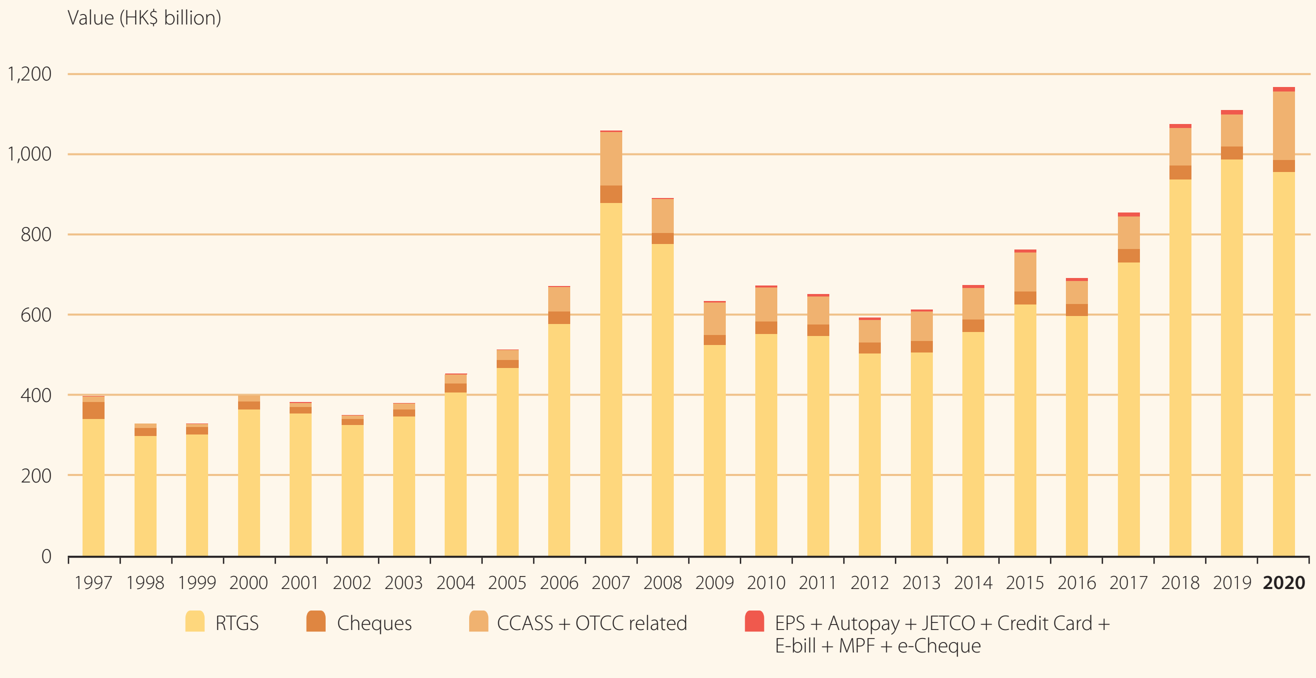
International Financial Centre

Hong Kong dollar RTGS system

The Hong Kong dollar Clearing House Automated Transfer System (CHATS), which operates on an RTGS basis, is responsible for clearing Hong Kong dollar interbank payments. It continued to run smoothly and efficiently in 2020, with a daily average transaction value of HK$956.1 billion (29,491 items), compared with HK$987.0 billion (30,643 items) in 2019.

In addition to settling large-value payments, CHATS handles daily bulk clearings and settlement of stock market transactions, Mandatory Provident Fund (MPF) schemes' switching transactions, credit card transactions, cheques, small-value bulk electronic payment items (EPS, auto-credit and auto-debit transactions) and automated teller machine transfers (Chart 4).

Chart 4 **Hong Kong dollar RTGS system average daily turnover**



International Financial Centre

Hong Kong Securities Clearing Company Limited (HKSCC), a central counterparty (CCP) established by Hong Kong Exchanges and Clearing Limited (HKEX) for the purpose of providing clearing services to securities transactions via the Central Clearing and Settlement System (CCASS), has opened a Hong Kong dollar CHATS account with the HKMA from late November, which enables it to settle CCP-related securities transactions through central bank money, thus strengthening its credit risk management as recommended by the IMF Financial Sector Assessment Program for this key CCP infrastructure in Hong Kong.

Furthermore, in collaboration with the HKMA, OTC Clearing Hong Kong Limited (OTCC), another CCP established by HKEX for the purpose of providing clearing and settlement services for OTC derivatives transactions, launched an enhancement on Hong Kong dollar CHATS as well as foreign currency CHATS in late November to help streamline the settlement process of OTCC's Clearing Members and their settlement banks for time-sensitive payment obligations to OTCC, mainly margin-related payments.

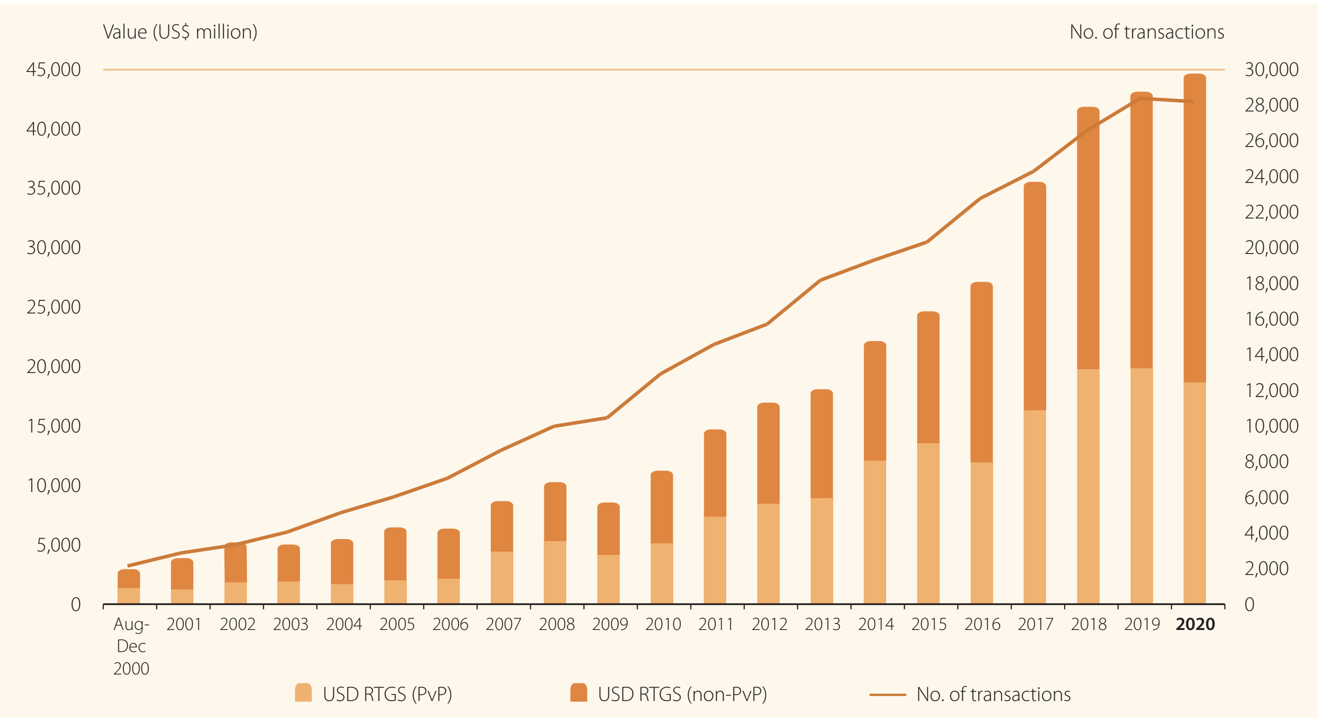
The FPS serves as an extension of Hong Kong dollar CHATS to enable the public to make instant retail fund transfers and payments across different banks and SVFs on a round-the-clock basis. It has been operating smoothly since its inception in September 2018, with a daily average real-time payment transaction value of HK$3.7 billion (354,230 items) in 2020.

Foreign currency RTGS systems in Hong Kong

The US dollar, euro and renminbi RTGS systems all operated smoothly during the period. The cut-off time of the renminbi RTGS system has been extended in phases since June 2012 from 6:30 p.m. to 5:00 a.m. the next day (Hong Kong time), providing a total of 20.5 hours for same-day value payments. The extension allows financial institutions around the world a much longer operating window to settle offshore and cross-boundary renminbi payments through Hong Kong's infrastructure. The average daily value of Mainland-Hong Kong cross-boundary renminbi payments amounted to around RMB211 billion in 2020, accounting for 18% of the total turnover.

The average daily turnover and other details of the foreign currency RTGS systems are set out in Charts 5–7 and Table 1.

Chart 5 US dollar RTGS system average daily turnover



International Financial Centre

Chart 6 **Euro RTGS system average daily turnover**

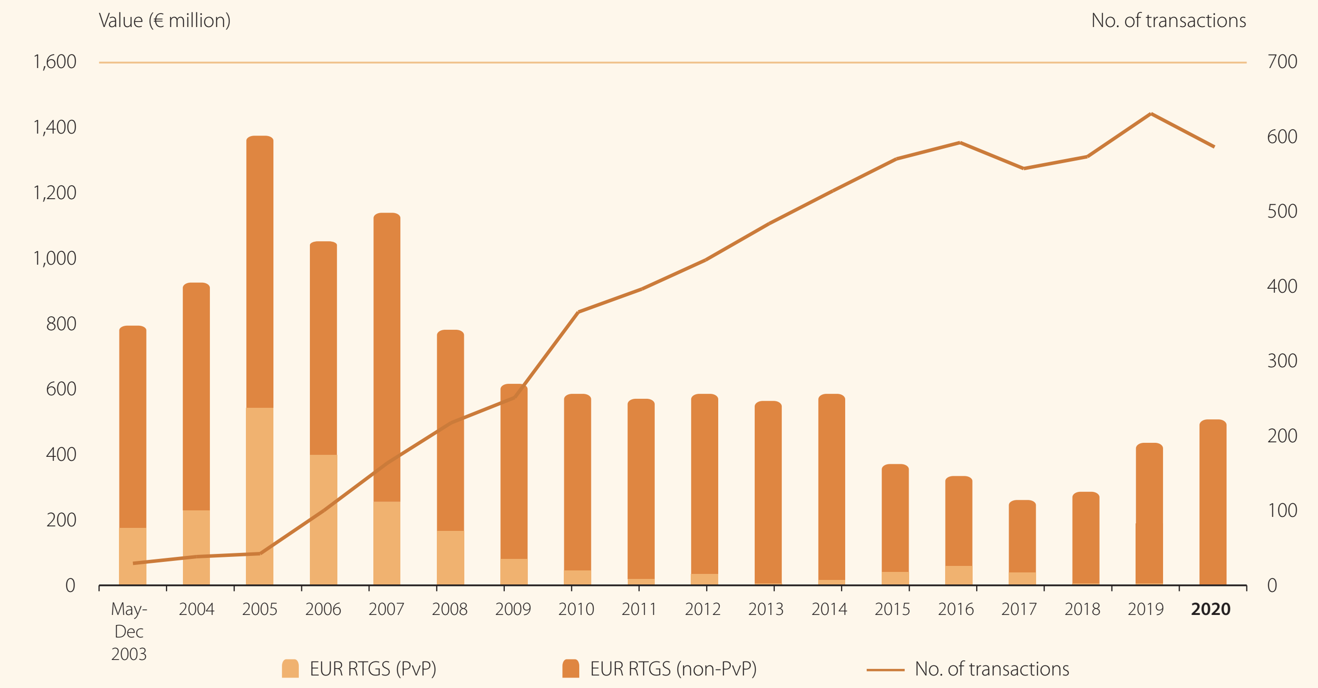


Chart 7 **Renminbi RTGS system average daily turnover**

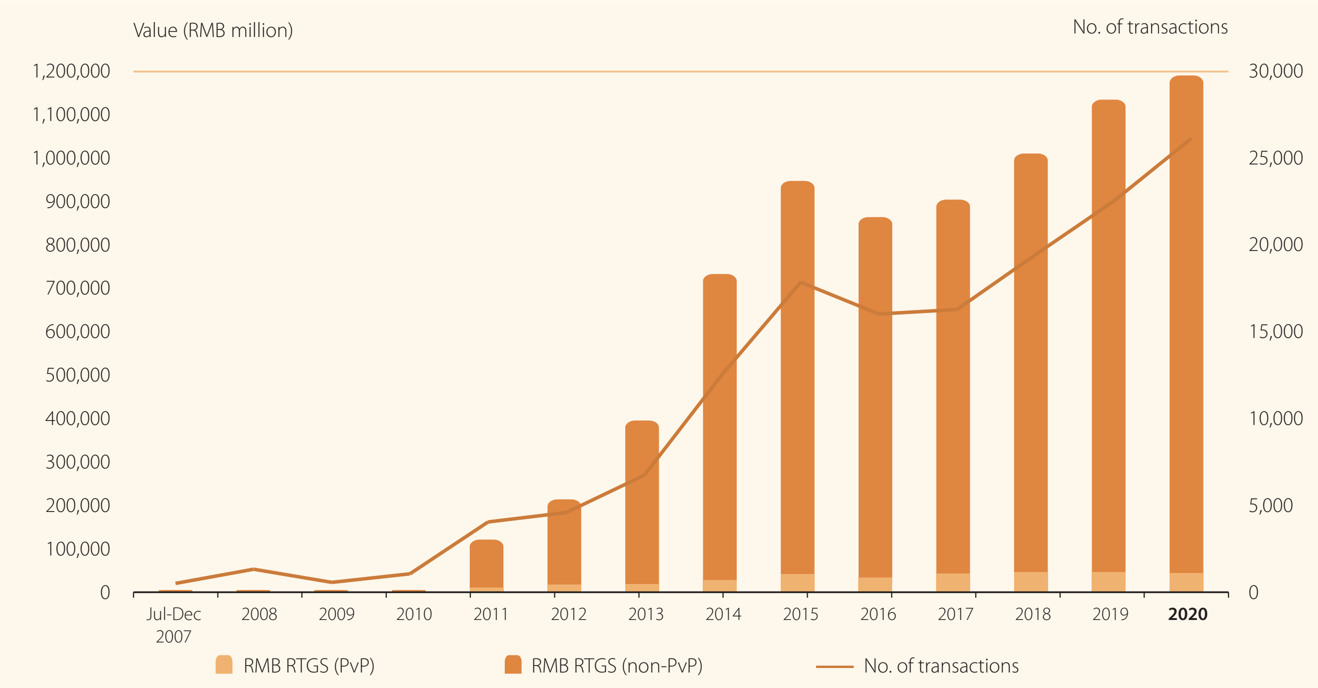


Table 1 Foreign currency RTGS systems

RTGS systems	Launch date	Settlement institution or Clearing Bank	Number of participants at the end of 2020	Average daily turnover in 2020	Average daily transactions in 2020
US dollar RTGS system	August 2000	The Hongkong and Shanghai Banking Corporation Limited	Direct: 112 Indirect: 105	US$44.8 billion	28,290
Euro RTGS system	April 2003	Standard Chartered Bank (Hong Kong) Limited	Direct: 38 Indirect: 18	€500 million	588
Renminbi RTGS system	June 2007	Bank of China (Hong Kong) Limited	Direct: 207	RMB1,191.5 billion	26,516

Like the Hong Kong dollar FPS, renminbi FPS as an extension of renminbi CHATS has been operating smoothly since inception in September 2018, with a daily average real-time payment transaction value of RMB52.5 million (564 items) in 2020.

Payment-versus-payment

PvP is a settlement mechanism for foreign exchange transactions, ensuring payments involving two currencies are settled simultaneously. In Hong Kong, six cross-currency PvP links have been established among the Hong Kong dollar, US dollar, euro and renminbi RTGS systems.

Hong Kong's US dollar RTGS system has also established three cross-border PvP links, with Malaysia's ringgit RTGS system in 2006, Indonesia's rupiah RTGS system in 2010 and Thailand's baht RTGS system in 2014. PvP greatly improves settlement efficiency and eliminates settlement risk arising from time lags in settlements and time-zone differences, known as Herstatt risk. In 2020, the transaction values of Hong Kong dollar, US dollar and renminbi-related PvP transactions amounted to approximately HK$13,262 billion, US$4,468 billion and RMB9,719 billion respectively while nil for euro-related one.

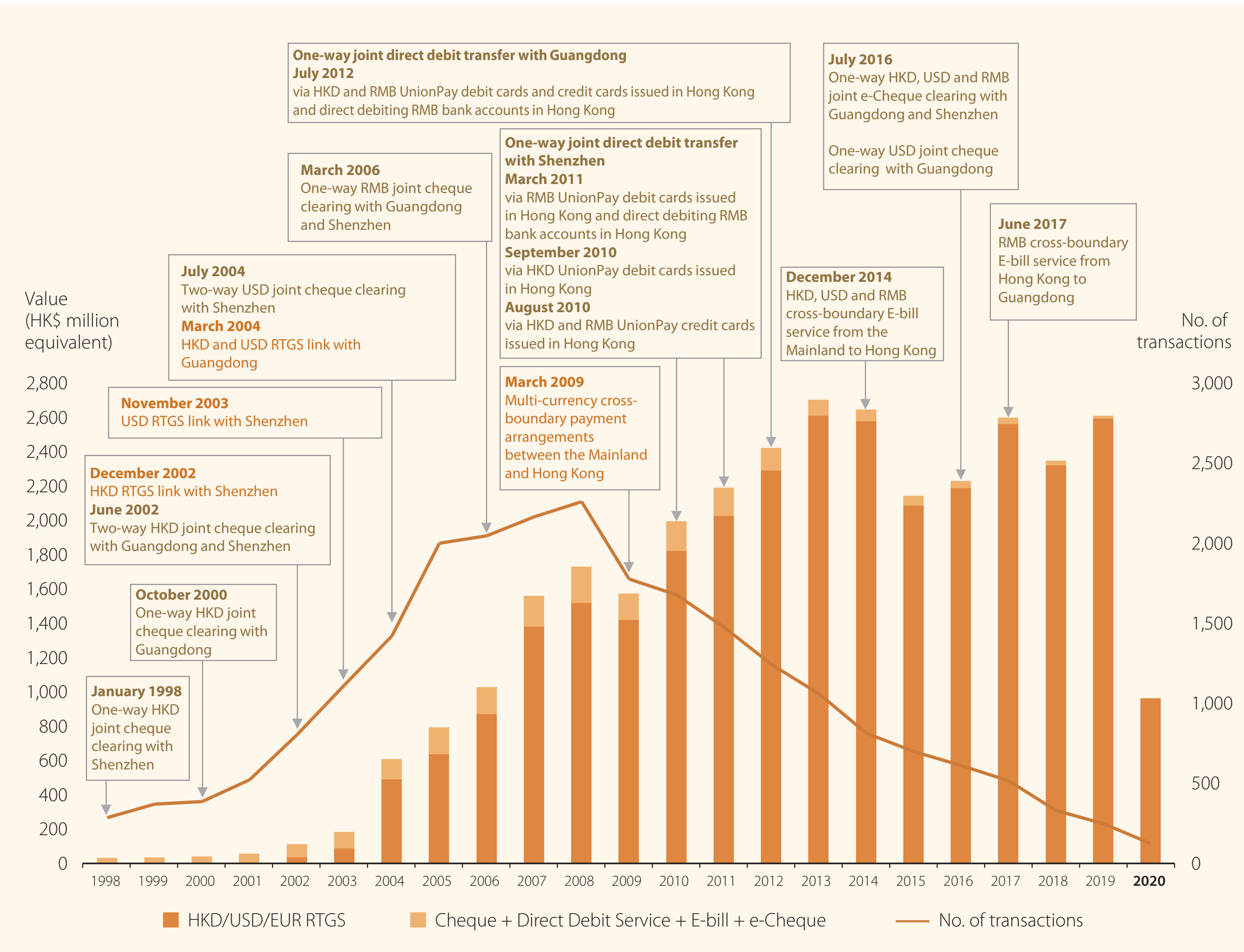
International Financial Centre

Payment links with Mainland China

The HKMA works closely with Mainland authorities to provide efficient cross-boundary payment links (Chart 8) to meet growing demand. In 2020, the average daily turnover of various system links, including RTGS cross-boundary links with Mainland's Domestic Foreign Currency Payment Systems, recorded a total value equivalent to around HK$1 billion. The Hong Kong dollar and US dollar RTGS system links with Shenzhen and Guangdong handled more than 10,000 transactions, with a total value equivalent to HK$116.4 billion.

The joint cheque-clearing facilities provided a clearing service for cheques drawn on banks in Hong Kong and presented in Shenzhen and Guangdong. In 2020, such facilities processed about 8,000 Hong Kong dollar, US dollar and renminbi cheques, with a total value equivalent to around HK$0.8 billion.

Chart 8 Average daily turnover in cross-boundary arrangements with the Mainland



International Financial Centre

Payment links with Macao

The one-way joint clearing facility between Hong Kong and Macao was launched in 2007 for Hong Kong dollar cheques, and in 2008 for US dollar cheques. In 2020, Hong Kong dollar cheques and US dollar cheques amounting to about HK$16 billion and about US$16 million respectively were cleared.

Debt securities settlement system

The CMU provides an efficient, one-stop clearing, settlement and depository service for Hong Kong dollar and foreign currency-denominated debt securities issued in Hong Kong. Through the CMU's linkages with international and regional CSDs, investors outside Hong Kong can hold and settle securities lodged with the CMU, while Hong Kong investors can hold and settle foreign securities held with CSDs outside Hong Kong. In 2020, the CMU processed an average daily value of HK$16.0 billion in 126 secondary market transactions (Chart 9). Among the debt securities lodged with the CMU at the end of the year, the outstanding amount of Exchange Fund Bills and Notes was HK$1,068.1 billion, the outstanding amount of debt securities issued by public and private sectors was equivalent to HK$891.7 billion and the outstanding amount of Government Bonds was HK$116.5 billion (Chart 10). To capitalise on the further opening up of the Mainland financial market, the HKMA reviewed the strategic position of the CMU and prepared to upgrade the CMU system by phases to support the business growth.

Trade repository for over-the-counter derivatives

The HKTR completed the enhancement of the reporting system to continuously support the second phase of mandatory reporting, covering reporting of all five asset classes of OTC derivative transactions, and reporting of valuation information of transactions. By the end of 2020, the HKTR system recorded 2,821,191outstanding transactions, compared with 2,463,724 in 2019. Separately, the HKMA participated in a number of international discussions and working groups on reporting standards for trade repositories to keep abreast of relevant developments and ensure the local trade repository continued to meet international standards and best practices.

Chart 9 CMU average daily turnover

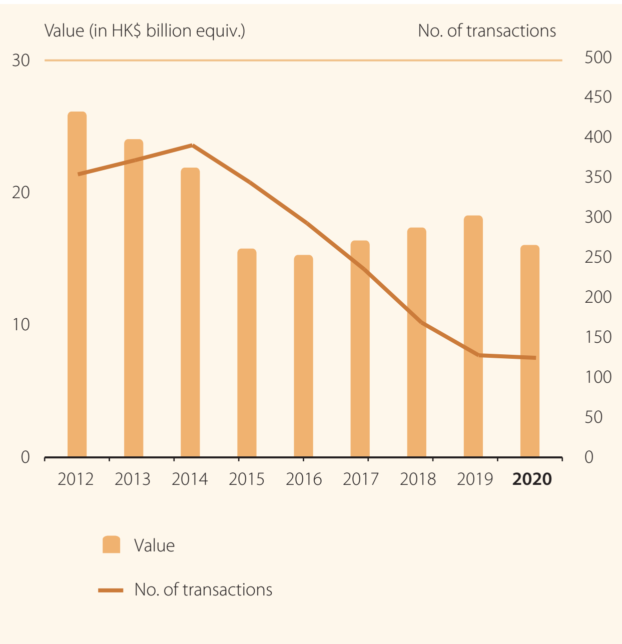
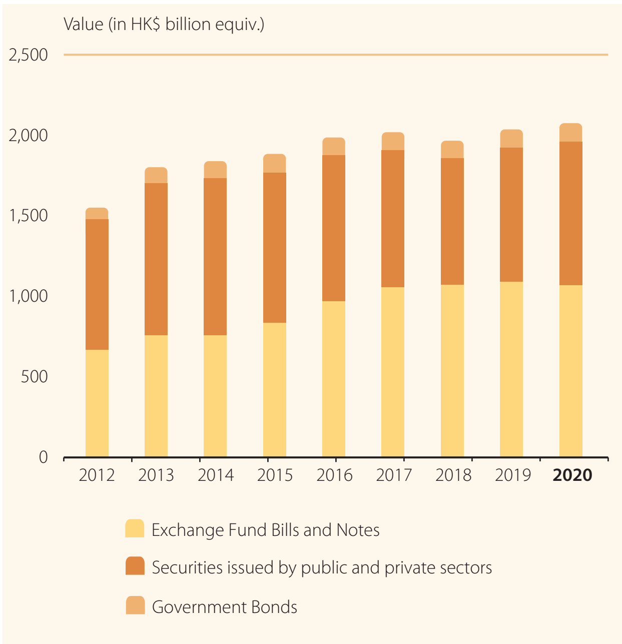


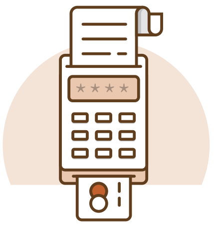
Chart 10 Outstanding amount of CMU issues



International Financial Centre

Hong Kong's retail payment industry

Stored value facilities (including e-wallets, prepaid cards)

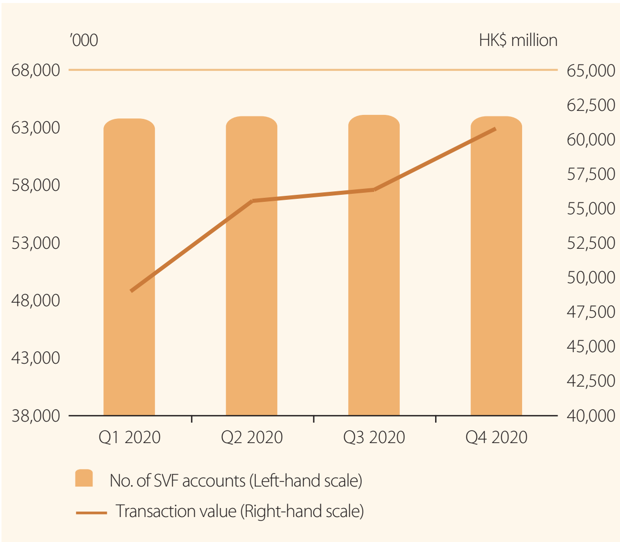


The HKMA promotes the safety and efficiency of the retail payment industry by implementing the regulatory regime for SVFs and RPSs in accordance with the PSSVFO. Under the PSSVFO, the HKMA is empowered to license SVF issuers, designate important RPSs and conduct relevant supervisory and enforcement functions.

Based on the supervisory experience accumulated since the implementation of the SVF licensing regime and the ongoing supervision of the 18 SVF licensees (Table 2), and having regard to relevant international and local developments, the HKMA continues to refine the risk-based supervisory approach. For instance, the HKMA has announced further enhancement to the account structure and opening requirements as appropriate, commensurate with the risk profile of different types and services offered under the SVF accounts. This includes amending the Guideline on Anti-Money Laundering and Counter-Financing of Terrorism (For Stored Value Facility Licensees) in September, which comprises, among other things, a tiered approach to customer due diligence featuring account limits and different functions for SVF products, subject to customer's choice. The amendment has taken into account the assessment made by the Financial Action Task Force in its mutual evaluation of Hong Kong in 2019, international developments in the regulatory regime for SVF, our risk assessment for the SVF sector, as well as industry feedback. To allow sufficient transitional period, these revisions will take effect on 2 July 2021. The HKMA also continues to provide the SVF industry with necessary supervisory guidance to, among other things, facilitate licensees in rolling out new functions to enhance user experience.

The number of SVF accounts stood at 63.9 million as at the end of 2020. In the fourth quarter, 1.5 billion transactions totalling HK$60.7 billion were recorded (Chart 11). During the year, the HKMA continued to promote public awareness of the SVF regulatory regime and issues associated with the use of SVFs through public education efforts.

Chart 11 Growth trend of the SVF industry in 2020



International Financial Centre

Table 2 Register of SVF licensees
(in alphabetical order) (as at 31 December 2020)

SVF Licensees
33 Financial Services Limited
Alipay Financial Services (HK) Limited
Autotoll Limited
ePaylinks Technology Co., Limited
Geoswift Cards Services Limited
HKT Payment Limited
K & R International Limited
Octopus Cards Limited
Optal Asia Limited
Paypal Hong Kong Limited
TNG (Asia) Limited
Transforex (Hong Kong) Investment Consulting Co., Limited
UniCard Solution Limited
WeChat Pay Hong Kong Limited
Yintran Group Holdings Limited
Licensed Banks *(currently issuing SVFs)*[1]
Bank of Communications (Hong Kong) Limited
Dah Sing Bank, Limited
Hongkong and Shanghai Banking Corporation Limited (The)

1. Pursuant to Section 8G of the PSSVFO, a licensed bank is regarded as being granted a licence.

Retail payment systems

The Monetary Authority has designated six RPSs which process payment transactions involving participants in Hong Kong under the PSSVFO, on the grounds that proper functioning of these systems is of significant public interest (Table 3). The HKMA adopts a risk-based approach in the oversight of the designated RPSs, which are required under the PSSVFO to operate in a safe and efficient manner.

Table 3 System operators of designated RPSs
(in alphabetical order) (as at 31 December 2020)

American Express
EPS Company (Hong Kong) Limited
Joint Electronic Teller Services Limited
Mastercard
UnionPay International
Visa

Hong Kong's treasury markets

The HKMA participates actively in international discussions and works closely with the Treasury Markets Association (TMA) to enhance the professionalism of Hong Kong's treasury market participants and prepare industry stakeholders for relevant international developments including the reforms of interest rate benchmarks. In particular, ongoing efforts were made during the year to engage with local market participants, including banks and corporates, to raise awareness and prepare for the possible discontinuation of the London Interbank Offered Rate (LIBOR) beyond 2021. The HKMA has also continued to work closely with the TMA in further enhancing the local interest rate benchmarks.

Over-the-counter derivatives market

The HKMA works closely with the SFC to develop detailed rules for implementing the regulatory regime for the OTC derivatives market in Hong Kong, which aims to reduce systemic risk and enhance transparency in the OTC derivatives market. Different aspects of the regulatory regime are introduced in phases. The first phase of mandatory clearing and the second phase of mandatory reporting took effect in September 2016 and July 2017, respectively. Following public consultation on further enhancements to the OTC derivatives regime in June, an updated list of financial service providers under the mandatory clearing regime came into effect in January 2021.

In addition, the HKMA participated in several international forums and the OTC Derivatives working groups established under the FSB, contributing to the relevant international initiatives and monitoring international regulatory developments closely.

International Financial Centre

PLANS FOR 2021 AND BEYOND

The HKMA will continue to work closely with other central banks, government agencies, and the private sector, both locally and internationally, to implement initiatives that enhance Hong Kong's position as an international financial centre.

Hong Kong as a fintech hub in Asia

To promote the development and use of technology in the banking and payment industries, the HKMA will continue to implement the Smart Banking initiatives. At the same time, the HKMA will continue to facilitate the digitalisation of trade finance, explore using data to support SME financing, and enhance the fintech talent pool. To explore the application of new technologies in financial services and facilitate financial innovation, the HKMA will continue to carry out research on new technologies such as AI and CBDC and maintain close collaboration with its strategic partners and key stakeholders both locally and abroad.

Hong Kong as the dominant gateway to Mainland China and the global offshore renminbi business hub

We expect that international investors' allocation to renminbi assets will continue to gather pace and a large part of the inflows will continue to take place through the various Mainland-Hong Kong Connect schemes. In order to capitalise on this trend, the HKMA will work closely with Mainland authorities to enhance and expand the existing channels. Top priorities include early implementation of the two-way WMC and developing a framework to enable the launch of Southbound Bond Connect. The HKMA will also continue to engage with Mainland authorities to develop detailed measures to facilitate cross-boundary access of financial and banking services in the GBA. With renminbi internationalisation expected to pick up momentum, we will seize the opportunity to explore more policy measures on a pilot basis to facilitate the cross-boundary use of renminbi, further strengthening Hong Kong's position as the global offshore renminbi business hub.

Hong Kong as a hub for corporate treasury centres, asset management and green and sustainable finance

The HKMA will explore ways to enhance the competitiveness of Hong Kong's financial sector, particularly in developing Hong Kong as an international asset management hub and regional destination for CTCs and fund investment activities. Following the enactment of the LPF Ordinance, the HKMA will continue to reach out to the industry to promote the setting up of PE funds in Hong Kong, and refine the LPF regime to meet market requirements. To promote Hong Kong's green and sustainable finance market, the HKMA will continue to assist the Government in future green bond issuances, and actively collaborate with other agencies under the CASG to coordinate on cross-sectoral issues, as well as to take forward the five nearer-term action points and other relevant initiatives. The HKMA and IFC will jointly launch targeted initiatives in the region to undertake green finance research, provide unique market insight, tailor capacity building/training support, and provide practical guidance for banks in order to help the banks develop their own roadmap to mainstream green finance as their core business.

International and regional cooperation

Looking ahead, trade tensions are likely to persist against a backdrop of still weak global growth. While financial conditions have eased further, lending support to the global growth outlook, the low interest rate environment is likely to fuel further incentives for global search for yield, contributing to stretched valuations and a build-up of debt vulnerabilities. Reflecting these developments, underlying medium-term risks to global financial stability have not dissipated, and risks of adverse changes in external financial conditions and a re-emergence of volatile capital flows remain. Against this backdrop, there is a need to strengthen cross-border cooperation in market surveillance and enhance the resilience of financial systems. To this end, the HKMA will maintain its active participation in international and regional forums to promote financial stability.

International Financial Centre

Hong Kong Academy of Finance

In 2021, the AoF will continue to develop its LDP with a view to fostering leadership and broadening the global and inter-disciplinary perspectives of AoF Members and industry participants. In particular, top financial leaders and industry experts will be invited to speak under the Distinguished Speakers Series, the Thematic Programme and the Interview Series of the LDP. On the research front, the HKIMR plans to release a stream of new applied research reports to explore relevant topics for the Hong Kong financial industry, including an investigation of COVID-19's impact on the financial services industry in Hong Kong and the implications of demographic changes in Hong Kong for the development of long-term asset markets. The HKIMR will continue to solicit and encourage views from the financial community and major stakeholders to identify relevant topics for future applied research.

Hong Kong's financial infrastructure

The HKMA will continue to maintain smooth and reliable operation of the various financial infrastructures to strengthen overall resilience and meet international standards. Riding on the success of the FPS in the past two years, the HKMA will continue to explore more potential applications of the technology, in collaboration with the industry, with a view to further promoting e-payment in Hong Kong. In particular, further work will be done to promote the use of the FPS in merchant and business payments. The HKMA is also working with the industry to establish a consumer presented QR code standard that will enhance customer experience in making payments to merchants.

While continuing to promote the use of the FPS locally, the HKMA will consider leveraging the FPS' advantages of 24/7 operations and instantaneous payment to enhance cross-border bank remittance services so that corporate and personal account holders in Hong Kong can receive overseas remittances or remit money to destinations abroad more speedily. The HKMA will also explore and conduct feasibility study on linkages with similar faster payment systems in other jurisdictions to allow visitors from Hong Kong to make payments directly through the FPS at overseas tourist hot spots.

Subject to market needs, the HKMA will consider further enhancements of the functionalities of the FPS to facilitate its use in making payments. The HKMA will continue working with various government departments, industry organisations and public/private institutions to assist them in adopting the FPS in making and/or receiving payments.

Hong Kong's retail payment industry

The HKMA will continue to implement the supervisory regime for SVF licensees and oversight regime for designated RPSs in accordance with the PSSVFO, with a view to promoting the safety and efficiency of the retail payment industry. The HKMA will also continue to monitor international developments regarding the regulation, supervision and oversight of retail payment arrangements entailing the use of new technologies, with a view to refining the relevant local frameworks as appropriate.

Hong Kong's treasury markets

The HKMA will continue to support the enhancement of professionalism and competitiveness of Hong Kong's treasury markets, particularly in relation to financial benchmarks and the promotion of the Foreign Exchange Global Code. In addition, the HKMA will work closely with TMA and engage market participants to prepare for the possible discontinuation of LIBOR beyond 2021.

Over-the-counter derivatives market

The HKMA will continue to work closely with the SFC to further develop and refine the rules to implement the regulatory regime for the OTC derivatives market.

Reserves Management

2020 was a year full of unexpected twists and turns, as the COVID-19 pandemic brought unprecedented challenges to the global economy. Asset markets experienced major corrections and disruptions in the first quarter of the year, after which sharp rebounds were recorded amid ultra-loose monetary policies put forth by major central banks and generous relief measures launched by various governments. Sovereign bond yields fell markedly while bond prices went up as major central banks substantially cut their benchmark interest rates and relaunched quantitative easing programmes. Against this backdrop, the Exchange Fund recorded an investment income of HK$235.8 billion in 2020, representing an investment return of 5.3%.

Reserves Management

THE EXCHANGE FUND

The Exchange Fund's primary objective, as laid down in the Exchange Fund Ordinance, is to affect, either directly or indirectly, the exchange value of the currency of Hong Kong. The Fund may also be used to maintain the stability and integrity of Hong Kong's monetary and financial systems to help maintain Hong Kong as an international financial centre. The HKMA, under the delegated authority of the Financial Secretary (FS) and within the terms of the delegation, is responsible to the FS for the use and investment management of the Exchange Fund.

MANAGEMENT OF THE EXCHANGE FUND

Investment objectives and portfolio structure

The Exchange Fund Advisory Committee (EFAC) has set the following investment objectives for the Exchange Fund:

(a) to preserve capital;

(b) to ensure that the entire Monetary Base, at all times, is fully backed by highly liquid US dollar-denominated assets;

(c) to ensure that sufficient liquidity is available for the purposes of maintaining monetary and financial stability; and

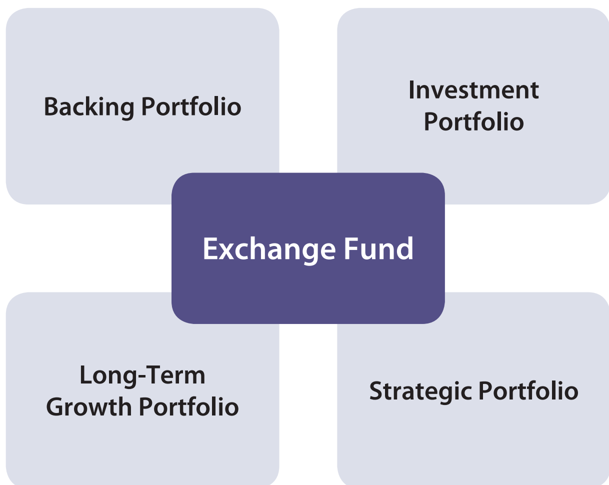
(d) subject to (a)–(c), to achieve an investment return that will help preserve the long-term purchasing power of the Fund.

These objectives take full account of the statutory purposes of the Exchange Fund, and are incorporated into the portfolio structure and the target asset mix of the Fund.

Broadly speaking, the Exchange Fund has two major portfolios: the Backing Portfolio (BP) and the Investment Portfolio (IP). The BP holds highly liquid US dollar-denominated assets to provide full backing to the Monetary Base as required under the Currency Board arrangements. The IP invests primarily in the bond and equity markets of the member countries of the Organisation for Economic Co-operation and Development to preserve the value and long-term purchasing power of its assets.

To better manage risks and enhance returns in the medium and long term, the HKMA diversifies part of the Exchange Fund's investments in a prudent and incremental manner into a wider variety of asset classes. This includes emerging market and Mainland bonds and equities, private equity (including infrastructure), and real estate. Emerging market and Mainland bonds and equities are held under the IP, while private equity and real estate investments are held under the Long-Term Growth Portfolio (LTGP). The cap for the market value of investments under the LTGP is set at the aggregate of one-third of the accumulated surplus of the Exchange Fund, and the portion of placements by the Future Fund and subsidiaries of the Exchange Fund linked to the LTGP.

The Strategic Portfolio, established in 2007, holds shares in Hong Kong Exchanges and Clearing Limited that have been acquired by the Government for the account of the Exchange Fund for strategic purposes. This Portfolio is not included in the assessment of the Fund's investment performance because of its unique nature.



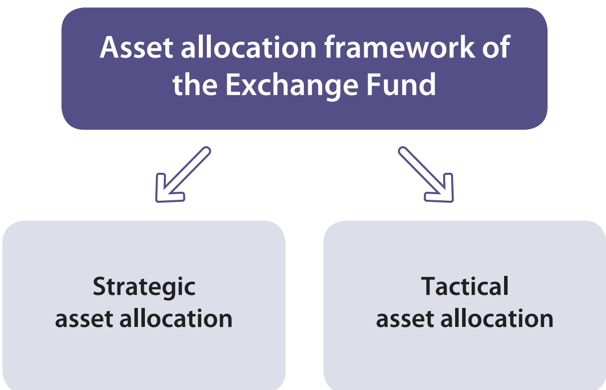
Reserves Management

Placements with the Exchange Fund

The Exchange Fund, from time to time, accepts placements by Fiscal Reserves, Government funds and statutory bodies. The interest rate is generally linked to the performance of the IP[1], with the major exception of the Future Fund, which links its interest rate to both the IP and the LTGP with reference to the portfolio mix. The portfolio mix of the Future Fund between the IP and the LTGP is about 40:60.

The investment process

The investment process of the Exchange Fund is underpinned by decisions on two types of asset allocation: the strategic asset allocation and the tactical asset allocation. The strategic asset allocation, reflected in the investment benchmark, represents long-term asset allocation given the investment objectives of the Exchange Fund. Guided by the strategic allocation, assets are tactically allocated in an attempt to achieve an excess return over the benchmark. This means the actual allocation is often different from the benchmark (or strategic) allocation. The differences between the actual and benchmark allocations are known as "tactical deviations". While the benchmark and tracking error[2] limit are determined by the FS in consultation with the EFAC, tactical decisions and allowable ranges for tactical deviations are made and set by the HKMA under delegated authority. Within the ranges allowed for tactical deviations, portfolio managers may assume positions to take advantage of short-term market movements.



1 The rate is the average annual investment return of the IP for the past six years, or the average annual yield of three-year Government Bond for the previous year subject to a minimum of 0%, whichever is higher.

2 "Tracking error" measures how closely a portfolio follows its benchmark.

Investment management

Direct investment

The HKMA's Exchange Fund Investment Office (EFIO) houses its investment and related risk management functions. EFIO staff members directly manage about 72% of the investments of the Exchange Fund, comprising the entire BP and part of the IP. This part of the IP includes a set of portfolios invested in global fixed-income markets and various derivative overlay portfolios implementing macro risk management strategies for the Fund.

Use of external managers

In addition to managing assets internally, the HKMA employs external fund managers to manage about 28% of the Exchange Fund's assets, including all of its listed equity portfolios and other specialised asset classes. The purpose of engaging external managers is to tap the best investment expertise available in the market to realise sustainable returns, draw on diverse and complementary investment styles, and gain their market insights and technical expertise in investment.

Expenditure relating to the use of external managers includes fund management and custodian fees, transaction costs, and withholding and other taxes. The expenditure is determined primarily by market factors and may fluctuate from year to year.

Risk management and compliance

The growing complexity of the investment environment underlines the importance of risk management. The HKMA sets stringent controls and investment guidelines for both internally and externally managed portfolios, and ensures a proper risk monitoring and compliance system is in place. Three lines of defence exist to implement effective risk management and governance of investment-related activities. Key risk categories (including credit, market, liquidity and operational risks) are regularly monitored and the risk management process has been strengthened to support investment diversification.

Reserves Management

Responsible Investment (RI)

The HKMA supports RI by integrating environmental, social and governance (ESG) factors into the investment process for both public and private market investments of the Exchange Fund.

A set of principles is in place to evaluate ESG risks and opportunities in the Exchange Fund's investments. For portfolios managed by external managers, RI is carried out through the appointed managers. To select, appoint and monitor external managers, the HKMA assesses different aspects of their ESG implementation, including their organisational setup with respect to ESG governance, ESG standards and policies, integration of ESG factors into investment processes, and stewardship activities including proxy voting and their portfolio company engagement programme, i.e. their discussion with management of portfolio companies on ESG issues. The HKMA emphasises RI by promoting better ESG practices in the external managers' stewardship activities. External managers of the HKMA's Hong Kong and Mainland active equities are required to commit to the Principles of Responsible Ownership issued by the Securities and Futures Commission on a "comply-or-explain" basis. The HKMA's external managers of developed market equities portfolios need to adhere to generally accepted international ESG standards. In addition, the HKMA has initiated a post-appointment monitoring programme to review the proxy voting and portfolio company engagement activities of its external managers.

The HKMA's internally managed fixed-income portfolio incorporates ESG factors into the credit risk analysis of bond investment. Analysis is strengthened by expanding the sources of ESG data and assigning greater weight to ESG factors in the quantitative assessment.

For ESG investments in the public market, the HKMA has been investing in green, social and sustainability bonds ("ESG bonds") since 2015. The HKMA is one of the early investors in this market, and participates in the Managed Co-Lending Portfolio Program run by the International Finance Corporation with a focus on sustainable investments across emerging markets. In 2020, the HKMA increased its investment in ESG bonds amid greater supply in the market. Going forward, the HKMA will continue to grow its ESG bond portfolio through direct purchase or investing in ESG bond funds. It will also motivate external managers to invest in ESG-themed equity mandates by adopting an ESG equities index as a benchmark for passive portfolios. In the coming years, the HKMA will continue to explore ESG-themed investment opportunities, such as active ESG mandates and low-carbon investment themes.

In private market investments, the HKMA examines the ESG policies and practices of general partners (GPs) as part of due diligence. The LTGP under the HKMA invests proactively in projects with sustainable features, including renewable energy infrastructure, as well as warehouses and other buildings with green and sustainable features in its real estate portfolio. Going forward, the HKMA will continue to source projects with sustainable features and include green accreditation as a key factor in real estate investment. The HKMA holds an annual ESG Workshop with GPs to share views and experiences on good ESG practices. At the ESG Workshop in November, GPs exchanged views about the impact of COVID-19 on their portfolio companies and the development of ESG investment. To improve the ESG transparency of private market investments, the HKMA has asked GPs to provide ESG information such as the climate change risks of its investments for monitoring purposes.

The HKMA will continue to monitor the development of ESG standards closely and assess how to further integrate these standards into its investment process. The process is facilitated by collaboration with like-minded investors and international organisations. In particular, the HKMA is a signatory of the UN-supported Principles for Responsible Investment, which is the world's leading proponent of RI, and expects to participate in formulating ESG best practices and to encourage other investors to adopt RI. The HKMA is also a member of the not-for-profit organisation, FCLTGlobal, which works to foster a longer-term focus in business and investment decision-making through workshops and research studies. The HKMA supports the Task Force on Climate-related Financial Disclosures and is a member of the Network of Central Banks and Supervisors for Greening the Financial System. In addition, the HKMA organises talks and actively participates in events held by the investment community to share and promote views on ESG investment.

For more details about the HKMA's RI policy framework, see the *Corporate Social Responsibility* chapter.

Reserves Management

PERFORMANCE OF THE EXCHANGE FUND

The financial markets in 2020

Global financial markets ended the year on a high note on the back of accommodative monetary and fiscal policies made in response to significant challenges posed by COVID-19 to the world economy. Equity markets around the world rebounded sharply, with double-digit growth in key markets, after experiencing major corrections and disruptions in the first quarter of the year. The Standard & Poor's 500 Index in the US rose by 16%, the best performing G7 equity index in 2020.

In the bond markets, yields of major developed countries remained suppressed after a significant decline in the first quarter. Ten-year US Treasury yields decreased by about 100 basis points from 1.9% at the beginning of the year to 0.9% at the end of the year. As major sovereign bond prices shot up, the mark-to-market gains in the bond markets were phenomenal in 2020.

In the currency markets, the US dollar weakened against other major currencies, particularly during the second half of 2020, as lower US interest rates narrowed interest rate gaps. In particular, the euro and the renminbi gained around 9.0% and 6.5% against the US dollar respectively.

The performance of major currency, bond and equity markets in 2020 is shown in Table 1.

Table 1 2020 market returns

Currencies	
Appreciation (+)/depreciation (-) against US dollar	
Euro	+9.0%
Pound	+3.2%
Renminbi	+6.5%
Japanese yen	+5.3%
Bond markets	
Relevant US Government Bond (1–30 years) Index	+8.4%
Equity markets[1]	
Standard & Poor's 500 Index	+16.3%
DAX Index	+3.5%
FTSE 100 Index	–14.3%
TOPIX Index	+4.8%
MSCI Emerging Markets Index	+15.8%
Hang Seng Index	–3.4%

1. Market performance on equities is based on index price change during the year.

Reserves Management

The Exchange Fund's performance

The Exchange Fund recorded an investment income of HK$235.8 billion in 2020. This comprised gains on bonds of HK$92.7 billion, gains on Hong Kong equities of HK$4.0 billion, gains on other equities of HK$69.9 billion, a positive currency translation effect of HK$9.6 billion on non-Hong Kong dollar assets and gains of HK$59.6 billion on other investments held by the investment holding subsidiaries of the Fund. Separately, the Strategic Portfolio recorded a valuation gain of HK$14.0 billion.

Total assets of the Exchange Fund reached HK$4,499.2 billion at year-end. The market value of investments under the LTGP totalled HK$406.4 billion, with private equity amounting to HK$299.7 billion and real estate at HK$106.7 billion. Outstanding investment commitments of the LTGP amounted to HK$224.1 billion.

The investment return of the Exchange Fund in 2020, excluding the Strategic Portfolio, was 5.3%. Specifically, the IP achieved a rate of return of 7.8%, while the BP gained 1.6%. The LTGP has recorded an annualised internal rate of return of 13.7% since its inception in 2009.

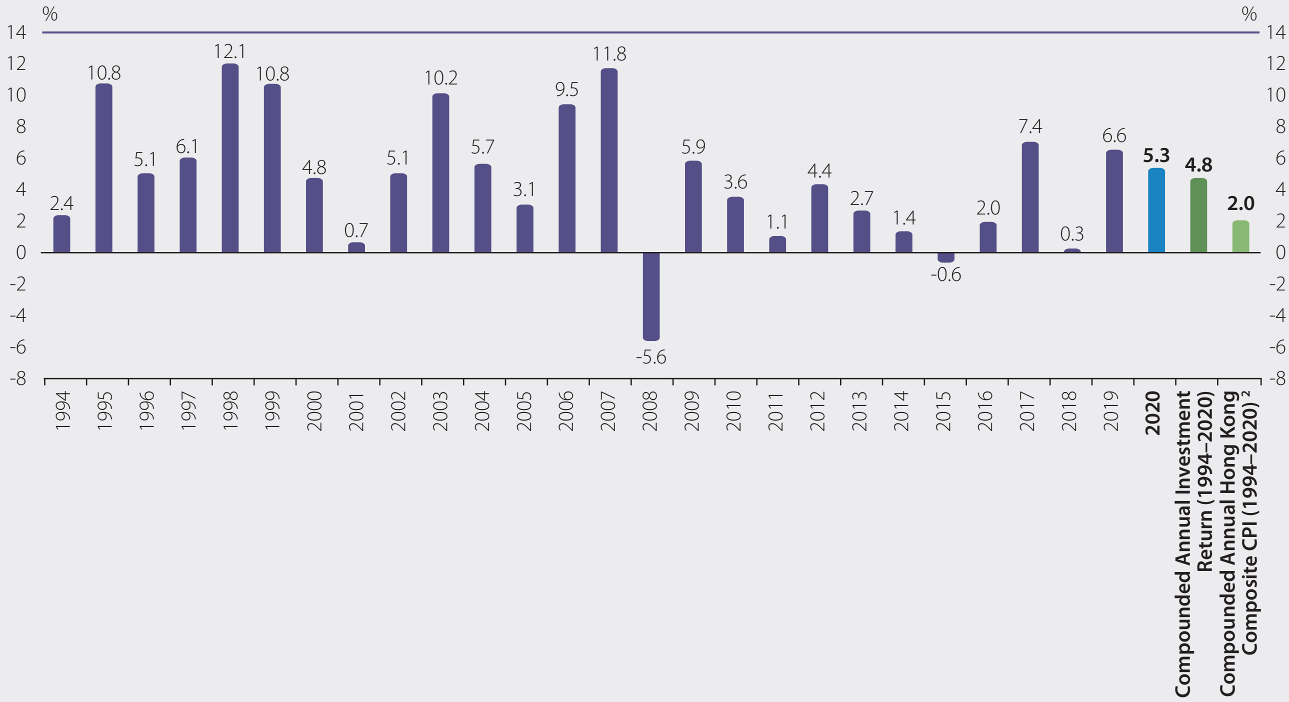
The annual returns of the Fund from 1994 to 2020 are set out in Chart 1. Table 2 shows the 2020 investment return and the average investment returns of the Fund over several different time horizons. The average return was 4.0% over the past three years, 4.3% over the past five years, 3.0% over the past 10 years and 4.8% since 1994[3]. Table 3 shows the currency mix of the Fund's assets on 31 December 2020.

HKMA Deputy Chief Executive, Mr Howard Lee, speaks at the press conference on the Exchange Fund results for 2020.

3 Averages over different time horizons are calculated on an annually compounded basis.

Reserves Management

Chart 1 Investment return of the Exchange Fund (1994–2020)[1]



1. Investment return calculations exclude holdings in the Strategic Portfolio.
2. The Composite Consumer Price Index is calculated based on the 2014/2015-based series.

Reserves Management

Table 2 **Investment return of the Exchange Fund in Hong Kong dollar terms**[1]

	Investment return[2&3]
2020	**5.3%**
3-year average (2018–2020)	4.0%
5-year average (2016–2020)	4.3%
10-year average (2011–2020)	3.0%
Average since 1994	4.8%

1. The investment returns for 2001 to 2003 are in US dollar terms.
2. Investment return calculations exclude holdings in the Strategic Portfolio.
3. Averages over different time horizons are calculated on an annually compounded basis.

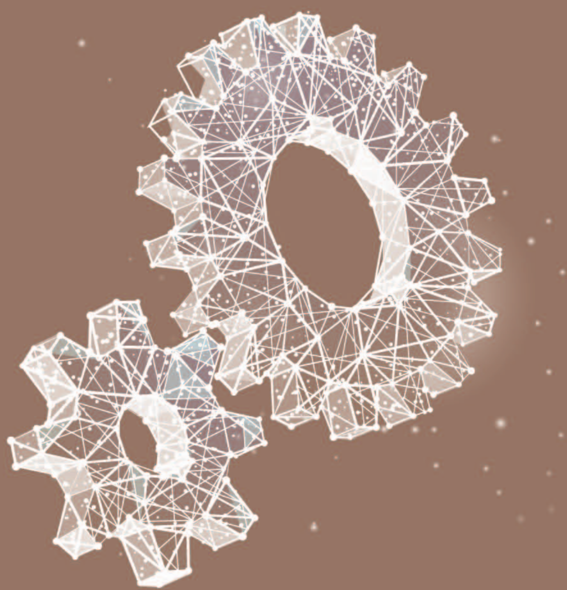
Table 3 **Currency mix of the Exchange Fund's assets on 31 December 2020 (including forward transactions)**

	HK$ billion	%
US dollar	**3,829.1**	85.1
Hong Kong dollar	**221.0**	4.9
Others[1]	**449.1**	10.0
Total	**4,499.2**	**100.0**

1. Other currencies consisted mainly of the euro, renminbi, pound sterling and Japanese yen.

Corporate Functions

The HKMA maintains effective communication with the community and the market through traditional and social media, its website, the Information Centre and other channels to facilitate public understanding about its policies and operations. Within the institution, the HKMA makes conscientious efforts to improve corporate governance by supporting the professional development of staff, instituting rigorous financial discipline, enhancing information technology security, and promoting a culture of innovation to cope with challenges arising from the implementation of new initiatives and the increasing complexity of work.



ENGAGING THE COMMUNITY

Media relations and social media

The HKMA works closely with the media to enhance transparency and promote public understanding about its policies and operations. During the year, the HKMA held 93 physical and virtual events, comprising eight press conferences, five stand-up interviews and 80 other public functions. A further 14 media interviews were arranged. A total of 552 bilingual press releases were issued and a large number of media enquiries were handled on a daily basis.

To raise awareness of the HKMA's key functions, media briefings and educational workshops were organised for local and overseas media as well as key opinion leaders in the community. Topics covered included the Linked Exchange Rate System (LERS), fintech, green finance, and macroprudential measures.

HKMA Chief Executive, Mr Eddie Yue, moderates a virtual panel discussion at the Hong Kong FinTech Week 2020.

HKMA Deputy Chief Executive, Mr Arthur Yuen (middle), hosts a media briefing on the HKMA's two-year roadmap to promote Regtech.

HKMA Chief Fintech Officer, Mr Nelson Chow (left), conducts an interview with Bloomberg.

The HKMA utilises social media to enhance understanding of its work and strengthen communication with the public. Five social media channels are in operation on Facebook, Instagram, LinkedIn, Twitter and YouTube, reaching over 66,500 followers as at end-2020. Amid the COVID-19 pandemic, the HKMA made use of social media to continue engaging the public and effectively dispel rumours about Hong Kong's financial and banking stability.

Corporate Functions

Public enquiries

The Public Enquiry Service provides an effective means for the public to better understand key HKMA functions and operations. It handled 9,514 enquiries in 2020, about half of which were related to banking policies and regulations, consumer banking issues, notes and coins, as well as financial infrastructure and debt market development. Some of the notable enquiries were about the Coin Collection Programme, banking products and services, banking-related guidelines and circulars, the Retail Bond Issuance Programme and monetary and economic statistics.

Chart 1 shows the number of public enquiries received since 2017 and Chart 2 provides a breakdown by enquiry nature in 2020.

Chart 1 Total number of public enquiries

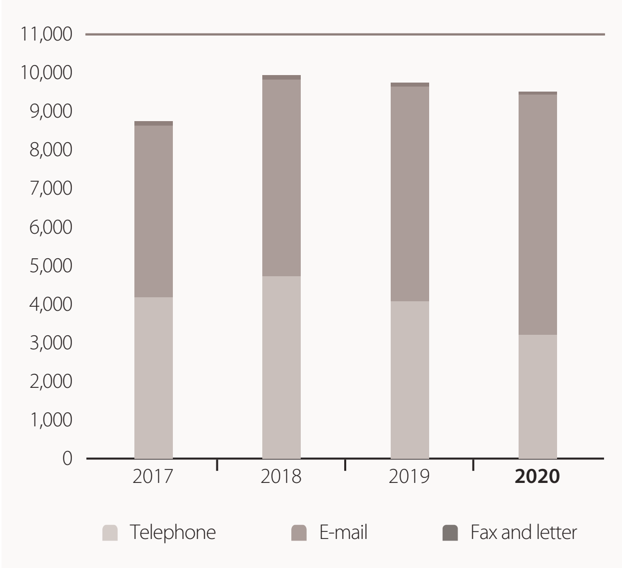
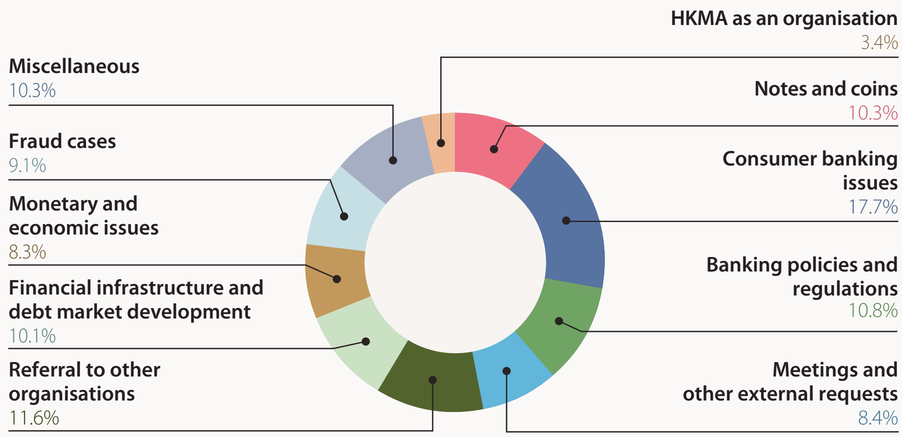


Chart 2 Nature of enquiries received in 2020



Corporate Functions

Publications

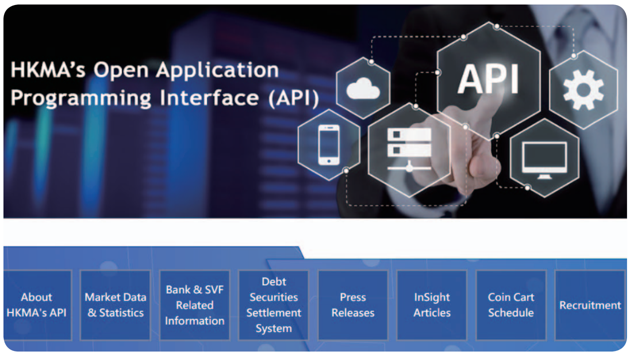
Apart from the *HKMA Annual Report*, the HKMA published two issues of the *Half-Yearly Monetary and Financial Stability Report*, four issues of the *Quarterly Bulletin*, and regularly updated the *Monthly Statistical Bulletin* to provide up-to-date and thematic information and analyses on monetary, banking and economic issues in Hong Kong. The HKMA also published 18 *inSight* articles to introduce its major new initiatives and policies and discuss topical issues of interest to the public.

The *HKMA Annual Report 2019* received a Silver Prize in the "Non-profit Making and Charitable Organisations" category of the Hong Kong Management Association's 2020 Best Annual Reports Awards.

HKMA website

The official HKMA website (www.hkma.gov.hk) presents more than 40,000 pages of content in English and traditional and simplified Chinese, and is the public gateway to up-to-date information about the HKMA. It contains the register of authorized institutions (AIs) and local representative offices and the register of securities staff of AIs, both maintained under section 20 of the Banking Ordinance, as well as the register of stored value facility (SVF) licensees under the Payment Systems and Stored Value Facilities Ordinance.

The HKMA has been releasing financial data and important information on its website via the Open Application Programming Interface (Open API) in phases since 2018. By end-2020, the HKMA had opened up 144 sets of Open APIs on its website according to schedule.



The HKMA embraces the development and application of Open API.

HKMA Information Centre

The HKMA Information Centre on the 55th floor of Two International Finance Centre is an important facility introducing the work of the HKMA to the community and promoting public awareness of monetary and banking matters. It consists of an exhibition area and a library. The exhibition area provides an overview of the HKMA's work and the development of money and banking in Hong Kong in an interactive manner. It also contains information and exhibits for the study of Hong Kong's monetary, banking and financial affairs. The library, situated next to the exhibition area, houses more than 26,000 books, journals and other publications on Hong Kong's monetary, banking and financial affairs as well as central banking topics. It also maintains the register of AIs and local representative offices, and the register of securities staff of AIs, as required by section 20 of the Banking Ordinance.

Corporate Functions

In recognition of its thoughtful design and unique ambience, the HKMA Information Centre was named one of the Platinum Winners of the 2020 MUSE Design Awards in Interior Design category among over 1,000 entries from around the world.

During the temporary closure of the Information Centre in 2020 amid the pandemic, the opportunity was taken to enhance the facilities at the Policy Section, which explains the work of the HKMA and related financial concepts. The enhancements, which took into account visitors' feedback, aimed to further improve the visiting experience by making the interactive facilities more user-friendly, engaging and durable.

Interactive facilities at the Policy Section of the HKMA Information Centre are enhanced.

The Exhibition Area of the HKMA Information Centre introduces the work of the HKMA and the development of money and banking in Hong Kong.

To ensure equal access to its services by all members of the public regardless of race, the Information Centre has implemented procedures to provide language services assistance to visitors and to enquirers who called the Centre's hotline.

The opening and service hours of the HKMA Information Centre have been affected by the ongoing pandemic situation. To safeguard public safety and to maintain a high standard of hygiene during the pandemic, special opening arrangements and precautionary measures have been implemented during the year. Cleansing and disinfection were stepped up, and facilities and exhibits were sanitised regularly with anti-microbial coating.

Public and consumer education

To reach out to the community and raise public awareness of the HKMA's work, a webinar was organised for over 1,600 students and teachers from 61 secondary schools in 2020. The webinar covered an introduction to the work of the HKMA, the LERS, Hong Kong banknotes, protection of personal digital keys and the Deposit Protection Scheme. This was the first time for the public education programme to be held virtually since its launch in 1998. To date, the programme registered more than 61,000 participants.

Over 1,600 students and teachers from 61 secondary schools participate in the HKMA Public Education Webinar.

Corporate Functions

The HKMA educates and engages the public on how to be smart and responsible financial consumers. An ongoing topic of focus has been "Protection of personal digital keys". During the year, the HKMA produced a series of short videos urging the public to properly safeguard their financial accounts and personal information no matter when and where. In view of prevailing online scams amid COVID-19, the public were reminded to stay vigilant against fraud when shopping or using personal credentials online.

The HKMA seeks to raise the interest of the young generation in joining the organisation. It launched an online drama series "STEPS" and a collection of related posts on social media in 2020, covering the HKMA's work in areas including currency, the LERS, fintech, financial inclusion, banking supervision and international collaboration.

The drama series "STEPS" introduces the HKMA's major functions in a light-hearted manner through the story of a young new recruit.

Protection of personal digital keys is extensively promoted on digital platforms and out-of-home media.

Corporate Functions

The HKMA also collaborated with stakeholders through a number of community engagement programmes, one of which being an online parenting and educational campaign to teach kindergarten and junior primary school pupils about money management concepts and banking and payment services. The campaign featured animation videos, web-based games, DIY toys, downloadable worksheets and a colouring competition.

Animation videos featuring mascot Dollar Pig and the Kam family bring out messages on five themes.

Demonstration on making DIY toys with recycled materials.

Other initiatives on youth education included an online financial literacy quiz and a webinar for secondary school students and teachers, producing comic storybooks for primary school pupils and parents jointly with a professional association, and delivering online talks to tertiary students.

The HKMA supports the Investor and Financial Education Council in promoting financial literacy and capacity in Hong Kong, and will explore further collaboration with stakeholders to maximise the impact of community engagement.

Corporate Functions

OUR PEOPLE

While the HKMA is an integral part of the Government, it employs staff on terms different from those of the civil service to attract people with the right experience and expertise. The HKMA recruits, develops and maintains a highly professional workforce to support its policy objectives and respond flexibly to changing work priorities.

The establishment of the HKMA in 2020 was 1,005. The HKMA made strong efforts to support new initiatives and the increasing complexity and volume of existing work through flexible redeployment of existing resources, efficiency enhancement and streamlining of work processes. In 2021, the HKMA will maintain its establishment at 1,005 and redeploy existing resources for the following new and expanded tasks:

Banking and Financial Stability

- Support the policy development of Wealth Management Connect (WMC), and other Greater Bay Area (GBA) and private wealth management initiatives, and undertake ongoing supervision of WMC activities
- Handle licensing work under the Insurance Ordinance and the new over-the-counter derivatives regime, and undertake conduct supervision of virtual banks
- Implement new supervisory requirements on climate risks, and step up prudential supervision of banks

Reserves Management

- Strengthen investment and risk management and other necessary support for the further expansion and diversification of the Exchange Fund's investment activities

Hong Kong as an International Financial Centre

- Support increased participation in activities of the Financial Stability Board and other international working groups
- Administer the newly proposed tax concession regime for carried interest and validate the eligibility of funds for various tax concessions

Corporate Functions

Table 1 gives a breakdown of the establishment and strength of the HKMA.

Table 1 Establishment and strength of the HKMA on 1 January 2021

Department	Functions	Senior staff Establishment	Senior staff Strength	Others Establishment	Others Strength
Senior Executives' Office	Top management of the HKMA	4	4	9	9
Banking Conduct	To take charge of payment systems oversight, licensing, and all supervisory and development functions relating to the business conduct of AIs	1	1	90	82
Banking Policy	To formulate supervisory policies for promoting the safety and soundness of the banking sector, enhance the capacity building of industry practitioners, and take charge of the deposit protection function	1	1	43	43
Banking Supervision	To supervise operations of AIs	1	1	182	171
Enforcement and AML	To investigate and where appropriate take enforcement action under relevant ordinances, supervise anti-money laundering and counter-terrorist financing systems and handle complaints	1	1	99	95
Exchange Fund Investment Office	To manage reserves in line with established guidelines to achieve investment returns and enhance the quality of returns by diversifying investments into different markets and asset types	1	1	105	97
Risk and Compliance*	To oversee all risk-generating activities, including investment risks and non-investment related corporate risks of the HKMA	1	1	45	44
External	To develop and promote Hong Kong as an international financial centre, foster regional monetary cooperation through participation in the international central banking and financial community, and promote the development of financial markets	1	1	54	50
Financial Infrastructure	To develop and enhance financial market infrastructure for maintaining and strengthening Hong Kong's status as an international financial centre, take charge of the settlement function, and ensure an adequate supply of banknotes and coins	1	1	53	50
Monetary Management	To maintain financial and monetary stability through macro-financial surveillance and monitoring of market operations, license and supervise stored value facilities, and designate and oversee important retail payment systems	1	1	50	48
Research	To conduct research and analyses on economic and financial market developments in Hong Kong and other economies	1	1	40	37
Office of the General Counsel	To provide in-house legal support and advice	1	1	27	25
Corporate Services	To provide support in the form of administration, finance, human resources, information technology and secretariat services, handle media and community relations, and provide consumer education	1	1	170	160
Internal Audit Division	To provide audit services through assisting the management in controlling risks, monitoring compliance and improving the efficiency of internal control systems and procedures	0	0	10	10
Resolution Office	To establish resolution standards, contribute to international resolution policy development, undertake local and cross-border resolution planning, develop operational capabilities to implement resolution, and execute the orderly resolution of a failing AI or a cross-sectoral group if needed	0	0	12	11
Total		**16**	**16**	**989**	**932**

* Staff members overseeing investment risks are part of the Exchange Fund Investment Office set-up. For presentational reasons, they are grouped under the Risk and Compliance Department.

Remuneration policies and pay review mechanism

The Financial Secretary (FS) determines the pay and conditions of service for HKMA staff on the advice of the Governance Sub-Committee (GSC) through the Exchange Fund Advisory Committee (EFAC), taking into account the prevailing market rates and practices. Remuneration comprises a total cash package and a provident fund scheme, with minimal benefits in kind. The cash package consists of monthly fixed pay (or basic pay) and variable pay that may be awarded to individual staff members as a lump sum once a year, depending on performance.

Pay for HKMA staff is reviewed annually by the FS in the light of recommendations made to him by the GSC through the EFAC, taking into account the GSC's assessment of the performance of the HKMA in the preceding year, the pay-survey findings of the financial sector conducted by independent human resources consultants, and any other relevant factors. Special pay adjustments may be made from time to time to reward individual meritorious staff members and to maintain the competitiveness of their pay.

Any approved annual adjustments to the fixed pay and any variable pay awards are distributed to individual staff members based on their performance. Investment staff members are subject to a variable pay system that seeks to strengthen the link between their investment performance and remuneration award. The pay adjustments and awards for individual staff members at the ranks of Executive Director and above are approved by the FS on the advice of the GSC. The staff members concerned are not present at the meetings when their pay is discussed. The pay adjustments and awards for individual staff members at the ranks of Division Head and below are determined by the Chief Executive of the HKMA under delegated authority from the FS within the approved overall pay awards.

Remuneration of senior staff members

The remuneration packages of senior staff members in 2020 are shown in Table 2.

Table 2 Remuneration packages of HKMA senior staff members in 2020[1]

HK$'000	Chief Executive	Deputy Chief Executive/ Senior Executive Director (average)	Executive Director (average)
Number of staff members[2]	1	4	14
Annualised pay			
Fixed pay	7,000	5,601	4,263
Variable pay	2,300	1,672	1,100
Other benefits[3]	1,015	767	697

1. Except for annual leave accrued, the actual remuneration received by staff members who did not serve out a full year is annualised for the purpose of calculating the average annual package for the rank.
2. The number of staff members in this table includes those who did not serve out a full year. The HKMA senior staff members include the Chief Executive Officer of the Hong Kong Mortgage Corporation Limited, the Commissioner of the Resolution Office, and the Chief Operating Officer of the Exchange Fund Investment Office.
3. Other benefits include provident funds or gratuity as the case may be, medical and life insurance, and annual leave accrued during the year. The provision of these benefits varies among senior staff members, depending on individual terms of service. Relatively, more annual leave accrual was observed in 2020.

Corporate Functions

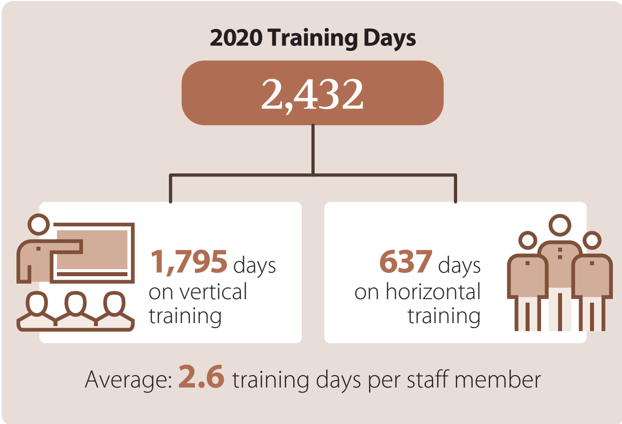
Conduct and discipline

The HKMA places great emphasis on the integrity and conduct of its staff, and expects them to observe an exemplary standard of personal conduct and integrity and to act in the best interests of the organisation. A Code of Conduct provides guidance to staff on their ethical and legal responsibilities.

Continuing efforts are made to remind staff of conduct-related rules and regulations. Weekly email alerts are issued to enhance staff's awareness of important conduct issues related to the avoidance of conflict of interest, prevention of corruption, personal data protection, and anti-discrimination practices. Staff are required to take an online test to deepen their understanding of the relevant policies, rules and regulations.

Staff development

The HKMA accords priority to developing its staff's capabilities not only for operational needs, but also for their career development and increase their adaptability to new challenges. Considerable efforts are devoted to training the staff's vertical (job-specific) and horizontal (general) skills in accordance with the identified individual and organisational needs. During the year, a number of training initiatives were launched to support various functional areas, and topical briefings on the HKMA's work and new and emerging trends were also arranged to keep the staff abreast of the latest financial developments. These briefings covered green finance, fintech, Regtech, control risks, legal protections and bank culture. A new Fundamental Digitalisation and Data Science Training Programme was launched to equip all staff with basic knowledge to participate in the journey of digitalisation. The training programmes were organised in-house or by the Government, other central banking institutions, local and overseas universities, consultants, and training institutions.



The HKMA implements a Continuous Capacity Development Programme to encourage a culture of continuous learning and to maintain the staff's competency. This is in addition to a training sponsorship scheme that supports staff members in pursuing studies relevant to the work of the HKMA. Staff members can also obtain reimbursement of the membership fees of relevant professional bodies.

To enhance work exposure and promote cross-fertilisation of skills and experience, the HKMA encourages staff members to rotate across different job areas, for example, posting to the HKMA's New York Office, or secondment to HKMA-related organisations, other regulatory authorities and the Government. Secondment to international organisations, such as the International Monetary Fund (IMF) and the Bank for International Settlements, is also arranged so that staff members can assist in activities and policy initiatives in which Hong Kong or the HKMA plays a key role. Some staff members are deployed on a full-time or part-time basis to provide support to the Hong Kong Deposit Protection Board and the Hong Kong Academy of Finance.

Opportunities for Graduates and Students to Join the HKMA

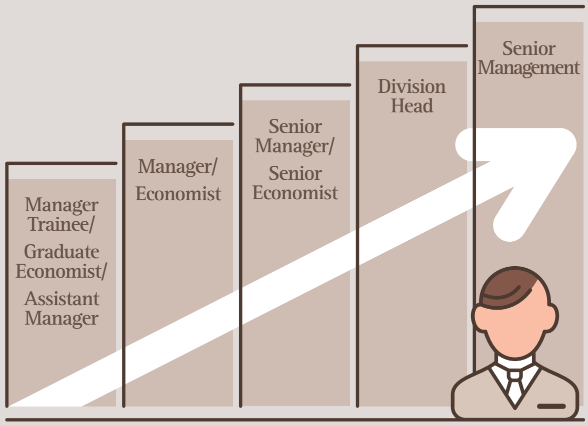
Manager Trainee (MT) and Graduate Economist (GE) Programmes

To develop a pool of young talent with sharp analytical minds, strong communication skills and good team spirit for a long-term career in central banking, the HKMA runs two trainee programmes: the MT programme and the GE programme. Each programme lasts for two years.

The MT programme prepares young graduates interested in central banking work to become part of the HKMA's future management team and contribute to the financial stability and prosperity of Hong Kong. Each MT undergoes on-the-job training in two or three departments to acquire hands-on experience in important HKMA functions. The GE programme, on the other hand, offers young graduates interested in economic research the opportunity to harness their research skills in two or three departments to contribute to policy formulation.

Both the MT and GE programmes provide an all-rounded career development environment for the trainees. Apart from on-the-job training, the MTs and GEs attend structured foundation courses on central banking, organised both in-house and by leading regional and international organisations. Upon successful completion of the respective programmes, MTs are offered appointments as Managers and GEs as Economists to pursue a professional career in the organisation.

Career prospects



Assistant Managers (AMs)

AMs form an important backbone of the HKMA's professional staff. Most AMs work in the banking departments to promote the safety and stability of Hong Kong's banking system. A small number of AMs work in other functional areas, providing analytical and other forms of support. Young graduates with a keen interest in banking supervision and regulation would find the position of AM a good starting point for a fulfilling career.

Internship Programmes

The HKMA runs summer and winter internship programmes to equip undergraduates with practical work experience and insights about the roles of a central bank. Talks and other activities are also arranged for interns to gain a better understanding of the functions and work of the HKMA.

Corporate Functions

Digitalisation Programme

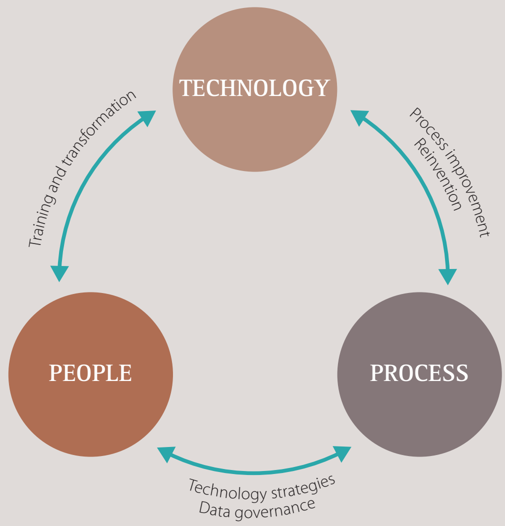
The HKMA started a transformational digitalisation programme in 2019 to enhance the effectiveness and efficiency of its work. It covers five key areas, including banking and anti-money laundering supervision, financial stability surveillance, economic research and reserves management. Following the exploratory consultancy studies conducted in 2019 to chart the digitalisation journey of each area, an implementation road map of initiatives with various complexities was drawn up for execution in the next few years.

In the second half of 2020, the HKMA set up a Digitalisation Office (DO) to implement the roadmap and drive the digitalisation agenda, strategic goals and adoption across the organisation. Other than supporting the multi-year implementation in the five key functional areas, the DO focuses on developing the HKMA's technology strategy, as well as people and process transformation.

To build a foundation that would support the digitalisation journey and help the HKMA become more data-driven, the DO started developing technology strategies on data governance. The strategies aim to ensure that data is collected and shared efficiently, effectively and securely throughout the HKMA to assist with decision-making and the formation of solution blueprints and enterprise architecture, so as to achieve synergy in the use of technologies and applications across the organisation, and in infrastructure and cloud resources to ensure faster time-to-market and sustainable investments.

Recognising that people are equally important in a transformation programme, the DO partnered with the internal training team to provide an in-house digitalisation awareness course for over 430 staff members. At the same time, the HKMA provided online materials and sponsored internet-based courses for staff members interested in acquiring digitalisation skills. In 2021, the DO plans to organise more domain-specific data science courses and transformation training to upskill colleagues in the digital era.

Process improvement and re-engineering are also essential elements in this transformation journey. The HKMA is examining processes critically for possible streamlining and consolidation to reduce complexity and manual intervention. In implementing these initiatives, project management, communication and collaboration are important enablers. In this regard, the HKMA will introduce more tools in these areas to increase the agility of multiple teams working together on issues that cut across team boundaries.



Corporate Functions

ADMINISTRATION

The HKMA regularly reviews its corporate resources, including space requirements, to ensure that operational needs are met. To keep its workplaces well-equipped and occupationally safe, the HKMA carries out office repair and maintenance work from time to time. For details about the HKMA's efforts in nurturing a caring workplace and a green office, see the *Corporate Social Responsibility* chapter.

Business continuity plans for the HKMA are reviewed constantly to ensure their effectiveness in a changing business and social environment. Drills on evacuation and the activation of back-up facilities are conducted regularly to ensure the staff are responsive and prepared to carry out business continuity measures. A dedicated team monitors COVID-19 alerts and other infectious diseases to make sure that the necessary precautionary and contingency measures can be taken in a timely manner.

FINANCE

In drawing up the annual budget, the HKMA takes into account ongoing operations, as well as its strategic development as set out in its Three-Year Plan approved by the FS on the advice of EFAC. Departments are required to assess their needs for the coming year and to review whether savings in staffing and expenditure can be achieved. This requires departments to assess critically the value of existing services and the cost-effectiveness of delivery methods. The Finance Division scrutinises all budget requests in communication with individual departments before submitting a consolidated draft budget, including a headcount proposal, for further scrutiny by senior management. The GSC of EFAC then deliberates on the proposed budget and recommends any changes it considers necessary, before putting it through EFAC to the FS for approval.

All expenditure items are subject to stringent financial controls governed by detailed procurement rules and guidelines. Compliance with these guidelines is subject to internal audit and is reviewed by independent auditors during the annual audit of the Exchange Fund. Expenses are analysed and reported to senior management every month.

The administrative expenditure in 2020 and the budgeted expenditure for core activities in 2020 and 2021 are shown in Table 3. During 2020, underspending in general operating costs was relatively significant. Actual expenditure in external relations, publicity and training activities was far below the 2020 budget, mainly as a result of the COVID-19 pandemic. The difference between the 2020 actual expenditure and the 2021 budget is mainly due to an increase in staff costs (including the full-year effect of the staff changes and pay review in 2020) and provision for professional and consulting services.

Table 4 shows other expenses that are not related directly to the HKMA's own operations. Expenses related to the provision of financial support (including premises and administrative costs) to international organisations, whose presence in Hong Kong strengthens the city's status as an international financial centre, are expected to remain broadly stable in 2021. Spending on financial infrastructure is related to the operation and continued development of payment and settlement systems to enable Hong Kong's financial markets to function efficiently and securely. The HKMA also provides operational support to the Hong Kong Deposit Protection Board on a cost-recovery basis, as endorsed by the FS according to section 6 of the Deposit Protection Scheme Ordinance (Cap. 581).

Financial disclosure

The HKMA adopts international standards in financial disclosure insofar as these are applicable to central banking operations. These include the Hong Kong Financial Reporting Standards (HKFRSs) and other applicable reporting requirements, for example, the IMF's Special Data Dissemination Standard. The Finance Division works with external auditors and other accounting professionals to prepare and present the Exchange Fund's financial statements in accordance with the HKFRSs. To achieve a high level of transparency, the HKMA also provides detailed disclosures and thorough analyses of a wide range of expense items and budgetary information in its *Annual Report*.

Corporate Functions

Table 3 HKMA administrative expenditure

HK$ million	2020 Budget	2020 Actual	2021 Budget
Staff costs	1,665		1,726
Salaries and other staff costs		1,439	
Retirement benefit costs		124	
Premises expenses			
Rental expenses	43	39	43
Other premises expenses (including management fees and utility charges)	81	71	87
General operating costs			
Maintenance of office and computer equipment	151	138	147
Financial information and communication services (including trading, dealing terminals and data link charges)	86	68	93
External relations (including international meetings)	78	12	73
Public education and publicity	51	16	62
Professional, consulting and other services	197	80	182
Training	32	4	32
Others	17	13	23
Total administrative expenditure	**2,401**	**2,004**	**2,468**

Table 4 Additional expenses

HK$ million	2020 Budget	2020 Actual	2021 Budget
Financial support to international financial organisations in Hong Kong	42	41	41
Service fees for financial infrastructure	110	63	140

INFORMATION TECHNOLOGY

The Information Technology (IT) Division maintains a reliable and secure IT operational environment that supports the smooth and efficient operation of the HKMA.

In 2020, all time-critical systems of the HKMA maintained full operational uptime.

IT security is a high-priority task of the IT Division. All emerging threats in the cyber space are closely monitored and the IT security system is reviewed regularly. The division also has a business contingency plan that is updated from time to time to ensure continued operation of all critical systems.

In 2020, the work-from-home (WFH) arrangement formed an integral part of our business continuity plan under the pandemic situation. To support the WFH mode, the division enhanced IT facilities while safeguarding cybersecurity.

To ensure continued reliability of the HKMA's IT systems, ageing components have been updated in batches. In order to promote the adoption of digitalisation within the organisation, the IT Division installed an internal cloud system to facilitate various initiatives.

SETTLEMENT SERVICES

The Settlement Section provides reliable and efficient settlement services and operational support to reserves management, monetary operations and other initiatives. In 2020, amid a challenging environment under COVID-19, the Settlement Section maintained a high level of operational resilience and efficiency to meet new settlement service demands. With effective and innovative operation and system controls in place, the funds and assets of the Exchange Fund were transferred accurately and securely. As the financial industry is developing rapidly through technological advancement and innovation, the Settlement Section will continue to respond swiftly to new changes.

Corporate Functions

OFFICE OF THE GENERAL COUNSEL

The Office of the General Counsel (OGC) provides legal advice to the HKMA on all aspects of its functions.

In 2020, the OGC worked alongside other HKMA departments on a diverse range of matters and new initiatives including:

- regulatory measures addressing the exigencies of COVID-19 on banks, their customers and the banking industry;
- fintech-related developments and the HKMA's digitalisation programme;
- legislation for the continued implementation of both Basel Committee regulatory standards and requirements under the Financial Institutions (Resolution) Ordinance; and
- the launch of the WMC pilot scheme in the GBA.

OGC lawyers also provide legal support for the HKMA's participation in international working groups and respond to legislative proposals and consultations on matters which may affect the functions and operations of the HKMA.

INTERNAL AUDIT

The Internal Audit (IA) Division provides independent and objective assurance on the adequacy and effectiveness of the HKMA's control, risk management and governance processes. The IA Division reports directly to the Chief Executive of the HKMA and the Audit Sub-Committee (ASC) of EFAC.

Adopting a risk-based approach, the IA Division conducts operational and information system audits to review all significant risk areas of the HKMA. During the year, 33 audits were conducted on the HKMA's reserves management, banking supervision, monetary and financial development, IT and other corporate functions. The audit results showed that adequate and effective control activities were in place to manage risks to the achievement of the HKMA's business objectives.

The IA Division also advises on major system development projects and internal control issues in response to requests from the senior executives and management. It provides risk updates to the Risk Committee regularly, while audit progress and key internal control matters are reported to the senior executives and the ASC every quarter.

RISK MANAGEMENT

One of the HKMA's most important tasks is to manage risks to the monetary and banking systems. Risk management is undertaken both at a working level in the day-to-day operations and at a higher level through strategic planning. There are two high-level committees under the HKMA's risk management framework, namely the Macro Surveillance Committee and the Risk Committee, which are chaired by the Chief Executive of the HKMA.

The terms of reference of the Macro Surveillance Committee are:

- to identify potential risks and threats to the monetary and financial system in Hong Kong and discuss possible measures to address such risks
- to review existing measures for managing risks in the monetary and financial system to identify possible gaps and ensure the adequacy of these measures
- to encourage cross-departmental sharing of relevant information on macro surveillance with a view to enhancing the macro surveillance capability of the HKMA.

The terms of reference of the Risk Committee are:

- to identify potential risks and threats to the organisation and devise strategies to reduce the impact of such events
- to review the existing system for managing risks across different departments to identify possible gaps and significant risks and ensure the adequacy of measures to address them
- to harmonise the criteria and methods of risk measurement and prioritise the resources management of risks identified
- to encourage a stronger risk management culture institutionally which promotes the proper levels of authorisation and controls.

Because of the growing complexity of activities the HKMA engages in, and the increasing public expectations of its work, a robust operational risk management process is in place. The framework covers organisational risks at two levels: the entity level and the department level. Entity-level risks refer mainly to those which concern the entire organisation in the medium term, or which might call for a cross-departmental response. Potential and emerging risks identified by business units, and the adequacy of the control measures and mitigating strategies they devise, are reviewed and reported every quarter. This is supplemented by a top-down approach to manage entity-level risks, in which senior colleagues heading different business units actively identify risks of wider impact and propose mitigating measures. The Risk Committee discusses these assessments and decides on appropriate follow-up actions.

Corporate Social Responsibility

The HKMA is committed to fulfilling its corporate social responsibility, and aims to be a responsible and sustainable organisation. This commitment is manifested in various areas, including promoting a sustainable and environment-friendly marketplace, supporting the wider community, protecting the environment and nurturing a caring workplace.

In response to the COVID-19 pandemic, the HKMA introduced a number of measures to support individuals and enterprises in need to help Hong Kong's economy ride out these difficult times.

MARKETPLACE

Green and sustainable finance

Climate change is one of the major risks threatening the well-being of mankind and the sustainability of the world economy. The financial sector in which banks operate, being an integral part of society, will not be spared and hence should be more proactive in managing climate risks. The HKMA is committed to exploring ways to address this challenge. It is undertaking a number of measures unveiled in May 2019 for promoting the development of green finance in Hong Kong, including a three-phased approach to promote green and sustainable banking:

Phase I

developing a common framework to assess the "Greenness Baseline" of individual banks, and collaborating with international bodies to provide technical support to banks in Hong Kong;

Phase II

consulting the industry and other stakeholders on the supervisory expectations and requirements of green and sustainable banking; and

Phase III

focusing on the implementation, monitoring and evaluation of banks' progress in this regard.

On the international front, the HKMA participates in a number of forums such as the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), the Basel Committee on Banking Supervision's high-level Task Force on Climate-related Financial Risks, the Interest Group on Sustainable Finance of the Working Group on Banking Supervision of the Executives' Meeting of East Asia-Pacific Central Banks and the International Platform on Sustainable Finance. The HKMA's participation provides an opportunity for it to contribute to the central banking and regulatory community in addressing climate change, while benefitting from the experience and insights of other jurisdictions when developing its local framework.

Specifically, the HKMA participates in various NGFS workstreams, including the workstream on microprudential and supervision (WS1), the workstream on macrofinancial (WS2) and the workstream on scaling up green finance (WS3). The HKMA also joined the two new workstreams — the workstream on research and the workstream on bridging the data gap. The former focuses on research work and the latter aims to develop a detailed list of data items that are currently lacking but are needed by authorities and financial institutions to assess climate-related risks and opportunities. See the *Banking Stability* chapter for more details about the progress on promoting green and sustainable banking during the year.

In November, the HKMA and the International Finance Corporation (IFC) jointly launched the Alliance for Green Commercial Banks to help banks develop solutions needed to address climate change across emerging markets. As the founding member and the first regional anchor of the Alliance, the HKMA i) promotes the development of Green Commercial Banks in the global financial market; ii) serves as a peer-to-peer learning platform for commercial banks to acquire knowledge, tools and business information to develop their green finance road maps and transform themselves into credible green banks; iii) facilitates dialogue and provides thought leadership to advance the green finance agenda globally; and iv) helps members of the Alliance to collaborate and take advantage of an estimated US$23 trillion in green and climate-related investment opportunities identified by the IFC across emerging markets in the next decade.

Locally, the HKMA is working with other financial regulators in Hong Kong to coordinate the management of climate and environmental risks to the financial sector. In addition to assisting the Government in implementing the Government Green Bond Programme, the HKMA co-initiated the establishment of the Green and Sustainable Finance Cross-Agency Steering Group (CASG) with the Securities and Futures Commission (SFC) to address cross-sectoral regulatory and market development issues. See the *International Financial Centre* chapter for more details about the HKMA's work on developing Hong Kong as a green and sustainable finance hub during the year.

Corporate Social Responsibility

Green and Sustainable Finance Cross-Agency Steering Group

The CASG aims to coordinate the management of climate and environmental risks to the financial sector, accelerate the growth of green and sustainable finance in Hong Kong and support the Government's climate strategies. It was formed in May at the initiation of the HKMA and the SFC. The other CASG members are the Environment Bureau, the Financial Services and the Treasury Bureau, Hong Kong Exchanges and Clearing Limited, the Insurance Authority and the Mandatory Provident Fund Schemes Authority.

Since its formation, the CASG has set up two work streams: to study and address cross-sectoral regulatory issues; and coordinate cross-agency market development efforts.

In December, the CASG launched its green and sustainable finance strategy for Hong Kong which comprises six key longer-term focus areas for strengthening Hong Kong's financial ecosystem to support a greener and more sustainable future. The CASG also announced five near-term action points to address some of the most pressing issues that are hindering development of the sector.

HKMA hosts the inaugural meeting of the CASG, which is co-chaired by HKMA Chief Executive, Eddie Yue (third from right).

The CASG launches its green and sustainable finance strategy for Hong Kong and five key action points.

Corporate Social Responsibility

Responsible investment

The HKMA supports responsible investment (RI), which is defined as the incorporation of environmental, social and governance (ESG) factors in investment activities. As a large asset owner, the HKMA's increasing focus on RI will affect how its asset managers carry out its investment activities.

HKMA beliefs

The HKMA believes that, by putting appropriate emphasis on RI and sustainable long-term performance, it can better achieve the investment objectives of the Exchange Fund and reduce risks associated with the ESG-related matters of its underlying investments.

HKMA principles

The HKMA's guiding principle is that priority will generally be given to ESG investments if the long-term risk-adjusted return is comparable with other investments. Where appropriate, the HKMA adopts in its investment process the following RI principles that underpin its beliefs as a responsible long-term investor:

Integration

The HKMA incorporates ESG factors into its investment analysis to identify risks and opportunities, as it believes that these factors can materially affect the long-term value of its investments. ESG factors are integrated into the HKMA's investment process for both public and private market investments.

Active ownership

The HKMA exercises shareholder rights in its public equity holdings in a manner that helps safeguard the long-term value of its investments. The HKMA believes that responsible corporate behaviour guided by ESG factors will help create shareholder value in the long run. The HKMA's asset managers are expected to help the HKMA discharge its ownership responsibilities in the underlying investments by adopting active ownership through exercising voting rights and engaging with investee companies.

Collaboration

The HKMA seeks to join hands with like-minded investors and regulators to promote good practices for the long-term management of investments. It participates in and speaks at public events to share better ESG practices and encourage the investment community to adopt RI.

See the *Reserves Management* chapter for more details about the HKMA's work on RI during the year.

Corporate Social Responsibility

HKMA as an Active Responsible Investor Monitoring External Managers' ESG Practices

HKMA expectations

The HKMA attaches high importance to the incorporation of ESG factors in investment decisions and to the notion of active ownership. To this end, it takes ESG factors into account in selecting, appointing and monitoring external managers. The appointed external managers are also required to take active ownership seriously, as the HKMA sees exercising shareholder rights in public equity holdings as a fundamental means of safeguarding the long-term value of equity investments.

HKMA monitoring

The external managers are subject to assessment of their ESG performance in managing the HKMA's listed equity portfolios. This is carried out through an engagement programme that systematically examines various aspects of their ESG practices, such as their ESG assessment framework, engagement with investee companies, and work on proxy voting. In 2020, a group of selected external managers became the first to undergo the programme. They were gauged not only by their ESG performance, but also whether they had properly discharged ownership responsibilities on behalf of the HKMA.

Engagement outcomes

The programme identified external managers with questionable practices that necessitated follow-up action. Two examples are set out below:

Case 1

The HKMA detected that an equity manager A had room for improvement in its ESG framework, specifically in establishing a more systematic approach to assess investee companies. The HKMA followed up on this with the manager, which embarked on a company-wide review to implement a more robust ESG framework. In particular, the manager engaged an external consultant to provide advice in the ESG process, demonstrating the manager's determination to expedite implementation of the improved framework. The manager also set up a new ESG committee comprising senior management, affirming both its commitment to ESG and the backing from its senior management of the endeavour.

Case 2

Having reviewed the voting practices of an equity manager B, the HKMA identified areas for improvement in the manager's voting policy and brought these up with B's Head of ESG for review. Specifically, the manager's voting decision was 100% in favour of the management's proposal and deviated from its own proxy voting guidelines. The manager later undertook to enhance the company's voting policy by incorporating the expectation that there would be greater involvement of its ESG team members and the possibility of voting against the management where governance issues are material.

For private market investments, the HKMA realises RI through its general partners' commitment to working with underlying portfolio companies on ESG matters. The HKMA has noted consistent ESG commitment among the general partners as they consider it to be aligned with the long-term value creation and sustainability of returns of their portfolio companies. The two examples below show that climate change risks can be managed through (i) design changes and adoption of innovative operational techniques and (ii) carbon reduction considerations being integrated in the construction and operation of green and sustainable warehouses. Both examples have seen significant positive impact to the environment with lower carbon emissions; harmful products are avoided and operational efficiency is gained through cost and energy savings.

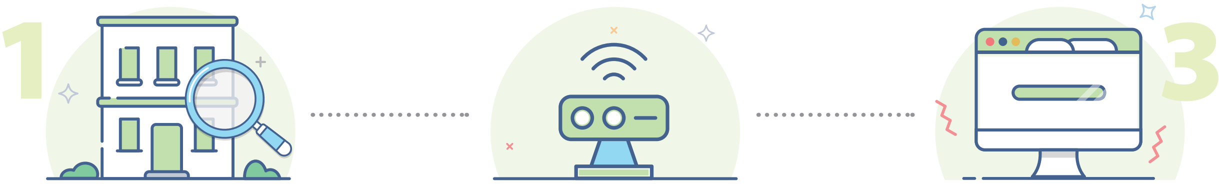
(i) The HKMA has investment in a pest control company which adopts environmentally friendly solutions. While traditional pesticides and chemicals can exterminate pests effectively, dead pests have adverse implications for public hygiene if not promptly or properly disposed of, and environmental concerns can also arise from the seepage and disposal of chemical ingredients. The company's biocide-free solution is to deploy physical pest traps, thereby avoiding the use of harmful chemicals. The company also uses internet-linked motion sensors to remotely detect whether pests have been trapped. With this new technology, the company can optimise route planning to collect trapped pests and reduce the mileage travelled, thereby lowering carbon emissions. The net effect on carbon as measured on a company-wide basis has shown an encouraging low reading of 0.36 kg/CO2e/$ net sales, which is close to the industry average for low-carbon-emitting sectors such as legal services and software publishing.

(ii) The HKMA has investment exposure to green and sustainable warehouses. While the construction industry is a major contributor to carbon emissions, the warehouse developer adopts a net zero carbon process in its overall construction and operation of warehouses. Standards and metrics for measuring the baseline of net zero carbon are in place, and construction planning takes into consideration the sustainability of materials and components used. The resulting warehouse is carbon-efficient and designed with sustainable features, including solar thermal systems, electric vehicle charging portals, natural lighting and rainwater harvesting.

The carbon footprint of the warehouse construction has net 25.8% lower carbon emissions than a standard logistics building, according to measurements by an independent consultant. To further offset carbon emissions from the construction work, 32,799 net trees were planted during the process. Post-construction, the warehouse reduced carbon emissions by 26.9% in its daily operations compared with a standard warehouse.

Corporate Social Responsibility

Environmentally Friendly Pest Control Solutions through Deploying Innovative Technology



1 Analyse pest-infected sites and plan for solutions

2 Install pest traps and web-connected motion sensors

3 Remote detection and monitoring

Green and Sustainable Warehouse: First-ever Building Verified as Net Zero Carbon Construction

-25.8%
Less embodied carbon

1 Method for defining **Net Zero Carbon**

2 Modelling initiatives to determine **carbon savings**

3 Monitoring the **construction process**

4 Measuring the **carbon footprint**

5 Offsetting the **carbon produced** during the construction

6 Maintaining the **low carbon operation**

Blueprint for construction setting out all sustainability considerations made in the design of the building

Rated A
Energy performance certificate

32,799
Net trees planted

18L
Water reduction per person per day

Adoption of the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Climate change presents both risks and opportunities to investments. As a responsible investor, the HKMA believes climate change warrants appropriate focus. In December 2020, the CASG unveiled a strategic plan to promote green and sustainable finance. One of the action plans is to require the relevant financial sectors to make climate-related disclosures that align with the TCFD[1] recommendations by 2025. The HKMA, as announced in May 2019, is supportive of the recommendations issued by the TCFD. It has stepped up efforts on climate-related issues to drive progress on the TCFD recommendations concerning governance, strategy, risk management, and metrics and targets in its own operations and also those of the wider banking and financial community.

Governance

The Exchange Fund Advisory Committee (EFAC) endorses the guiding principle and overall framework for RI of the Exchange Fund, and delegates responsibility for the oversight of ESG-related risks, including climate change, to its Investment Sub-Committee (ISC). The Exchange Fund's RI framework, including its climate change management approach, is reviewed by the ISC on an annual basis and regular updates are provided.

Strategy

Similar to many other long-term asset owners, the HKMA is evaluating different tools and approaches, including the use of climate scenario analysis, to identify short-to-long term climate-related risks and opportunities for the Exchange Fund. Given the broad scope and uncertain trajectory of climate change impacts, the HKMA will continue to upgrade research efforts and modify its approach as it develops a better understanding of climate-related risks and opportunities.

Risk management

A working-level, multidisciplinary forum reviews and discusses ESG and climate change risks and opportunities regularly. The forum comprises representatives from different departments covering the HKMA's major policy areas, to facilitate information sharing and a coordinated approach in tackling climate change issues.

On risk management for the Exchange Fund, climate-related risks and opportunities are assessed for the relevant asset classes in the investment process. For instance, ESG factors are incorporated in the credit analysis of HKMA bond portfolios, and green accreditation is included as a predominant factor in real estate investments. The HKMA has also started to invest in ESG-themed mandates in public equities investment to reduce the carbon intensity of its portfolios. It monitors how external managers and general partners address climate risk and, where appropriate, encourages them to improve climate risk disclosure to align with the TCFD recommendations.

Progress on the Exchange Fund's ESG and climate-related investment plans is reported regularly to the Exchange Fund Investment Office's ESG Committee, whose members are from investment and risk management functions, to ensure a consistent and comprehensive strategy to address climate risk.

Metrics and targets

In view of the complexity and uncertainty of climate change and its impact on investment returns, different institutions are developing and applying a variety of climate metrics and modelling technologies, having regard to a host of factors including portfolio composition, investment objectives and investment horizon. The Exchange Fund is identifying and studying suitable metrics and data, such as ESG scores and carbon intensity, to assess and manage the relevant climate risk exposures.

[1] The Financial Stability Board created the TCFD in 2015 to improve and increase reporting of climate-related financial information.

Corporate Social Responsibility

Promoting financial inclusion

The HKMA attaches great importance to financial inclusion, and strives to promote access to basic banking services by different segments of the society to meet the basic daily needs of the public and the operational needs of legitimate businesses. In particular, the HKMA has been working closely with the banking industry on the following priority areas:

- Encouraging banks to launch more physical banking facilities and develop digital and innovative channels for delivering basic banking services to serve the public, particularly residents in remote areas and public housing estates, and the elderly;
- Facilitating and monitoring the accessibility of bank accounts to individuals and small and medium-sized enterprises (SMEs);
- Encouraging banks to launch the Simple Bank Account service that provides basic banking services with less extensive customer due diligence measures to eligible corporate customers;
- Enhancing the accessibility of banking services to specific customer groups, for example, people with physical, visual, hearing or intellectual impairment, and people of different races;
- Facilitating and monitoring the accessibility of bank credit to SMEs; and
- Introducing virtual banks, which play an active role in promoting financial inclusion through their banking services.

Guideline on Banking Services for Persons with Intellectual Disabilities

To enhance accessibility to banking services by customers requiring special care, the HKMA worked closely with the banking industry to develop a Guideline on Banking Services for Persons with Intellectual Disabilities. The Guideline was published in December and endorsed by the HKMA. It sets out principles and good practices that the banking industry should follow in providing banking services to customers in need and establishing communication channels with them.

See the *Banking Stability* chapter for more details about the HKMA's work on promoting financial inclusion during the year.

Barrier-free banking services

— Wheelchair accessible bank branches: **over 95%**

— Branches with notices stating that guide dogs are welcomed: **99%**

— Voice navigation ATMs: **over 1,100**

— ATMs with suitable height for wheelchair users: **over 1,200**

— Branches with assistive listening system: **over 850**

Cash withdrawal service for the elderly

— Outlets of convenience store chain: **over 340**

— Hongkong Post Offices and Mobile Post offices: **over 160**

Locations served by mobile bank branches: **30**

Simple Bank Accounts opened: **over 6,000**

Virtual banks in operation: **8**

COMMUNITY

Relief Measures amid COVID-19

HKMA initiatives to support businesses and households affected by the pandemic

In response to the COVID-19 outbreak, the HKMA, together with the banking sector, rolled out a series of measures to support SMEs and personal customers. Details of the HKMA's multi-pronged support measures are available at the dedicated webpage on the HKMA website.

How did the HKMA help banks support their customers?	**Corporate customers**	**Individual customers**
Released **HK$ 1 trillion** of lending capacity	Launched the Pre-approved Principal Payment Holiday Scheme in May and extended it to **end-October 2021**, with over 100 participating banks	Principal repayment holidays for residential mortgages
Increased banking system liquidity	Provided principal moratorium for the SME Financing Guarantee Scheme which is operated by HKMC Insurance Limited (HKMCI)	Relief loans offered to employees of hard-hit sectors
Set up the Banking Sector SME Lending Coordination Mechanism to facilitate banks' support of the economy	**> 58,000 applications** for payment holiday and other relief measures totalling **> HK$ 740 billion** granted by banks up to end-2020	Extension of loan tenor for personal lending
Total loans of the banks increased by more than **HK$ 120 billion** in 2020	**> 25,000 applications** for Special 100% Loan Guarantee approved up to end-2020, totalling **HK$ 40 billion**	Reduction of charges for credit card lending
	Overall credit line granted by banks to SMEs grew by **HK$ 6 billion** in 2020	**> 28,000 applications** for relief measures granted up to end-2020, totalling **> HK$ 44 billion**

Corporate Social Responsibility

SME Financing Guarantee Scheme (SFGS) by HKMCI

Among the support initiatives targeting SMEs, the SFGS operated by the HKMCI plays an indispensable role as it helps alleviate cash flow pressures on SMEs. The SFGS covers different products, such as the Special 100% Loan Guarantee, and the 80% and 90% Guarantee Products, which collectively approved around 30,000 applications in 2020. These initiatives have provided crucial support to SMEs, enabling them to carry on their business and maintain the jobs of their employees.

Take for example a wonton noodle shop which has been around for more than half a century. The outstanding traditional noodle-making skills of its experienced chefs are highly valued by patrons who have faithfully visited the shop over the years. Unfortunately, even the best caterers were not spared in the economic downturn caused by the pandemic. With the Special 100% Loan Guarantee, the noodle shop can continue to operate, preserving a unique craft and a much-loved neighbourhood eatery.

Another example was a start-up brewery developed by a young entrepreneur. He is passionate about producing high-quality craft beer in Hong Kong, but was stymied by the heavy blows dealt to his major business partners – such as restaurants and bars – during the pandemic. The special loan has improved the cash flow of the brewery so that the entrepreneur could keep running the business and pursuing his dream.

Interview with a start-up brewery, which is a borrower of the Special 100% Loan Guarantee of the SFGS (in Chinese):

Launched a dedicated email account and an enquiry hotline on the Pre-approved Principal Payment Holiday Scheme for corporate customers

The Pre-approved Principal Payment Holiday Scheme was launched in May to defer all loan principal payments of eligible corporate customers by six months. The Scheme was extended to end-October 2021. The HKMA set up a dedicated email account and enquiry hotline to receive comments and answer queries regarding the Scheme. The dedicated team had since handled more than 410 cases of enquiries and feedback from the public related to the Scheme.

Helped social security recipients residing on the Mainland to receive payments without returning to Hong Kong amid COVID-19

As the risk of COVID-19 remains, imposing restrictions or special arrangements on cross-boundary travel, recipients and appointees of the Portable Comprehensive Social Security Assistance Scheme, Guangdong Scheme and Fujian Scheme residing on the Mainland may not be able to return to Hong Kong to receive their payments. The HKMA worked with the Social Welfare Department (SWD) and HKAB during the year to facilitate their cash withdrawals in the Mainland. Retail banks in Hong Kong have arrangements in place to support the activation of the cash withdrawal function in the Mainland of ATM cards issued by banks in Hong Kong through different bank channels. The recipients and appointees may also set up standing instructions remotely via mail-in, internet banking and mobile banking channels to regularly remit social security payments from their bank accounts in Hong Kong to their designated bank accounts in the Mainland. These arrangements are publicised jointly by the HKMA, the SWD and HKAB.

Interview with the Chinese Manufacturers' Association of Hong Kong (in Chinese):

Corporate Social Responsibility

Promoting financial literacy

The HKMA promotes financial literacy through various channels. There are educational programmes to promote smart and responsible use of banking and financial services by the public. The "Smart Consumers" section on the HKMA website provides useful information and smart tips on a wide range of banking and related products and services. Social media platforms such as Facebook, LinkedIn, YouTube, Instagram and Twitter complement the HKMA website and publications to provide up-to-date information on banking and financial affairs.

The HKMA Information Centre, as the HKMA's key public education and research resource, introduces the work of the HKMA to the community and promotes awareness of monetary and banking matters. Public education webinars and other activities are also organised for students to enhance their financial knowledge and literacy. In addition, the HKMA works closely with the Investor and Financial Education Council to promote financial literacy in Hong Kong via its financial education platform, The Chin Family.

See the *Corporate Functions* chapter for more details about the HKMA's work on promoting financial literacy during the year.

Addressing the needs of special groups

Accessibility of Hong Kong banknotes

The 2018 Series of Banknotes retains accessibility features used in the previous series of banknotes to help the visually impaired differentiate between the denominations. These features include Braille, tactile lines and high-tactility numerals. To further help the visually impaired, the HKMA sponsors a mobile app developed by the Hong Kong Society for the Blind, which uses the phone's camera to scan banknote patterns for the denomination. The app is available for free downloading from the Apple App Store and Google Play Store. The HKMA also sponsors a note-measuring template together with the three note-issuing banks. It can measure the length of banknotes from the 2018 Series and also the other notes currently in circulation. The template is embossed with Braille on one side and symbols on the other. It is freely distributed at voluntary agencies serving the visually impaired community.

Coin Collection Programme

Under the Coin Collection Programme, the HKMA collaborates with the Hong Kong Council of Social Service to deploy Coin Carts to collect coins on flag days for non-governmental organisations.

Accessibility of public information

As part of the HKMA's continuing effort in promoting equal opportunities, various measures are in place to ensure all members of the public have equal access to its services regardless of race. The HKMA website has a clear navigation structure to help users search for content easily. In particular, a dedicated webpage on "Information in Other Languages" under the "Smart Consumers" section provides useful information on banking services in seven languages commonly used by people of different races in Hong Kong, namely Bahasa Indonesia, Hindi, Nepali, Punjabi, Tagalog, Thai and Urdu. Translation work is under way to add Vietnamese to the existing seven languages on the webpage.

The HKMA is committed to ensuring that its website and online publications conform to the World Wide Web Consortium's Web Content Accessibility Guidelines 2.0 Level AA standard to the maximum extent possible, in order to help people with special needs access its online information.

Corporate Social Responsibility

The dedicated webpage on the HKMA's official website provides information in seven languages (i.e. Bahasa Indonesia, Hindi, Nepali, Punjabi, Tagalog, Thai, and Urdu) regarding the following topics:

- Account opening
- Treat Customers Fairly Charter
- Security tips on using ATMs
- General Principles of the Code of Banking Practice
- Dormant accounts
- Financial health
- Deposit Protection Scheme

In 2020, the HKMA started implementing procedures to provide language assistance for members of the public who are not conversant in English or Chinese to make enquiries or complaints via HKMA hotlines, and for visitors of the HKMA Information Centre. The interpretation services will cover eight languages, namely Bahasa Indonesia, Hindi, Nepali, Punjabi, Tagalog, Thai, Urdu and Vietnamese.

Corporate Social Responsibility

Volunteer and charitable activities

The HKMA supports community services by taking part in volunteer and charitable activities.

Although many volunteer activities were suspended or cancelled due to the pandemic, HKMA staff members continued to contribute to the community by participating in activities like flag-selling, Green Low Carbon Day, Love Teeth Day, Skip Lunch Day, Dress Casual Day, Aniform Day, and regular campaigns that collected clothes, toys and other reusable items for donation to charities.

HKMA staff and his family member join the "Free Meal Distribution" organised by the Banyan Services Association.

Charitable events participated in by the HKMA Volunteer Team in 2020

"Free Meal Distribution" *organised by the Banyan Services Association*

"Caring call service" *organised by the Agency for Volunteer Service to express care and send warm greetings to the elderly over the phone*

"Fun Learning in Chinese – Tutor" *organised by the Agency for Volunteer Service to provide Chinese homework tutorials to students of different races aged six to 12 through online video calls*

Corporate Social Responsibility

Caring organisation

In recognition of its commitment to care for the community, the HKMA was accredited with the "10 Years Plus Caring Organisation Logo" by the Hong Kong Council of Social Service for the 14th consecutive year.

HKMA staff members made charitable donations to help the community fight against COVID-19. They donated a total of HK$1.95 million to underprivileged children and families, residents of caged homes, the elderly, the physically impaired as well as other charitable causes.

The story of a staff member who participated in *"Fun Learning in Chinese – Tutor" organised by the Agency for Volunteer Service*

"Providing Chinese homework tutorials to students of different races during the COVID-19 pandemic via video conference was a unique and challenging experience, since it was not easy to ensure that the children could fully understand how to pronounce or write Chinese words in an online setting. By learning how to fully utilise different video conferencing functions such as the online whiteboard, and adapting some teaching methods, I am glad to be able to help the children with their Chinese schoolwork and, in particular, assist one of my tutees in achieving significant improvement in Chinese dictation. I am grateful for this opportunity to participate in such a meaningful volunteer work. The experience shows how technology can enable us to help those in need during the pandemic in innovative ways."

The story of a staff member who participated in the *"Caring call service" organised by the Agency for Volunteer Service*

"This experience tells me that all of us would inevitably grow older and weaker. Luckily, many in the community are willing to help the elderly, for example, by delivering to them meals, sanitisers and masks, and to show love and care, especially to those who live alone. We can also be more attentive to the physical and mental needs of the elderly in our neighbourhoods and always stand ready to help. We can make a big difference to their lives by doing so!"

ENVIRONMENT

Green office measures

The HKMA has an environmental policy in place to promote green office practices and awareness of environmental issues. Green office measures implemented in 2020 included:

Paper/Photocopying/Printing

- Distributing electronic copies of documents and meeting materials, in particular, digitalised the meeting materials of EFAC and its Sub-Committees;
- Adopting automated means for internal processes, including e-remittance advice for staff;
- Using recycled paper and envelopes;
- Avoiding the use of paper cups; and
- Using environmentally friendly paper and ink for major HKMA publications.

Electricity

- Installed energy-saving devices, including LED lights and auto-timers in refurbished offices to control indoor lighting;
- Switching off computers, printers, lights, audio-visual systems and other electrical appliances when not in use; and
- Using the power-saving mode in water dispensers, electric punching machines and shredders.

Recycling

- Making good use of recycled bins to collect different types of waste, including paper, cans, bottles, batteries, CDs and ink cartridges;
- Placed more bins in pantries to recycle plastic lunch boxes; and
- Participating in green campaigns with building managers, such as recycling of red packets.

Corporate Social Responsibility

WORKPLACE

The COVID-19 pandemic has presented an unprecedented challenge to the workplace. Across the whole of the HKMA, concerted efforts were made to ensure the normal operation of essential functions while special work arrangements were deployed to safeguard the well-being of staff. Split-team operations, work-from-home arrangements, and staggered work and lunch hours were scheduled to reduce people flow in the office and bunching during peak hours. Social distancing was practised in the office and video conferences were held as far as possible. Office hygiene was constantly monitored and maintained at a high standard. Staff received regular updates on business contingency measures and could obtain prompt advice on a dedicated hotline. Depending on the latest developments of the pandemic, the HKMA will stay agile and adjust the special working arrangements as appropriate.

Corporate Social Responsibility

Equal opportunities policy

The HKMA is an equal opportunities employer. We believe that everyone should be able to work in an environment free of discrimination, harassment, vilification and victimisation. The equal opportunities policy applies to job advertisements, recruitment, terms and conditions of employment, performance assessment, promotion, transfer, training, dismissal, grievance procedures and general conduct.

Key statistics on diversity

People are central to the work of the HKMA. We value the diversity of our workforce, which has a balanced gender representation and a spectrum of different age groups.

Female representation in senior management, that is, Executive Director and above, was 37.5% as of January 2021.

Human capital key statistics on 1 January 2021

Chart 1 Gender of staff

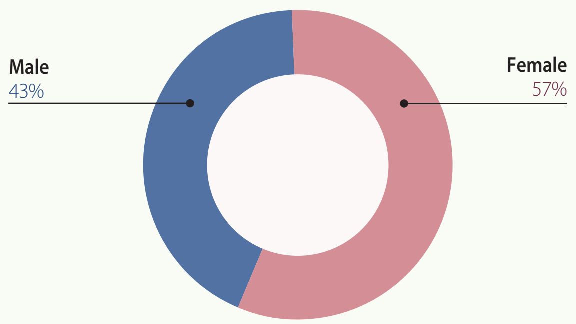
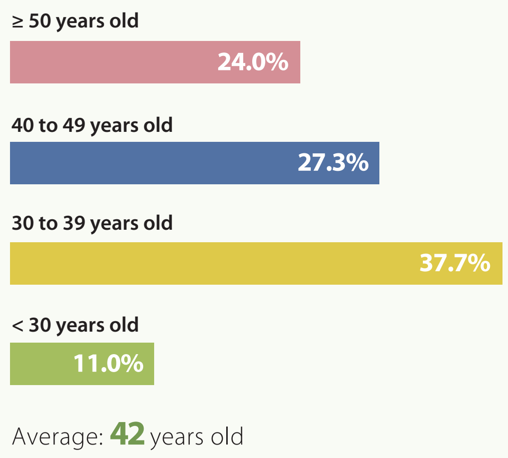


Chart 2 Age of staff

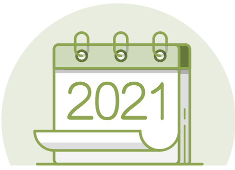


Staff well-being

The HKMA promotes work-life balance and cares about the health and work safety of its staff. Regular talks on healthy lifestyles, stress management and workplace safety are organised and indoor air quality is monitored. Annual medical check-ups and flu vaccinations are arranged. The HKMA also sponsors a professional counselling service provided by experienced psychologists and social workers. Prior to the pandemic, the HKMA also held activities every year to enhance the staff's physical wellness, promote their sense of belonging, and foster cooperation and team spirit. These staff activities included interest classes, and inter-organisational and cross-divisional activities such as basketball and football competitions. Because of the pandemic, the activities were suspended in 2020.

Corporate Social Responsibility

PLANS FOR 2021 AND BEYOND



The HKMA will continue to address climate change risks and promote green finance development in Hong Kong in different capacities. As a banking supervisor, the HKMA will further promote green and sustainable banking by setting supervisory expectations and requirements for the banking industry. As the manager of the Exchange Fund, the HKMA will further develop and implement its RI policy by incorporating ESG factors into investment decisions and processes. As a market facilitator, the HKMA will assist the Government in issuing more green bonds, enhance the green finance capacity of market players, and position Hong Kong as a green finance hub globally.

The HKMA will also keep working with the banking industry to make banking services more accessible to different segments of the community, and promote financial literacy and inclusion via various channels.

Within the institution, the HKMA will step up green office measures, including installing motion sensors in common and other suitable areas to reduce electricity use, and working with the building managers to collect waste for recycling. It will also continue to support and participate in charitable activities and volunteer work, and foster a caring and healthy workplace for staff.

Amid fluctuations in the pandemic situation, the HKMA will review the effectiveness of existing support measures provided to banks, corporates, and individual customers, and refine and adjust them as appropriate. Regarding its public services, the HKMA will also keep monitoring the situation and make improvements where necessary, having regard to feedback and suggestions from its staff and members of the public.

The Exchange Fund

- Report of the Director of Audit
- Exchange Fund Financial Statements

Report of the Director of Audit

Audit Commission
The Government of the Hong Kong Special Administrative Region

Independent Auditor's Report
To the Financial Secretary

Opinion

I certify that I have audited the financial statements of the Exchange Fund and its subsidiaries ("the Group") set out on pages 187 to 289, which comprise the balance sheets of the Exchange Fund and of the Group as at 31 December 2020, and their income and expenditure accounts, statements of comprehensive income, statements of changes in equity and statements of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the financial statements give a true and fair view of the financial position of the Fund and of the Group as at 31 December 2020, and of their financial performance and cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in accordance with the directive of the Chief Executive made under section 7 of the Exchange Fund Ordinance (Cap. 66).

Basis for opinion

I conducted my audit in accordance with the directive of the Chief Executive made under section 7 of the Exchange Fund Ordinance and the Audit Commission auditing standards. My responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of my report. I am independent of the Group in accordance with those standards, and I have fulfilled my other ethical responsibilities in accordance with those standards. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key audit matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the financial statements for the year ended 31 December 2020. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Report of the Director of Audit (continued)

Key audit matter	How the matter was addressed in my audit
Valuation of financial assets and financial liabilities at fair value *Refer to notes 2.5, 2.6 and 38.1 to the financial statements.*	
As at 31 December 2020, the Group had financial assets totalling HK$4,343,925 million and financial liabilities totalling HK$1,076,349 million valued at fair value. For 90% of these financial assets and all these financial liabilities, their fair values were quoted prices in active markets for identical assets or liabilities (Level 1 inputs) or were estimated using valuation techniques with inputs based on observable market data (Level 2 inputs). For the remaining 10% of these financial assets, their fair values were estimated using valuation techniques with inputs not based on observable market data (Level 3 inputs). Such financial assets totalled HK$421,325 million, including mainly unlisted investment funds. Given the substantial amount and the estimations involved, valuation of financial assets and financial liabilities at fair value was a key audit matter.	The audit procedures on valuation of financial assets and financial liabilities at fair value included: – obtaining an understanding of the procedures, including relevant controls, for valuing different categories of financial assets and financial liabilities; – evaluating and testing the controls, including relevant application controls of the computer systems; – obtaining external confirmations on the valuation, existence, rights and obligations and completeness of the financial assets and financial liabilities; – where quoted market prices were used, verifying the prices to independent sources; – where valuation techniques with inputs based on observable market data were used, evaluating the appropriateness of the valuation methodologies and the reasonableness of the assumptions, and verifying the inputs to independent sources; and – where valuation techniques with inputs not based on observable market data were used, evaluating the appropriateness of the valuation methodologies and the reasonableness of the assumptions and inputs.
Valuation of investment properties at fair value *Refer to notes 2.11, 18 and 19 to the financial statements.*	
The Group's investment properties were stated at their fair values, totalling HK$23,135 million as at 31 December 2020. The Group also had interests in twenty two joint ventures totalling HK$40,707 million, whose principal activities were holding overseas investment properties. The fair values of these investment properties, whether held by the Group directly or by joint ventures, were mainly determined based on valuations by independent professional valuers. Such valuations involved significant judgments and estimates, including the valuation methodologies and the assumptions used.	The audit procedures on valuation of investment properties at fair value included: – obtaining and reviewing the valuation reports of investment properties held by the Group directly or by joint ventures, and verifying that the fair values were based on the valuations stated in the valuation reports; – assessing the independence and qualifications of the valuers; and – evaluating the appropriateness of the valuation methodologies and the reasonableness of the assumptions and inputs.

Report of the Director of Audit (continued)

Other information

The Monetary Authority is responsible for the other information. The other information comprises all the information included in the 2020 Annual Report of the Hong Kong Monetary Authority, other than the financial statements and my auditor's report thereon.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

Responsibilities of the Monetary Authority and the Audit Sub-Committee of the Exchange Fund Advisory Committee for the financial statements

The Monetary Authority is responsible for the preparation of the financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the directive of the Chief Executive made under section 7 of the Exchange Fund Ordinance, and for such internal control as the Monetary Authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Monetary Authority is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

The Audit Sub-Committee of the Exchange Fund Advisory Committee is responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

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

As part of an audit in accordance with the Audit Commission auditing standards, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

Report of the Director of Audit (continued)

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control;

- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Monetary Authority;

- conclude on the appropriateness of the Monetary Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern;

- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation; and

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the Audit Sub-Committee of the Exchange Fund Advisory Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the Audit Sub-Committee of the Exchange Fund Advisory Committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the Audit Sub-Committee of the Exchange Fund Advisory Committee, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

John Chu
Director of Audit

Audit Commission
26th Floor
Immigration Tower
7 Gloucester Road
Wanchai, Hong Kong

1 April 2021

Contents

Exchange Fund – Income and Expenditure Account

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Note	Group 2020	Group 2019	Fund 2020	Fund 2019
INCOME					
Interest income		**32,784**	69,579	**31,179**	67,811
Dividend income		**14,662**	16,456	**11,799**	13,850
Income from investment properties		**867**	1,374	**–**	–
Net realised and unrealised gains		**194,301**	191,446	**137,671**	158,239
Net exchange gain/(loss)		**9,708**	(13,923)	**9,607**	(13,019)
Investment income	4(a)	**252,322**	264,932	**190,256**	226,881
Bank licence fees		**127**	128	**127**	128
Net premiums earned	5	**2,326**	1,849	**–**	–
Other income		**500**	503	**83**	82
TOTAL INCOME		**255,275**	267,412	**190,466**	227,091
EXPENDITURE					
Interest expense on placements by Fiscal Reserves, HKSAR Government funds and statutory bodies	4(b)	**(81,299)**	(62,793)	**(81,299)**	(62,793)
Other interest expense	4(c)	**(10,257)**	(20,902)	**(10,147)**	(20,025)
Operating expenses	4(d)	**(6,210)**	(5,888)	**(4,926)**	(4,673)
Note and coin expenses	4(e)	**(382)**	(548)	**(382)**	(548)
(Charge for)/Reversal of impairment allowances	4(f)	**(97)**	(92)	**–**	1
Net claims incurred, benefits paid and movement in policyholders' liabilities	5	**(3,542)**	(2,021)	**–**	–
TOTAL EXPENDITURE		**(101,787)**	(92,244)	**(96,754)**	(88,038)
SURPLUS BEFORE SHARE OF (LOSS)/PROFIT OF ASSOCIATES AND JOINT VENTURES		**153,488**	175,168	**93,712**	139,053
Share of (loss)/profit of associates and joint ventures, net of tax		**(3,211)**	3,088	**–**	–
Gain on disposal of an associate		**–**	47	**–**	–
SURPLUS BEFORE TAXATION		**150,277**	178,303	**93,712**	139,053
Income tax	6	**45**	(657)	**–**	–
SURPLUS FOR THE YEAR		**150,322**	177,646	**93,712**	139,053
SURPLUS FOR THE YEAR ATTRIBUTABLE TO:					
Owner of the Fund		**150,501**	177,332	**93,712**	139,053
Non-controlling interests		**(179)**	314	**–**	–
		150,322	177,646	**93,712**	139,053

The notes on pages 195 to 289 form part of these financial statements.

Exchange Fund – Statement of Comprehensive Income

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Group 2020	Group 2019	Fund 2020	Fund 2019
SURPLUS FOR THE YEAR	**150,322**	177,646	**93,712**	139,053
OTHER COMPREHENSIVE INCOME				
Items that will not be reclassified to income and expenditure account				
Equity securities measured at fair value through other comprehensive income				
– fair value changes on revaluation	**160**	66	**160**	66
Items that are or may be reclassified subsequently to income and expenditure account				
Debt securities measured at fair value through other comprehensive income				
– fair value changes on revaluation	**(16)**	26	**–**	–
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures	**2,434**	10	**–**	–
Translation reserve released on disposal of an associate	**–**	(17)	**–**	–
Translation reserve released on dissolution of a subsidiary	**13**	–	**–**	–
OTHER COMPREHENSIVE INCOME FOR THE YEAR, NET OF TAX	**2,591**	85	**160**	66
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	**152,913**	177,731	**93,872**	139,119
TOTAL COMPREHENSIVE INCOME FOR THE YEAR ATTRIBUTABLE TO:				
Owner of the Fund	**153,073**	177,431	**93,872**	139,119
Non-controlling interests	**(160)**	300	**–**	–
	152,913	177,731	**93,872**	139,119

The notes on pages 195 to 289 form part of these financial statements.

Exchange Fund – Balance Sheet

as at 31 December 2020

(Expressed in millions of Hong Kong dollars)	Note	Group 2020	Group 2019	Fund 2020	Fund 2019
ASSETS					
Cash and money at call	8	**148,947**	181,527	**145,255**	180,741
Placements with banks and other financial institutions	9	**143,149**	153,369	**121,796**	125,201
Financial assets measured at fair value through income and expenditure account	10	**4,335,548**	3,866,803	**3,981,157**	3,586,245
Financial assets measured at fair value through other comprehensive income	11	**5,789**	6,131	**1,370**	1,210
Derivative financial instruments	12(a)	**2,588**	1,289	**1,791**	1,088
Debt securities measured at amortised cost	13	**9,730**	12,034	**–**	–
Loan portfolio	14	**49,433**	9,310	**–**	–
Gold	15	**979**	793	**979**	793
Other assets	16	**45,545**	127,666	**43,178**	123,833
Interests in subsidiaries	17	**–**	–	**200,706**	184,654
Interests in associates and joint ventures	18	**42,718**	46,528	**–**	–
Investment properties	19	**23,135**	22,481	**–**	–
Property, plant and equipment	20	**3,441**	3,261	**3,016**	2,965
TOTAL ASSETS		**4,811,002**	4,431,192	**4,499,248**	4,206,730
LIABILITIES AND EQUITY					
Certificates of Indebtedness	21	**556,204**	516,062	**556,204**	516,062
Government-issued currency notes and coins in circulation	21	**12,844**	12,988	**12,844**	12,988
Balance of the banking system	22	**457,466**	67,688	**457,466**	67,688
Placements by banks and other financial institutions	23	**87,650**	35,000	**87,650**	35,000
Placements by Fiscal Reserves	24	**881,832**	1,137,490	**881,832**	1,137,490
Placements by HKSAR Government funds and statutory bodies	25	**342,471**	328,406	**342,471**	328,406
Placements by subsidiaries	26	**–**	–	**15,469**	12,597
Exchange Fund Bills and Notes issued	27	**1,068,880**	1,152,327	**1,068,880**	1,152,327
Derivative financial instruments	12(a)	**7,469**	6,212	**7,023**	5,728
Bank loans	28	**12,050**	11,348	**–**	–
Other debt securities issued	29	**62,587**	40,370	**–**	–
Other liabilities	30	**248,090**	202,720	**226,111**	189,018
Total liabilities		**3,737,543**	3,510,611	**3,655,950**	3,457,304

Exchange Fund – Balance Sheet (continued)

as at 31 December 2020

(Expressed in millions of Hong Kong dollars)	Group 2020	Group 2019	Fund 2020	Fund 2019
Accumulated surplus	**1,070,757**	920,256	**842,421**	748,709
Revaluation reserve	**886**	742	**877**	717
Translation reserve	**(100)**	(2,528)	**–**	–
Total equity attributable to owner of the Fund	**1,071,543**	918,470	**843,298**	749,426
Non-controlling interests	**1,916**	2,111	**–**	–
Total equity	**1,073,459**	920,581	**843,298**	749,426
TOTAL LIABILITIES AND EQUITY	**4,811,002**	4,431,192	**4,499,248**	4,206,730

Eddie Yue
Monetary Authority
1 April 2021

The notes on pages 195 to 289 form part of these financial statements.

Exchange Fund – Statement of Changes in Equity

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Attributable to owner of the Fund					
	Accumulated surplus	Revaluation reserve	Translation reserve	Total attributable to owner of the Fund	Non-controlling interests	Total
Group						
At 1 January 2019	742,924	650	(2,535)	741,039	2,144	743,183
Surplus for the year	177,332	–	–	177,332	314	177,646
Other comprehensive income for the year						
Fair value changes on financial assets measured at fair value through other comprehensive income	–	92	–	92	–	92
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures	–	–	24	24	(14)	10
Translation reserve released on disposal of an associate	–	–	(17)	(17)	–	(17)
Total comprehensive income for the year	177,332	92	7	177,431	300	177,731
Capital distribution to non-controlling interests	–	–	–	–	(326)	(326)
Dividends paid to non-controlling interests	–	–	–	–	(7)	(7)
At 31 December 2019	920,256	742	(2,528)	918,470	2,111	920,581
At 1 January 2020	**920,256**	**742**	**(2,528)**	**918,470**	**2,111**	**920,581**
Surplus for the year	**150,501**	**–**	**–**	**150,501**	**(179)**	**150,322**
Other comprehensive income for the year						
Fair value changes on financial assets measured at fair value through other comprehensive income	**–**	**144**	**–**	**144**	**–**	**144**
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures	**–**	**–**	**2,415**	**2,415**	**19**	**2,434**
Translation reserve released on dissolution of a subsidiary	**–**	**–**	**13**	**13**	**–**	**13**
Total comprehensive income for the year	**150,501**	**144**	**2,428**	**153,073**	**(160)**	**152,913**
Capital distribution to non-controlling interests	**–**	**–**	**–**	**–**	**(25)**	**(25)**
Derecognition of non-controlling interests on dissolution of a subsidiary	**–**	**–**	**–**	**–**	**(1)**	**(1)**
Dividends paid to non-controlling interests	**–**	**–**	**–**	**–**	**(9)**	**(9)**
At 31 December 2020	**1,070,757**	**886**	**(100)**	**1,071,543**	**1,916**	**1,073,459**

Exchange Fund – Statement of Changes in Equity (continued)

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Accumulated surplus	Revaluation reserve	Total attributable to owner of the Fund
Fund			
At 1 January 2019	609,656	651	610,307
Surplus for the year	139,053	–	139,053
Other comprehensive income for the year			
Fair value changes on financial assets measured at fair value through other comprehensive income	–	66	66
Total comprehensive income for the year	139,053	66	139,119
At 31 December 2019	748,709	717	749,426
At 1 January 2020	**748,709**	**717**	**749,426**
Surplus for the year	**93,712**	**–**	**93,712**
Other comprehensive income for the year			
Fair value changes on financial assets measured at fair value through other comprehensive income	**–**	**160**	**160**
Total comprehensive income for the year	**93,712**	**160**	**93,872**
At 31 December 2020	**842,421**	**877**	**843,298**

The notes on pages 195 to 289 form part of these financial statements.

Exchange Fund – Statement of Cash Flows

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Note	Group 2020	Group 2019	Fund 2020	Fund 2019
Cash flows from operating activities					
Surplus before taxation		**150,277**	178,303	**93,712**	139,053
Adjustments for:					
Interest income	4(a)	**(32,784)**	(69,579)	**(31,179)**	(67,811)
Dividend income	4(a)	**(14,662)**	(16,456)	**(11,799)**	(13,850)
Change in fair value of investment properties	4(a)	**356**	(46)	**–**	–
Gain on disposal of debt securities measured at amortised cost	4(a)	**(11)**	–	**–**	–
Interest expense	4(b) & 4(c)	**91,556**	83,695	**91,446**	82,818
Depreciation	4(d)	**376**	360	**251**	247
Charge for/(Reversal of) impairment allowances	4(f)	**97**	92	**–**	(1)
Share of loss/(profit) of associates and joint ventures		**3,211**	(3,088)	**–**	–
Gain on disposal of an associate		**–**	(47)	**–**	–
Loss on disposal of property, plant and equipment		**–**	1	**–**	–
Elimination of exchange differences and other non-cash items		**(4,999)**	4,326	**(3,185)**	2,458
Interest received		**34,718**	68,661	**33,027**	66,996
Dividends received		**14,693**	16,356	**11,609**	13,669
Interest paid		**(51,982)**	(77,895)	**(51,407)**	(76,966)
Income tax paid		**(153)**	(120)	**–**	–
		190,693	184,563	**132,475**	146,613
Change in fair value of derivatives and other debt securities issued		**785**	5,273	**616**	5,150
Change in carrying amount of:					
– placements with banks and other financial institutions		**7,219**	3,459	**(1,272)**	4,698
– financial assets measured at fair value through income and expenditure account		**(498,230)**	(194,288)	**(427,253)**	(141,852)
– loan portfolio		**(40,194)**	(1,906)	**–**	–
– gold		**(186)**	(123)	**(186)**	(123)
– other assets		**80,269**	(26,693)	**78,752**	(25,275)
– Certificates of Indebtedness, government-issued currency notes and coins in circulation		**39,998**	30,745	**39,998**	30,745
– balance of the banking system		**389,778**	(10,896)	**389,778**	(10,896)
– placements by banks and other financial institutions		**52,650**	(21,346)	**52,650**	(21,346)
– placements by Fiscal Reserves		**(255,658)**	(35,994)	**(255,658)**	(35,994)
– placements by HKSAR Government funds and statutory bodies		**14,065**	7,872	**14,065**	7,872
– placements by subsidiaries		**–**	–	**2,872**	4,887
– Exchange Fund Bills and Notes issued		**(83,447)**	22,717	**(83,447)**	22,717
– other liabilities		**5,662**	8,334	**(3,077)**	6,641
Net cash used in operating activities		**(96,596)**	(28,283)	**(59,687)**	(6,163)

Exchange Fund – Statement of Cash Flows (continued)

for the year ended 31 December 2020

(Expressed in millions of Hong Kong dollars)	Note	Group 2020	Group 2019	Fund 2020	Fund 2019
Cash flows from investing activities					
Investment in subsidiaries		–	–	(70)	(80)
Loans to subsidiaries		–	–	(15,982)	(14,828)
Decrease/(Increase) in interests in associates and joint ventures		1,727	(726)	–	–
Proceeds from sale or redemption of financial assets measured at fair value through other comprehensive income		1,136	1,846	–	–
Purchase of financial assets measured at fair value through other comprehensive income		(623)	(1,680)	–	–
Proceeds from sale or redemption of debt securities measured at amortised cost		3,037	1,631	–	–
Purchase of debt securities measured at amortised cost		(773)	(2,176)	–	–
Proceeds from disposal of an associate		–	1,683	–	–
Proceeds from disposal of investment properties		–	3,886	–	–
Additions of investment properties		(105)	(107)	–	–
Additions of property, plant and equipment		(156)	(152)	(99)	(97)
Dividends received from subsidiaries		–	–	221	81
Net cash from/(used in) investing activities		4,243	4,205	(15,930)	(14,924)
Cash flows from financing activities					
Bank loans raised	31(c)	183	418	–	–
Repayment of bank loans	31(c)	–	(2,104)	–	–
Proceeds from issue of other debt securities	31(c)	58,244	31,844	–	–
Redemption of other debt securities issued	31(c)	(37,027)	(29,474)	–	–
Principal portion of lease payments	31(c)	(122)	(115)	(72)	(62)
Capital distribution to non-controlling interests		(25)	(326)	–	–
Dividends paid to non-controlling interests		(9)	(7)	–	–
Net cash from/(used in) financing activities		21,244	236	(72)	(62)
Net decrease in cash and cash equivalents		(71,109)	(23,842)	(75,689)	(21,149)
Cash and cash equivalents at 1 January		356,420	382,717	343,482	367,089
Effect of foreign exchange rate changes		3,187	(2,455)	3,185	(2,458)
Cash and cash equivalents at 31 December	31(a)	288,498	356,420	270,978	343,482

The notes on pages 195 to 289 form part of these financial statements.

Exchange Fund – Notes to the Financial Statements

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

1 PRINCIPAL ACTIVITIES

The Monetary Authority, under delegated authority from the Financial Secretary as Controller of the Exchange Fund (the Fund), manages the Fund in accordance with the provisions of the Exchange Fund Ordinance (Cap. 66). The principal activities of the Fund are safeguarding the exchange value of the currency of Hong Kong and maintaining the stability and integrity of Hong Kong's monetary and financial systems.

The assets of the Fund are managed as four portfolios: the Backing Portfolio, the Investment Portfolio, the Long-Term Growth Portfolio and the Strategic Portfolio. The assets of the Backing Portfolio fully match the Monetary Base, under Hong Kong's Currency Board system. The Investment Portfolio is invested primarily in the bond and equity markets of the member countries of the Organisation for Economic Co-operation and Development (OECD). The Long-Term Growth Portfolio holds private equity and real estate investments. The Strategic Portfolio holds shares in Hong Kong Exchanges and Clearing Limited acquired by the Hong Kong Special Administrative Region (HKSAR) Government for the account of the Fund for strategic purposes. Operating segment information is set out in note 32.

2 SIGNIFICANT ACCOUNTING POLICIES

2.1 Statement of compliance

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards (HKFRSs), which is a collective term that includes all applicable individual HKFRSs, Hong Kong Accounting Standards and Interpretations issued by the Hong Kong Institute of Certified Public Accountants (HKICPA), and accounting principles generally accepted in Hong Kong. A summary of the significant accounting policies adopted by the Fund and its subsidiaries (together referred to as the Group) is set out below.

The HKICPA has issued certain new or revised HKFRSs that are first effective or available for early adoption for the current accounting period of the Group. Note 3 provides information on the changes, if any, in accounting policies resulting from initial application of these developments to the extent that they are relevant to the Group for the current and prior accounting periods reflected in these financial statements.

2.2 Basis of preparation of the financial statements

The Group financial statements include the financial statements of the Group as well as the Group's interests in associates and joint ventures. The principal activities of the principal subsidiaries, associates and joint ventures are shown in notes 17 and 18.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The measurement basis used in the preparation of the financial statements is historical cost except for the following assets and liabilities that are measured at fair value:

- derivative financial instruments (note 2.6);
- financial assets and financial liabilities measured at fair value through income and expenditure account (note 2.6);
- financial assets measured at fair value through other comprehensive income (note 2.6);
- gold (note 2.10); and
- investment properties (note 2.11).

The preparation of financial statements in conformity with HKFRSs requires management to make judgements, estimates and assumptions that affect the application of policies and the reported amounts of assets, liabilities, income and expenditure. The estimates and associated assumptions are based on experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of HKFRSs that have significant effect on the financial statements and major sources of estimation uncertainty are disclosed in note 2.19.

Certain comparative figures for 2019 have been reclassified to conform to the current year presentation of the Group financial statements.

2.3 Subsidiaries and non-controlling interests

A subsidiary is an entity controlled by the Group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. When assessing whether the Group has power, only substantive rights (held by the Group and other parties) are considered.

An investment in a subsidiary is consolidated into the Group financial statements from the date that control commences until the date that control ceases.

Intra-group balances, transactions and cash flows and any unrealised profits and losses arising from intra-group transactions are eliminated in full in preparing the Group financial statements.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Fund, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. Non-controlling interests are presented in the Group balance sheet within equity, separately from equity attributable to the owner of the Fund. Non-controlling interests in the results of the Group are presented on the face of the Group income and expenditure account and statement of comprehensive income as an allocation of the surplus or deficit and total comprehensive income or loss for the year between non-controlling interests and the owner of the Fund.

In the balance sheet of the Fund, its investments in subsidiaries are stated at cost less impairment losses, if any (note 2.14).

2.4 Associates and joint ventures

An associate is an entity in which the Group has significant influence, but not control or joint control, over its management, through its power to participate in the financial and operating policy decisions.

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

An interest in an associate or a joint venture is accounted for in the Group financial statements under the equity method and is initially recorded at cost, adjusted for any excess or deficit of the Group's share of the acquisition-date fair values of the investee's identifiable net assets over the cost of the investment, if any. Thereafter, the investment is adjusted for the post acquisition change in the Group's share of the net assets of the associate or the joint venture and any impairment loss relating to the investment.

The Group income and expenditure account and statement of comprehensive income include the Group's share of the post-tax results of the associates and the joint ventures for the year. When the Group's share of losses exceeds its interest in the associates or the joint ventures, the Group's interest is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associates or the joint ventures. For this purpose, the Group's interest is the carrying amount of the investment under the equity method together with the Group's long-term interests that in substance form part of the Group's net investment in the associates or the joint ventures.

Unrealised profits and losses resulting from transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interests in the associates or the joint ventures.

When the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in the associate or the joint venture, with a resulting gain or loss being recognised in the Group income and expenditure account. Any interest retained in the associate or the joint venture at the date when significant influence or joint control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (note 2.6).

In the balance sheet of the Fund, interests in associates and joint ventures are stated at cost less impairment losses, if any (note 2.14).

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.5 Fair value measurement

The Group measures certain financial instruments, all investment properties and gold at fair value at each reporting date. The fair values of financial instruments measured at amortised cost are disclosed in note 38.2.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

(a) in the principal market for the asset or liability; or

(b) in the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group.

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

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

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

The Group measures fair values using the following fair value hierarchy that reflects the significance of inputs used in making the measurements:

(a) Level 1 – fair values are quoted prices (unadjusted) in active markets for identical assets or liabilities;

(b) Level 2 – fair values are determined involving inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices); and

(c) Level 3 – fair values are determined with inputs that are not based on observable market data (unobservable inputs).

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

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6 Financial assets and financial liabilities

2.6.1 Initial recognition and measurement

The Group recognises financial assets and financial liabilities on the date it becomes a party to the contractual provisions of the instrument. Regular way purchases and sales of financial instruments are recognised on trade date, the date on which the Group commits to purchase or sell the instruments.

At initial recognition, financial assets and financial liabilities are measured at fair value plus or minus, in the case of a financial asset or financial liability not at fair value through income and expenditure account, transaction costs that are directly attributable to the acquisition of the financial assets or the issue of the financial liabilities. Transaction costs of financial assets and financial liabilities at fair value through income and expenditure account are expensed immediately.

2.6.2 Classification and subsequent measurement

The Group classifies its financial assets into three categories for determining the subsequent measurement methods, on the basis of both the Group's business model for managing the assets and the contractual cash flow characteristics of the assets. The three measurement categories are:

– fair value through income and expenditure account (which is equivalent to the term "fair value through profit or loss" under HKFRS 9 "Financial Instruments");

– fair value through other comprehensive income; and

– amortised cost.

The Group classifies its financial liabilities as subsequently measured at fair value through income and expenditure account, or other financial liabilities.

Financial liabilities measured at fair value through income and expenditure account include those that are irrevocably designated by the Group at initial recognition as at fair value through income and expenditure account when doing so results in more relevant information because either:

(a) the designation eliminates or significantly reduces an accounting mismatch which would otherwise arise; or

(b) a group of financial liabilities or financial assets and liabilities is managed and its performance is evaluated on a fair value basis in accordance with a documented risk management or investment strategy.

Financial liabilities measured at fair value through income and expenditure account also include contracts that contain embedded derivatives which significantly modify the cash flows otherwise required.

The Group reclassifies a financial asset when and only when it changes its business model for managing the asset. A financial liability is not reclassified.

An analysis of the Group's financial assets and financial liabilities by category is set out in note 7.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6.2.1 Debt securities

The Group classifies its debt securities as measured at (a) amortised cost, (b) fair value through other comprehensive income or (c) fair value through income and expenditure account, depending on the Group's business model in managing them and their contractual cash flow characteristics.

(a) Debt securities measured at amortised cost

Debt securities are measured at amortised cost if they are held within a business model whose objective is to hold them for collection of contractual cash flows and the contractual cash flows represent solely payments of principal and interest. Debt securities in this category are initially recognised at fair value plus directly attributable transaction costs and subsequently carried at amortised cost. Interest income on these debt securities is recognised in the income and expenditure account using the effective interest method.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating and recognising the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial asset or financial liability to the gross carrying amount of the financial asset or to the amortised cost of the financial liability. When calculating the effective interest rate, the Group estimates cash flows by considering all contractual terms of the financial instrument but does not consider the expected credit losses. The calculation includes all fees received or paid between parties to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums or discounts.

The measurement of loss allowances for debt securities measured at amortised cost is based on the expected credit loss model as described in note 2.9.

(b) Debt securities measured at fair value through other comprehensive income

Debt securities are measured at fair value through other comprehensive income if they are held within a business model whose objective is achieved by both collecting contractual cash flows and selling them and the contractual cash flows represent solely payments of principal and interest. Debt securities in this category are initially recognised at fair value plus directly attributable transaction costs and subsequently carried at fair value. Movements in the carrying amount of these securities are recognised in other comprehensive income, except for interest income, foreign exchange gains or losses, and impairment losses or reversals which are recognised in the income and expenditure account. Upon derecognition, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to the income and expenditure account.

The measurement of loss allowances for debt securities measured at fair value through other comprehensive income is based on the expected credit loss model as described in note 2.9. The loss allowances are recognised in other comprehensive income and do not reduce the carrying amount of such debt securities in the balance sheet.

(c) Debt securities measured at fair value through income and expenditure account

Debt securities that do not meet the criteria for being measured at amortised cost or fair value through other comprehensive income are measured at fair value through income and expenditure account. Debt securities in this category are initially recognised at fair value with transaction costs immediately charged to the income and expenditure account, and subsequently carried at fair value. Changes in fair value of these securities are recognised in the income and expenditure account in the period in which they arise.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6.2.2 Equity securities and investment funds

Equity securities are measured at fair value through income and expenditure account, unless an election is made to designate them at fair value through other comprehensive income upon initial recognition.

For equity securities measured at fair value through income and expenditure account, changes in fair value are recognised in the income and expenditure account in the period in which they arise.

The Group classifies certain equity securities, which are held for strategic or longer term investment purposes, as fair value through other comprehensive income. The election of fair value through other comprehensive income is made upon initial recognition on an instrument-by-instrument basis and once made is irrevocable. Gains and losses on these equity securities are recognised in other comprehensive income, which are not reclassified subsequently to the income and expenditure account, including when they are derecognised. Dividends on such investments are recognised in the income and expenditure account unless the dividends clearly represent a recovery of part of the cost of the investment.

Investment funds are measured at fair value through income and expenditure account. Changes in fair value of these funds are recognised in the income and expenditure account in the period in which they arise.

2.6.2.3 Derivative financial instruments and hedge accounting

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently measured at their fair values. Fair values are obtained from market prices in active markets, including recent market transactions, and valuation techniques, including discounted cash flow models and options pricing models, as appropriate. Derivatives are carried as assets when their fair value is positive and as liabilities when their fair value is negative.

The best evidence of the fair value of a derivative at initial recognition is the transaction price (i.e. the fair value of the consideration given or received).

Certain derivatives embedded in other financial instruments are treated as separate derivatives when their economic characteristics and risks are not closely related to those of the host contract and the host contract is not carried at fair value through income and expenditure account. These embedded derivatives are measured at fair value through income and expenditure account.

The method of recognising the resulting fair value gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either (a) hedges of the fair value of recognised assets or liabilities or unrecognised firm commitments (fair value hedge) or (b) hedges of highly probable future cash flows attributable to a recognised asset or liability, or a forecast transaction (cash flow hedge). Hedge accounting is used for derivatives designated in this way provided that certain criteria are met.

The Group documents, at the inception of the transaction, the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

(a) Fair value hedge

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

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used, is amortised to the income and expenditure account over the period to maturity.

(b) Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges are recognised in other comprehensive income and accumulated in equity. The gain or loss relating to the ineffective portion is recognised immediately in the income and expenditure account.

Amounts accumulated in equity are recycled to the income and expenditure account in the periods in which the hedged item will affect the income and expenditure account.

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

(c) Derivatives not qualified as hedges for accounting purposes

Derivative instruments entered into as economic hedges that do not qualify for hedge accounting are held at fair value through income and expenditure account. Changes in the fair value of such derivative instruments are recognised in the income and expenditure account.

2.6.2.4 Other financial assets

Other financial assets are measured at amortised cost. This category includes cash and money at call, placements with banks and other financial institutions, and loan portfolio. The measurement of loss allowances for these financial assets is based on the expected credit loss model as described in note 2.9.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6.2.5 Financial liabilities measured at fair value through income and expenditure account

The following financial liabilities are measured at fair value through income and expenditure account:

- Exchange Fund Bills and Notes (EFBN) issued which, on initial recognition, are irrevocably designated by the Group as at fair value through income and expenditure account; and
- other debt securities issued, which contain embedded derivatives that significantly modify the cash flows otherwise required.

Financial liabilities measured at fair value through income and expenditure account are initially recognised at fair value. Changes in fair value are recognised in the income and expenditure account, except for those changes arising from changes in the Group's own credit risk. Any changes in fair value of liabilities due to changes in the Group's own credit risk are recognised in other comprehensive income and the amount of such changes recognised in other comprehensive income is not reclassified subsequently to the income and expenditure account upon derecognition.

2.6.2.6 Other financial liabilities

Other financial liabilities are financial liabilities other than those measured at fair value through income and expenditure account.

Other financial liabilities repayable on demand are stated at the principal amount payable. These include Certificates of Indebtedness, government-issued currency notes and coins in circulation (note 2.6.2.7), balance of the banking system, placements by Fiscal Reserves (Operating and Capital Reserves), placements by the Bond Fund and placements by the Deposit Protection Scheme Fund.

Other financial liabilities with a fixed maturity and a predetermined rate are carried at amortised cost using the effective interest method. These include placements by banks and other financial institutions, other placements by HKSAR Government funds and statutory bodies, placements by subsidiaries, bank loans and other debt securities issued (other than those which contain embedded derivatives).

Placements by Fiscal Reserves (Future Fund) which are repayable on 31 December 2025 (unless otherwise directed by the Financial Secretary according to the terms of the placements) are stated at the principal amount payable. Interest payable on these placements is calculated at a composite rate determined annually (note 2.17.1) and compounded on an annual basis until maturity. If the composite rate is negative for a year, the negative return will first be offset against the balance of interest payable, with the excess portion (if any) written off against the principal amount payable. When the composite rate turns positive in subsequent years, the return will be used to recover fully or partially the amount written off.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6.2.7 Certificates of Indebtedness and government-issued currency notes and coins in circulation

As backing for the banknote issues, each note-issuing bank is required to hold a non-interest-bearing Certificate of Indebtedness issued by the Financial Secretary, which is redeemable on demand. Payments for the issue and redemption of banknotes against these Certificates are made in US dollars at the fixed exchange rate of US$1=HK$7.80. Consistent with the requirement for backing banknote issues with US dollars, the issue and redemption of government-issued currency notes and coins are conducted with an agent bank against US dollars at the fixed exchange rate of US$1=HK$7.80.

The Group's liabilities in respect of Certificates of Indebtedness represent the US dollars payable to the note-issuing banks on redemption of the Certificates. The Group's liabilities in respect of government-issued currency notes and coins represent the US dollars payable to the agent bank when they are redeemed. Certificates of Indebtedness in issue and government-issued currency notes and coins in circulation are stated in the financial statements at the Hong Kong dollar equivalent of the US dollars required for their redemption using the closing exchange rate at the reporting date.

2.6.3 Derecognition

A financial asset is derecognised when the contractual rights to receive the cash flows from the financial asset expire, or where the financial asset together with substantially all the risks and rewards of ownership have been transferred.

A financial liability is derecognised when the obligation specified in the contract is discharged, is cancelled or expires.

Liabilities for EFBN in issue are derecognised when they are repurchased as a result of market making activities. The repurchase is considered as redemption of the debt.

2.6.4 Offsetting

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet where there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the assets and settle the liabilities simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Group or the counterparty.

2.7 Repurchase and reverse repurchase transactions

Securities sold subject to a simultaneous agreement to repurchase these securities at a certain later date at a fixed price (repurchase agreements) are retained on the balance sheet without changes in their measurement. The proceeds from the sale are reported as liabilities in "placements by banks and other financial institutions" and are carried at amortised cost.

Conversely, securities purchased under agreements to resell (reverse repurchase agreements) are reported as receivables in "placements with banks and other financial institutions" and are carried at amortised cost.

Interest earned on reverse repurchase agreements and interest incurred on repurchase agreements are recognised as interest income and interest expense respectively, over the life of each agreement using the effective interest method.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.8 Securities lending agreements

Where securities are loaned with the receipt of cash or other securities as collateral, they are retained on the balance sheet without changes in their measurement. Where cash collateral is received, a liability is recorded in respect of the cash received in "placements by banks and other financial institutions". Securities received as collateral are not recognised in the financial statements.

2.9 Impairment of financial instruments

The Group applies a three-stage approach to measure expected credit losses and to recognise the corresponding loss allowances (provision in the case of loan commitments and financial guarantee contracts) and impairment losses or reversals, for financial instruments that are not measured at fair value through income and expenditure account, including mainly the following types of financial instruments:

– cash and money at call;

– placements with banks and other financial institutions;

– debt securities measured at amortised cost or fair value through other comprehensive income;

– loan portfolio;

– loan commitments; and

– financial guarantee contracts.

The change in credit risk since initial recognition determines the measurement bases for expected credit losses:

Stage 1: 12-month expected credit losses

For financial instruments for which there has not been a significant increase in credit risk since initial recognition, the portion of the lifetime expected credit losses that represent the expected credit losses that result from default events that are possible within the 12 months after the reporting date are recognised.

Stage 2: Lifetime expected credit losses – not credit impaired

For financial instruments for which there has been a significant increase in credit risk since initial recognition but that are not credit impaired, lifetime expected credit losses representing the expected credit losses that result from all possible default events over the expected life of the financial instruments are recognised.

Stage 3: Lifetime expected credit losses – credit impaired

For financial instruments that have become credit impaired, lifetime expected credit losses are recognised and interest income is calculated by applying the effective interest rate to the amortised cost rather than the gross carrying amount.

2.9.1 Determining significant increases in credit risk

At each reporting date, the Group assesses whether there has been a significant increase in credit risk for financial instruments since initial recognition by comparing the risk of default occurring over the remaining expected life as at the reporting date with that as at the date of initial recognition. For this purpose, the date of initial recognition of loan commitments and financial guarantee contracts is the date that the Group becomes a party to the irrevocable commitment. The assessment considers quantitative and qualitative historical information as well as forward-looking information. A financial asset is assessed to be credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred.

The Group assesses whether there has been a significant increase in credit risk since initial recognition on an individual or collective basis. For collective assessment, financial instruments are grouped on the basis of shared credit risk characteristics, taking into account investment type, credit risk ratings, date of initial recognition, remaining term to maturity, industry, geographical location of the counterparty or borrower and other relevant factors.

Debt securities with an external credit rating of investment grade are considered to have a low credit risk. Other financial instruments are considered to have a low credit risk if they have a low risk of default and the counterparty or borrower has a strong capacity to meet its contractual cash flow obligations in the near term. The credit risk on these financial instruments is assessed as not having increased significantly since initial recognition.

For a financial asset with lifetime expected credit losses recognised in the previous reporting period, if its credit quality improves and reverses the previously assessed significant increase in credit risk, then the loss allowance reverts from lifetime expected credit losses to 12-month expected credit losses.

When a financial asset is uncollectible, it is written off against the related loss allowance. Such assets are written off after all the necessary procedures have been completed and the amount of the loss has been determined. Subsequent recoveries of amounts previously written off are recognised in the income and expenditure account.

2.9.2 Measurement of expected credit losses

Expected credit losses of a financial instrument are an unbiased and probability-weighted estimate of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial instrument:

– for financial assets, a credit loss is the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate. For a financial asset that is credit impaired at the reporting date, the Group measures the expected credit losses as the difference between the asset's gross carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate;

– for undrawn loan commitments, a credit loss is the present value of the difference between the contractual cash flows that are due to the Group if the commitment is drawn down and the cash flows that the Group expects to receive; and

– for financial guarantee contracts, a credit loss is the present value of expected payments to reimburse the holder less any amounts that the Group expects to recover.

Further details on the expected credit losses calculation are set out in note 37.3.3.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.10 Gold

Gold is carried at fair value. Changes in the fair value of gold are recognised in the income and expenditure account in the period in which they arise.

2.11 Investment properties

Properties that are held for long-term rental yields, capital appreciation or both, and that are not occupied by the Group, are classified as investment properties.

Investment properties are recognised initially at cost, including related transaction costs. After initial recognition, investment properties are measured at fair value as assessed by independent professional valuers, or by the management based on the latest valuation made by the independent professional valuers. Fair value of the investment properties are measured based on the market or income approach. Under the market approach, the value is determined based on comparable transactions. For the income approach, the fair value is determined using valuation techniques including discounted cash flow and income capitalisation methods.

Any gain or loss arising from a change in fair value or the disposal of an investment property is recognised directly in the income and expenditure account. Rental income from investment properties is recognised in accordance with the accounting policies as set out in note 2.13.2.

2.12 Property, plant and equipment

The following items of property, plant and equipment are stated in the balance sheet at cost less accumulated depreciation and any impairment losses (note 2.14):

– buildings held for own use situated on freehold land;

– leasehold land and buildings held for own use;

– plant and equipment, including plant, machinery, furniture, fixtures, equipment, motor vehicles and personal computers; and

– right-of-use assets arising from leases of premises (note 2.13.1).

Intangible assets including computer software licences and system development costs are included in property, plant and equipment.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Freehold land is not depreciated. For other items of property, plant and equipment, depreciation is calculated to write off their cost less their estimated residual value, if any, on a straight-line basis over their estimated useful lives as follows:

– leasehold land	over the unexpired term of lease
– buildings situated on freehold land	39 years
– buildings situated on leasehold land	over the shorter of the unexpired term of lease and their estimated useful lives
– right-of-use assets	over the shorter of the lease terms and their estimated useful lives
– plant and equipment	3 to 15 years
– computer software licences and system development costs	3 to 5 years

A gain or loss arising from the disposal of an item of property, plant and equipment is determined as the difference between the net disposal proceeds and the carrying amount of the asset and is recognised in the income and expenditure account on the date of disposal.

2.13 Leases

2.13.1 As a lessee

A lease is recognised in the balance sheet as a right-of-use asset with a corresponding lease liability at the lease commencement date, except that variable lease payments and payments associated with short-term leases having a lease term of 12 months or less and leases of low-value assets are charged to the income and expenditure account on a straight-line basis over the lease term.

A right-of-use asset, except that meeting the definition of investment property (note 2.11), is recognised as property, plant and equipment and measured at cost less accumulated depreciation and any impairment losses (note 2.12). The right-of-use asset is depreciated on a straight-line basis over the shorter of the lease term and the asset's estimated useful life. A right-of-use asset that meets the definition of investment property is presented in the balance sheet as an investment property.

The lease liability is recognised as other liabilities and is measured at the present value of the lease payments payable over the lease term, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. The lease liability is subsequently adjusted by the effect of the interest on and the settlement of the lease liability.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Lease payments included in the measurement of the Group's lease liability mainly comprise:

- fixed payments, less any lease incentives receivable;
- lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option; and
- penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is remeasured if the Group changes its assessment of whether it will exercise an extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in the income and expenditure account if the carrying amount of the right-of-use asset has been reduced to zero.

2.13.2 As a lessor

The Group enters into contracts as a lessor with respect to some of its properties. These contracts are classified as operating leases because the Group does not transfer substantially all the risks and rewards incidental to ownership of assets to the lessees. Rental income from operating leases is recognised in the income and expenditure account as other income (note 2.17.5) on a straight-line basis over the lease term.

2.14 Impairment of other assets

The carrying amounts of other assets, including interests in subsidiaries, interests in associates and joint ventures, and property, plant and equipment, are reviewed at each reporting date to identify any indication of impairment.

If any such indication exists, an impairment loss is recognised in the income and expenditure account whenever the carrying amount of an asset exceeds its recoverable amount. The recoverable amount of an asset is the higher of its fair value less costs of disposal and value in use.

2.15 Cash and cash equivalents

Cash and cash equivalents comprise cash and money at call, placements with banks and other financial institutions, and short-term highly liquid investments that are readily convertible to known amounts of cash and subject to an insignificant risk of changes in value, having been within three months of maturity when placed or acquired.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.16 Insurance contracts

2.16.1 Life insurance contracts

Premiums are recognised as income when the cash is received from the annuitant, and the policy is issued and becomes effective after the completion of all the underwriting procedures.

Insurance contract liabilities are recognised when contracts are entered into and premiums are recognised. These liabilities are measured by using the Modified Net Level Premium Valuation method for long term business in accordance with the provision of the Insurance (Determination of Long Term Liabilities) Rules (Cap. 41E). The movements in liabilities at each reporting date are recorded in the income and expenditure account.

Insurance claims reflect the cost of all annuity payments, surrenders, withdrawals and death claims arising during the year. Surrenders, withdrawals and death claims are recorded on the basis of notifications received. Annuity payments are recorded when due.

2.16.2 Mortgage insurance contracts

The mortgage insurance business under the Mortgage Insurance Programme of the Group is accounted for on the annual accounting basis. Under the annual accounting approach, the Group makes provisions based on credible estimates of future income and outgoings to determine the underwriting result for the current accounting period. The underwriting result includes any adjustments arising from the correction of the previous estimates.

Gross premiums represent direct business written through authorized institutions as defined under the Banking Ordinance (Cap. 155) during an accounting period. The gross premiums after deduction of discounts and refunds, include the reinsurance premiums to be paid to the approved reinsurers, the risk premiums and servicing fees earned by the Group. The net premiums are recognised as income on a time-apportioned basis during the time the insurance coverage is effective.

Unearned premiums represent that portion of net premiums written which are estimated to relate to risks and services subsequent to the reporting date.

Provisions are made for outstanding claims, claims incurred but not reported and loss reserve at the reporting date.

Reinsurance contracts refer to contracts entered into by the Group with reinsurers under which the Group is compensated for losses on one or more insurance contracts issued by the Group. Benefits to which the Group is entitled under its reinsurance contracts held are recognised as reinsurance assets. These assets consist of claims recoverable from reinsurers and receivables that are dependent on the expected claims and benefits arising under the related reinsured insurance contracts. Amounts recoverable from or due to reinsurers are measured consistently with the amounts associated with the reinsured insurance contracts and in accordance with the terms of each reinsurance contract. Reinsurance assets are primarily premiums for reinsurance contracts and are amortised as an expense.

A reinsurance asset is impaired if there is objective evidence, as a result of an event that occurred after initial recognition of the reinsurance asset, that the Group may not receive all amounts due to it under the terms of the contract, and the impact on the amounts that the Group will receive from the reinsurer can be reliably measured.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.16.3 Other guarantee and insurance contracts

The Group provides financial guarantees for loan facilities provided to eligible small and medium enterprises (SMEs), in return for a guarantee fee, insurance coverage on reverse mortgage loans and policy reverse mortgage loans provided to elderly people in return for an insurance premium.

In respect of insurance coverage on reverse mortgage loans, the Group entered into reinsurance contract with a reinsurer. Reinsurance contracts refer to contracts entered into by the Group with reinsurers under which the Group is compensated for losses on one or more insurance contracts issued by the Group. Benefits to which the Group is entitled under its reinsurance contracts held are recognised as reinsurance assets. Reinsurance assets are primarily premiums for reinsurance contracts and are amortised as an expense.

A reinsurance asset is impaired if there is objective evidence, as a result of an event that occurred after initial recognition of the reinsurance asset, that the Group may not receive all amounts due to it under the terms of the contract, and the impact on the amounts that the Group will receive from the reinsurer can be reliably measured.

The Group will assess if its recognised liabilities are adequate on each reporting date, using the current estimates of future cash flows under these contracts. If the assessment shows that the carrying amount of its insurance liabilities are inadequate in the light of the estimated future cash flows, the shortfall shall be recognised in the income and expenditure account.

2.17 Revenue and expenditure recognition

2.17.1 Interest income and expense

Interest on the majority of the placements by Fiscal Reserves (Operating and Capital Reserves) and placements by HKSAR Government funds and statutory bodies is payable at a fixed rate determined annually (notes 24 and 25). Interest on these placements is recognised in the income and expenditure account on an accrual basis, using the effective interest method.

Interest on the placements by Fiscal Reserves (Future Fund) is payable at a composite rate which is determined annually and linked with the performance of certain portfolios of assets under the Fund (note 24). Interest on these placements is recognised in the income and expenditure account on an accrual basis, based on the performance of those portfolios.

Interest income and expense for all other interest-bearing financial assets and financial liabilities is recognised in the income and expenditure account on an accrual basis, using the effective interest method.

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

2.17.2 Dividend income

Dividend income from listed equity securities is recognised in the income and expenditure account when the share price is quoted ex-dividend. Dividend income from unlisted equity securities is recognised when the shareholder's right to receive payment is unconditionally established.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Dividends on equity securities measured at fair value through other comprehensive income that clearly represent a recovery of part of the cost of the investment are presented in other comprehensive income.

2.17.3 Net realised and unrealised gains/(losses)

Realised gains or losses on financial instruments other than equity securities measured at fair value through other comprehensive income are recognised in the income and expenditure account when the financial instruments are derecognised.

Changes in fair value of financial instruments measured at fair value through income and expenditure account are recognised as unrealised gains or losses in the income and expenditure account in the period in which they arise.

2.17.4 Bank licence fees

Bank licence fees are fees receivable from authorized institutions under the Banking Ordinance and are accounted for in the period when the fees become receivable.

2.17.5 Other income

Other income includes rental income and fee income from the provision of financial market infrastructure services. Rental income is recognised in accordance with the accounting policies as set out in note 2.13.2. Other income is accounted for in the period when it becomes receivable.

2.17.6 Contributions to staff retirement schemes

The Group operates several defined contribution schemes, including the Mandatory Provident Fund Scheme. Under these schemes, contributions payable each year are charged to the income and expenditure account. The assets of the staff retirement schemes are held separately from those of the Group.

2.17.7 Income tax

The Fund is not subject to Hong Kong profits tax as it is an integral part of the government. Income tax payable on profits of subsidiaries is recognised as an expense in the period in which profits arise.

Deferred tax assets and liabilities arise from deductible and taxable temporary differences respectively, being the differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the assets can be utilised. Deferred tax liabilities are provided in full. For investment properties that are measured at fair value, the amount of deferred tax recognised is measured using the tax rates that would apply on sale of those assets at their carrying value at the reporting date on the presumption that their carrying amounts are recovered entirely through sale. In all other cases, the amount of deferred tax recognised is measured based on the expected manner of realisation or settlement of the carrying amount of the assets and liabilities, using tax rates enacted or substantively enacted at the reporting date. Deferred tax assets and liabilities are not discounted.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.18 Foreign currency translation

The financial statements are presented in Hong Kong dollars, which is the Group's and the Fund's functional currency.

Foreign currency transactions during the year are translated into Hong Kong dollars using the spot exchange rates at the transaction dates. Monetary assets and liabilities denominated in foreign currencies are translated into Hong Kong dollars using the closing exchange rate at the reporting date. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated into Hong Kong dollars using the spot exchange rates at the transaction dates. Non-monetary assets and liabilities that are measured at fair value in a foreign currency are translated into Hong Kong dollars using the closing exchange rates at the dates when the fair value is determined.

All foreign currency translation differences are presented in aggregate as "net exchange gain/(loss)" in the income and expenditure account. Although it is not practicable to disclose separately the net exchange gain/(loss) on financial assets and financial liabilities measured at fair value through income and expenditure account or on derivative financial instruments, the majority of the exchange gains/(losses) relate to these two categories of financial instruments.

The results of foreign operations are translated into Hong Kong dollars at the exchange rates approximating the foreign exchange rates ruling at the dates of the transactions. Balance sheet items are translated into Hong Kong dollars at the closing foreign exchange rates at the reporting date. The resulting exchange differences are recognised in other comprehensive income and accumulated separately in equity in the translation reserve.

On disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation is reclassified from equity to the income and expenditure account when the gain or loss on disposal is recognised.

2.19 Critical accounting estimates and assumptions

The Group makes estimates and assumptions that affect the reported amounts of assets and liabilities. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group has considered the impacts arising from the COVID-19 pandemic when reviewing the estimates and assumptions which are based on future economic conditions and sensitive to changes in those conditions. In particular, the economic effects of the COVID-19 pandemic increase the level of estimation uncertainty for the measurements of fair values of investment properties, fair values of certain financial assets that are derived from unobservable inputs and expected credit losses on financial instruments.

(a) Fair value of investment properties

The fair value of investment properties is revalued by independent professional valuers using property valuation techniques which involve certain assumptions of market conditions. Details of the fair value measurement of investment properties are set out in note 19.1.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Fair value of financial instruments

The majority of valuation techniques employ only observable market data. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, where the measurement of fair value is more judgemental. Details of the fair value measurement of financial instruments are set out in note 38.

(c) Impairment allowances on loan portfolio

The Group reviews its loan portfolio to assess expected credit losses on a regular basis. In determining expected credit losses, the Group makes judgements as to whether there is any significant increase in credit risk since initial recognition. It is required to exercise judgements in making assumptions and estimates to incorporate relevant information about external credit ratings, past events, current conditions and forecast of economic conditions. The methodology and assumptions used for estimating both the amount and timing of future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience. Information about the assumptions relating to measurement of expected credit losses is set out in note 37.3.3.

(d) Provision for outstanding claims on insurance and guarantee portfolios of general insurance business

The Group reviews the insurance and guarantee portfolios of its general insurance subsidiary to assess provision for outstanding claims, including claims of which the amounts have not been determined and claims arising out of incidents that have not been notified to the insurer and related expenses for settling such claims. In determining the provision for outstanding claims, the Group makes judgements and assumptions including but not limited to the loss severity rate applied, the economic conditions and the local property market in making estimation of the payments which the Group is required to make in fulfilling its obligations under the insurance and guarantee contracts. The methodology and assumptions used for estimating the ultimate claim amount are reviewed regularly.

(e) Insurance contract liabilities of life insurance business

The liability for insurance contracts of the Group's life insurance subsidiary is based on current assumptions with a margin for risk and adverse deviation. The main assumptions used relate to mortality, longevity, expenses and discount rates, which are reviewed regularly.

2.20 Related parties

For the purposes of these financial statements, a person or an entity is considered to be related to the Group if:

(a) the person, or a close member of that person's family:

- (i) has control or joint control over the Group;
- (ii) has significant influence over the Group; or
- (iii) is a member of the key management personnel of the Group.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) any of the following conditions applies to the entity:

(i) the entity and the Group are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others);

(ii) the entity is an associate or joint venture of the Group (or an associate or joint venture of a member of a group of which the Group is a member);

(iii) the entity and the Group are joint ventures of the same third party;

(iv) the entity is a joint venture of another entity and the Group is an associate of that entity;

(v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;

(vi) the entity is controlled or jointly controlled by a person identified in (a);

(vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); or

(viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group.

Close members of the family of a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity.

2.21 Operating segments

Operating segments are reported in a manner consistent with the internal management reports provided to the chief operating decision maker. The Group comprises the following operating segments:

– management of funds under the Currency Board Operations, including the Backing Portfolio;

– management of funds representing the general reserve assets of the Fund, including the Investment Portfolio, the Long-Term Growth Portfolio and the Strategic Portfolio; and

– maintaining the stability and integrity of Hong Kong's monetary and financial systems, which includes banking supervision and monetary management, and the activities of Hong Kong FMI Services Limited, The Hong Kong Mortgage Corporation Limited and Hong Kong Note Printing Limited.

Details of the operating segments of the Group are set out in note 32.

3 CHANGES IN ACCOUNTING POLICIES

The HKICPA has issued certain new or revised HKFRSs that are first effective for the current accounting period of the Group. None of them has impact on the accounting policies of the Group.

The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period (note 39).

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

4 INCOME AND EXPENDITURE

(a) Investment income

	Group		Fund	
	2020	2019	**2020**	2019
Interest income:				
– from derivative financial instruments	**206**	109	**198**	108
– from financial assets measured at fair value through income and expenditure account	**29,868**	63,146	**29,626**	62,956
– from financial assets measured at fair value through other comprehensive income	**89**	154	**–**	–
– from financial assets measured at amortised cost	**2,621**	6,170	**1,355**	4,747
	32,784	69,579	**31,179**	67,811
Dividend income:				
– from financial assets measured at fair value through income and expenditure account	**14,662**	16,445	**11,578**	13,758
– from financial assets measured at fair value through other comprehensive income	**–**	11	**–**	11
– from subsidiaries	**–**	–	**221**	81
	14,662	16,456	**11,799**	13,850
Income from investment properties:				
– rental income	**1,223**	1,328	**–**	–
– change in fair value on revaluation	**(356)**	46	**–**	–
	867	1,374	**–**	–
Net realised and unrealised gains/(losses):				
– on derivative financial instruments	**4,019**	(4,303)	**3,381**	(4,124)
– on financial assets and financial liabilities measured at fair value through income and expenditure account	**190,080**	195,623	**134,099**	162,237
– on debt securities measured at amortised cost	**11**	–	**–**	–
– on gold	**191**	126	**191**	126
	194,301	191,446	**137,671**	158,239
Net exchange gain/(loss)	**9,708**	(13,923)	**9,607**	(13,019)
TOTAL	**252,322**	264,932	**190,256**	226,881

Net realised and unrealised gains/(losses) included a gain of HK$855 million (2019: HK$15 million loss) on hedging instruments designated as fair value hedge and a loss of HK$849 million (2019: HK$14 million gain) on hedged items.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Interest expense on placements by Fiscal Reserves, HKSAR Government funds and statutory bodies

	Group and Fund	
	2020	2019
Interest expense on placements by Fiscal Reserves:		
– at a fixed rate determined annually[1]	**32,644**	29,393
– at market-based rates	**–**	1
– at a composite rate determined annually[2]	**37,148**	24,354
Interest expense on placements by HKSAR Government funds and statutory bodies:		
– at a fixed rate determined annually[1]	**11,496**	9,013
– at market-based rates	**11**	32
TOTAL	**81,299**	62,793

1 This rate was fixed at 3.7% per annum for 2020 (2019: 2.9%) – notes 24, 25 and 30.

2 The composite rate was 12.3% per annum for 2020 (2019: 8.7%) – notes 24 and 30.

(c) Other interest expense

	Group		Fund	
	2020	2019	**2020**	2019
Interest expense on Exchange Fund Bills and Notes issued	**8,974**	19,109	**8,974**	19,109
Interest expense on placements by subsidiaries	**–**	–	**889**	466
Interest expense on derivative financial instruments	**17**	44	**2**	10
Interest expense on financial instruments measured at fair value through income and expenditure account	**–**	69	**–**	66
Interest expense on lease liabilities	**17**	19	**7**	8
Interest expense on other financial instruments	**1,249**	1,661	**275**	366
TOTAL	**10,257**	20,902	**10,147**	20,025

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(d) Operating expenses

	Group		Fund	
	2020	2019	**2020**	2019
Staff costs				
Salaries and other staff costs	**1,896**	1,747	**1,439**	1,347
Retirement benefit costs	**151**	142	**124**	118
Premises and equipment expenses				
Depreciation	**376**	360	**251**	247
Other premises expenses	**93**	87	**74**	71
General operating costs				
Maintenance of office and computer equipment	**162**	136	**138**	116
Financial information and communication services	**83**	76	**68**	63
External relations	**13**	33	**12**	31
Public education and publicity	**46**	50	**16**	17
Financial infrastructure operation	**137**	140	**63**	79
Professional, consulting and other services	**119**	100	**80**	67
Training	**5**	11	**4**	9
Expenses relating to investment properties				
– Operating expenses	**136**	197	**–**	–
– Variable lease payment expenses	**19**	10	**–**	–
Others	**24**	42	**28**	23
Investment management and custodian fees				
Management and custodian fees	**1,767**	1,519	**1,537**	1,375
Transaction costs	**271**	182	**269**	180
Withholding tax	**745**	799	**745**	799
Professional fees and others	**167**	257	**78**	131
TOTAL	**6,210**	5,888	**4,926**	4,673

The aggregate emoluments of senior staff members (Executive Directors and above) of the Group are as follows:

	Group	
	2020	2019
Fixed pay	**84.5**	83.0
Variable pay	**22.6**	25.5
Other benefits	**13.4**	11.8
	120.5	120.3

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Other benefits shown above included provident funds, medical and life insurance, gratuity and annual leave accrued during the year. There were no other allowances or benefits-in-kind.

The numbers of senior staff members (Executive Directors and above) of the Group whose emoluments including other benefits fell within the following bands were shown in the table below. The number of senior staff posts was 18 (2019: 18). The higher figures in the table below reflected staff movements during the respective years.

	Group	
HK$	**2020**	2019
1,000,001 to 1,500,000	**1**	1
3,500,001 to 4,000,000	**–**	1
4,000,001 to 4,500,000	**1**	1
4,500,001 to 5,000,000	**–**	2
5,000,001 to 5,500,000	**5**	2
5,500,001 to 6,000,000	**3**	3
6,000,001 to 6,500,000	**2**	2
6,500,001 to 7,000,000	**1**	–
7,000,001 to 7,500,000	**–**	2
7,500,001 to 8,000,000	**2**	1
8,000,001 to 8,500,000	**1**	–
8,500,001 to 9,000,000	**1**	1
9,500,001 to 10,000,000	**1**	1
10,000,001 to 10,500,000	**1**	1
10,500,001 to 11,000,000	**–**	1
	19	19

(e) Note and coin expenses

These represent reimbursements to the note-issuing banks in respect of note-issuing expenses and expenses incurred directly by the Fund in issuing government-issued currency notes and coins.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(f) Charge for/(Reversal of) impairment allowances

	Group		Fund	
	2020	2019	**2020**	2019
Charge for/(Reversal of) impairment allowances				
Placements with banks and other financial institutions (note 37.3.3(a))	**1**	(1)	**–**	(1)
Debt securities measured at amortised cost (note 37.3.3(b))	**2**	–	**–**	–
Loan portfolio (note 37.3.3(c))	**73**	80	**–**	–
Provision on loan commitments (note 37.3.3(d))	**21**	13	**–**	–
TOTAL	**97**	92	**–**	(1)

5 REVENUE ACCOUNT FOR INSURANCE BUSINESS

	Group		
	2020		
	Non-life insurance	Life insurance	Total
Gross premiums written	**2,072**	**2,538**	**4,610**
Reinsurance premiums	**(231)**	**–**	**(231)**
Net premiums written	**1,841**	**2,538**	**4,379**
Movement in unearned premiums, net	**(1,386)**	**–**	**(1,386)**
Net commission and levy expenses	**(666)**	**(1)**	**(667)**
Net premiums earned	**(211)**	**2,537**	**2,326**
Net claims incurred, benefits paid and movement in policyholders' liabilities	**(24)**	**(3,518)**	**(3,542)**
Net premiums earned after provisions	**(235)**	**(981)**	**(1,216)**

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group		
	2019		
	Non-life insurance	Life insurance	Total
Gross premiums written	542	1,631	2,173
Reinsurance premiums	(76)	–	(76)
Net premiums written	466	1,631	2,097
Movement in unearned premiums, net	(110)	–	(110)
Net commission and levy expenses	(138)	–	(138)
Net premiums earned	218	1,631	1,849
Net claims incurred, benefits paid and movement in policyholders' liabilities	(3)	(2,018)	(2,021)
Net premiums earned after provisions	215	(387)	(172)

6 INCOME TAX

(a) Income tax (credited to)/charged in the income and expenditure account

	Group		**Fund**	
	2020	2019	**2020**	2019
Current tax				
Hong Kong profits tax:				
– current year	**49**	47	**–**	–
– under-provision in prior years	**–**	3	**–**	–
Taxation outside Hong Kong:				
– current year	**113**	158	**–**	–
– under-provision in prior years	**8**	83	**–**	–
Deferred tax				
(Credit)/Charge for current year	**(215)**	366	**–**	–
TOTAL	**(45)**	657	**–**	–

No provision for Hong Kong profits tax has been made for the Fund as it is an integral part of the government. The provision for Hong Kong profits tax relates to the tax liabilities of the Fund's subsidiaries. For 2020, it is calculated at 16.5% (2019: 16.5%) of the estimated assessable profits for the year. Tax for overseas subsidiaries is charged at the appropriate current rates of taxation ruling in the relevant countries.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Reconciliation between tax expense and accounting profit at applicable tax rates:

	Group		Fund	
	2020	2019	**2020**	2019
Surplus before taxation	**150,277**	178,303	**93,712**	139,053
(Deficit)/Surplus subject to tax in Hong Kong and elsewhere	**(3,606)**	6,680	**–**	–
Tax calculated at domestic tax rates in the respective countries	**(599)**	1,151	**–**	–
Tax effect of:				
– non-deductible expenses	**1,349**	509	**–**	–
– non-taxable income	**(712)**	(1,478)	**–**	–
– tax losses not recognised	**–**	19	**–**	–
– utilisation of tax losses previously not recognised	**(22)**	(1)	**–**	–
– under-provision in prior years	**8**	86	**–**	–
– effect on deferred tax balances arising from change in tax rates	**(135)**	290	**–**	–
– others	**66**	81	**–**	–
Income tax (credit)/charge	**(45)**	657	**–**	–

(b) Tax (recoverable)/payable

		Group		Fund	
	Note	**2020**	2019	**2020**	2019
Tax recoverable	16	**(21)**	–	**–**	–
Tax payable	30	**600**	561	**–**	–
		579	561	**–**	–

(c) Deferred tax

		Group		Fund	
	Note	**2020**	2019	**2020**	2019
Deferred tax assets	16	**(203)**	(83)	**–**	–
Deferred tax liabilities	30	**443**	511	**–**	–
		240	428	**–**	–

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The major components of net deferred tax liabilities and the movements during the year are as follows:

	Group				
	Fair value changes on investment properties	Accelerated tax depreciation	Tax losses	Others	Net deferred tax liabilities
At 1 January 2019	111	35	(77)	(6)	63
Charged/(Credited) to the income and expenditure account	371	1	(5)	(1)	366
Exchange differences	(1)	–	–	–	(1)
At 31 December 2019	481	36	(82)	(7)	428
At 1 January 2020	**481**	**36**	**(82)**	**(7)**	**428**
Credited to the income and expenditure account	**(91)**	**(3)**	**(119)**	**(2)**	**(215)**
Exchange differences	**27**	**–**	**–**	**–**	**27**
At 31 December 2020	**417**	**33**	**(201)**	**(9)**	**240**

There was no significant unprovided deferred tax as at 31 December 2020 and 2019.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

7 CATEGORIES OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES

		Group – 2020					
	Note	Total	Derivative financial instruments	Financial assets and financial liabilities measured at fair value through income and expenditure account	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortised cost	Other financial liabilities
Cash and money at call	8	148,947	–	–	–	148,947	–
Placements with banks and other financial institutions	9	143,149	–	–	–	143,149	–
Financial assets measured at fair value through income and expenditure account	10	4,335,548	–	4,335,548	–	–	–
Financial assets measured at fair value through other comprehensive income	11	5,789	–	–	5,789	–	–
Derivative financial instruments	12(a)	2,588	2,588	–	–	–	–
Debt securities measured at amortised cost	13	9,730	–	–	–	9,730	–
Loan portfolio	14	49,433	–	–	–	49,433	–
Others		45,129	–	–	–	45,129	–
FINANCIAL ASSETS		4,740,313	2,588	4,335,548	5,789	396,388	–
Certificates of Indebtedness	21	556,204	–	–	–	–	556,204
Government-issued currency notes and coins in circulation	21	12,844	–	–	–	–	12,844
Balance of the banking system	22	457,466	–	–	–	–	457,466
Placements by banks and other financial institutions	23	87,650	–	–	–	–	87,650
Placements by Fiscal Reserves	24	881,832	–	–	–	–	881,832
Placements by HKSAR Government funds and statutory bodies	25	342,471	–	–	–	–	342,471
Exchange Fund Bills and Notes issued	27	1,068,880	–	1,068,880	–	–	–
Derivative financial instruments	12(a)	7,469	7,469	–	–	–	–
Bank loans	28	12,050	–	–	–	–	12,050
Other debt securities issued	29	62,587	–	–	–	–	62,587
Others		246,507	–	–	–	–	246,507
FINANCIAL LIABILITIES		3,735,960	7,469	1,068,880	–	–	2,659,611

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Group – 2019					
	Note	Total	Derivative financial instruments	Financial assets and financial liabilities measured at fair value through income and expenditure account	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortised cost	Other financial liabilities
Cash and money at call	8	181,527	–	–	–	181,527	–
Placements with banks and other financial institutions	9	153,369	–	–	–	153,369	–
Financial assets measured at fair value through income and expenditure account	10	3,866,803	–	3,866,803	–	–	–
Financial assets measured at fair value through other comprehensive income	11	6,131	–	–	6,131	–	–
Derivative financial instruments	12(a)	1,289	1,289	–	–	–	–
Debt securities measured at amortised cost	13	12,034	–	–	–	12,034	–
Loan portfolio	14	9,310	–	–	–	9,310	–
Others		127,361	–	–	–	127,361	–
FINANCIAL ASSETS		4,357,824	1,289	3,866,803	6,131	483,601	–
Certificates of Indebtedness	21	516,062	–	–	–	–	516,062
Government-issued currency notes and coins in circulation	21	12,988	–	–	–	–	12,988
Balance of the banking system	22	67,688	–	–	–	–	67,688
Placements by banks and other financial institutions	23	35,000	–	–	–	–	35,000
Placements by Fiscal Reserves	24	1,137,490	–	–	–	–	1,137,490
Placements by HKSAR Government funds and statutory bodies	25	328,406	–	–	–	–	328,406
Exchange Fund Bills and Notes issued	27	1,152,327	–	1,152,327	–	–	–
Derivative financial instruments	12(a)	6,212	6,212	–	–	–	–
Bank loans	28	11,348	–	–	–	–	11,348
Other debt securities issued	29	40,370	–	147	–	–	40,223
Others		201,182	–	–	–	–	201,182
FINANCIAL LIABILITIES		3,509,073	6,212	1,152,474	–	–	2,350,387

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Fund – 2020					
	Note	Total	Derivative financial instruments	Financial assets and financial liabilities measured at fair value through income and expenditure account	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortised cost	Other financial liabilities
Cash and money at call	8	145,255	–	–	–	145,255	–
Placements with banks and other financial institutions	9	121,796	–	–	–	121,796	–
Financial assets measured at fair value through income and expenditure account	10	3,981,157	–	3,981,157	–	–	–
Financial assets measured at fair value through other comprehensive income	11	1,370	–	–	1,370	–	–
Derivative financial instruments	12(a)	1,791	1,791	–	–	–	–
Others		43,138	–	–	–	43,138	–
FINANCIAL ASSETS		4,294,507	1,791	3,981,157	1,370	310,189	–
Certificates of Indebtedness	21	556,204	–	–	–	–	556,204
Government-issued currency notes and coins in circulation	21	12,844	–	–	–	–	12,844
Balance of the banking system	22	457,466	–	–	–	–	457,466
Placements by banks and other financial institutions	23	87,650	–	–	–	–	87,650
Placements by Fiscal Reserves	24	881,832	–	–	–	–	881,832
Placements by HKSAR Government funds and statutory bodies	25	342,471	–	–	–	–	342,471
Placements by subsidiaries	26	15,469	–	–	–	–	15,469
Exchange Fund Bills and Notes issued	27	1,068,880	–	1,068,880	–	–	–
Derivative financial instruments	12(a)	7,023	7,023	–	–	–	–
Others		225,965	–	–	–	–	225,965
FINANCIAL LIABILITIES		3,655,804	7,023	1,068,880	–	–	2,579,901

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Fund – 2019					
	Note	Total	Derivative financial instruments	Financial assets and financial liabilities measured at fair value through income and expenditure account	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortised cost	Other financial liabilities
Cash and money at call	8	180,741	–	–	–	180,741	–
Placements with banks and other financial institutions	9	125,201	–	–	–	125,201	–
Financial assets measured at fair value through income and expenditure account	10	3,586,245	–	3,586,245	–	–	–
Financial assets measured at fair value through other comprehensive income	11	1,210	–	–	1,210	–	–
Derivative financial instruments	12(a)	1,088	1,088	–	–	–	–
Others		123,787	–	–	–	123,787	–
FINANCIAL ASSETS		4,018,272	1,088	3,586,245	1,210	429,729	–
Certificates of Indebtedness	21	516,062	–	–	–	–	516,062
Government-issued currency notes and coins in circulation	21	12,988	–	–	–	–	12,988
Balance of the banking system	22	67,688	–	–	–	–	67,688
Placements by banks and other financial institutions	23	35,000	–	–	–	–	35,000
Placements by Fiscal Reserves	24	1,137,490	–	–	–	–	1,137,490
Placements by HKSAR Government funds and statutory bodies	25	328,406	–	–	–	–	328,406
Placements by subsidiaries	26	12,597	–	–	–	–	12,597
Exchange Fund Bills and Notes issued	27	1,152,327	–	1,152,327	–	–	–
Derivative financial instruments	12(a)	5,728	5,728	–	–	–	–
Others		188,900	–	–	–	–	188,900
FINANCIAL LIABILITIES		3,457,186	5,728	1,152,327	–	–	2,299,131

Exchange Fund – Notes to the Financial Statements (continued)
(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

8 CASH AND MONEY AT CALL

	Group		Fund	
	2020	2019	**2020**	2019
At amortised cost				
Balance with central banks	**6,473**	9,272	**6,473**	9,272
Balance with banks	**142,474**	172,255	**138,782**	171,469
TOTAL	**148,947**	181,527	**145,255**	180,741

9 PLACEMENTS WITH BANKS AND OTHER FINANCIAL INSTITUTIONS

	Group		Fund	
	2020	2019	**2020**	2019
At amortised cost				
Placements in respect of reverse repurchase agreements:				
– with central banks	**8,122**	51,016	**8,122**	51,016
– with banks and other financial institutions	**8,942**	688	**8,942**	688
Other placements:				
– with central banks	**31,015**	–	**31,015**	–
– with banks	**95,075**	101,669	**73,720**	73,500
	143,154	153,373	**121,799**	125,204
Less: allowances for expected credit losses	**(5)**	(4)	**(3)**	(3)
TOTAL	**143,149**	153,369	**121,796**	125,201

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

10 FINANCIAL ASSETS MEASURED AT FAIR VALUE THROUGH INCOME AND EXPENDITURE ACCOUNT

	Group		Fund	
	2020	2019	**2020**	2019
At fair value				
Debt securities				
Treasury bills and commercial paper				
Listed outside Hong Kong	**1,179**	423	**1,179**	423
Unlisted	**975,159**	740,372	**975,159**	740,372
Certificates of deposit				
Unlisted	**194,020**	218,201	**194,020**	218,201
Other debt securities				
Listed in Hong Kong	**6,237**	7,098	**6,226**	7,088
Listed outside Hong Kong	**1,934,983**	1,767,909	**1,934,983**	1,767,909
Unlisted	**126,467**	122,562	**126,467**	122,562
Total debt securities	**3,238,045**	2,856,565	**3,238,034**	2,856,555
Equity securities				
Listed in Hong Kong	**207,118**	195,141	**206,864**	194,773
Listed outside Hong Kong	**339,697**	330,222	**337,852**	328,646
Unlisted	**207,259**	212,362	**198,407**	206,271
Total equity securities	**754,074**	737,725	**743,123**	729,690
Investment funds				
Unlisted	**343,429**	272,513	**–**	–
TOTAL	**4,335,548**	3,866,803	**3,981,157**	3,586,245

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

11 FINANCIAL ASSETS MEASURED AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	Group		Fund	
	2020	2019	**2020**	2019
At fair value				
Debt securities				
Listed in Hong Kong	**1,103**	1,102	**–**	–
Listed outside Hong Kong	**1,732**	2,012	**–**	–
Unlisted	**1,584**	1,807	**–**	–
	4,419	4,921	**–**	–
Equity securities				
Unlisted	**1,370**	1,210	**1,370**	1,210
TOTAL	**5,789**	6,131	**1,370**	1,210

The Group's investment in unlisted equity securities as at 31 December 2020 represents a holding of 4,285 shares (2019: 4,285 shares) in the Bank for International Settlements. As at 31 December 2020 and 2019, the nominal value of each share is 5,000 Special Drawing Rights (SDRs) and is 25% paid up (note 35(a)).

12 DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments refer to financial contracts whose value depends on the value of one or more underlying assets or indices with settlement at a future date.

The Group uses derivative financial instruments to manage its exposures to market risk and facilitate the implementation of investment strategies. The principal derivative financial instruments used are interest rate and currency swap contracts, and forward foreign exchange contracts, which are primarily over-the-counter derivatives, as well as exchange-traded futures contracts.

Market risk arising from derivative financial instruments is included as part of the overall market risk exposure. The credit risk arising from these transactions is marked against the overall credit exposure to individual counterparties. The financial risk management approaches are outlined in note 37.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(a) Fair values of derivative financial instruments

An analysis of the fair values of derivative financial instruments held by product type is set out below:

	Group				Fund			
	2020		2019		**2020**		2019	
	Assets	**Liabilities**	Assets	Liabilities	**Assets**	**Liabilities**	Assets	Liabilities
Derivatives categorised as held for trading								
Interest rate derivatives								
Interest rate swap contracts	**1,223**	**79**	446	65	**1,208**	**25**	441	41
Interest rate futures contracts	**–**	**–**	–	–	**–**	**–**	–	–
Swaption contracts	**1**	**–**	1	–	**1**	**–**	1	–
Equity derivatives								
Equity index futures contracts	**97**	**257**	65	141	**97**	**257**	65	141
Currency derivatives								
Forward foreign exchange contracts	**276**	**6,781**	529	5,554	**276**	**6,669**	529	5,390
Currency swap contracts	**–**	**224**	16	20	**–**	**–**	–	–
Bond derivatives								
Bond futures contracts	**20**	**12**	32	32	**20**	**12**	32	32
Commodity derivatives								
Commodity futures contracts	**189**	**60**	20	124	**189**	**60**	20	124
	1,806	**7,413**	1,109	5,936	**1,791**	**7,023**	1,088	5,728
Derivatives designated as hedging instruments in fair value hedges								
Interest rate derivatives								
Interest rate swap contracts	**405**	**2**	133	54	**–**	**–**	–	–
Currency derivatives								
Currency swap contracts	**377**	**54**	47	222	**–**	**–**	–	–
	782	**56**	180	276	**–**	**–**	–	–
Derivatives designated as hedging instruments in cash flow hedges								
Currency derivatives								
Currency swap contracts	**–**	**–**	–	–	**–**	**–**	–	–
TOTAL	**2,588**	**7,469**	1,289	6,212	**1,791**	**7,023**	1,088	5,728

The fair value hedges consist of currency and interest rate swap contracts that are used to protect against changes in the fair value of certain fixed-rate debt securities issued due to movements in market interest rates and foreign exchange rates. The currency swap contracts under cash flow hedges are used to hedge the portion of foreign exchange risks arising from variability of cash flows from foreign currency denominated debt securities issued.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Notional amounts of derivative financial instruments

An analysis of the notional amounts of derivative financial instruments held at the reporting date based on the remaining periods to settlement is set out below. The notional amounts of these instruments indicate the volume of outstanding transactions and do not represent the amounts at risk.

	Group Notional amounts with remaining life of									
	2020					2019				
	Total	3 months or less	1 year or less but over 3 months	5 years or less but over 1 year	Over 5 years	Total	3 months or less	1 year or less but over 3 months	5 years or less but over 1 year	Over 5 years
Derivatives categorised as held for trading										
Interest rate derivatives										
Interest rate swap contracts	34,892	1,500	1,600	21,906	9,886	24,100	4	3,001	13,181	7,914
Interest rate futures contracts	–	–	–	–	–	585	–	585	–	–
Swaption contracts	312	192	120	–	–	1,044	896	148	–	–
Equity derivatives										
Equity index futures contracts	55,808	55,808	–	–	–	51,179	51,179	–	–	–
Currency derivatives										
Forward foreign exchange contracts	274,288	271,041	1,405	1,842	–	355,864	352,045	2,450	1,369	–
Currency swap contracts	2,900	–	613	2,041	246	1,842	–	139	1,529	174
Bond derivatives										
Bond futures contracts	42,552	42,552	–	–	–	33,786	33,786	–	–	–
Commodity derivatives										
Commodity futures contracts	33,104	16,236	16,868	–	–	20,643	13,673	6,970	–	–
	443,856	387,329	20,606	25,789	10,132	489,043	451,583	13,293	16,079	8,088
Derivatives designated as hedging instruments in fair value hedges										
Interest rate derivatives										
Interest rate swap contracts	28,250	2,431	14,365	9,825	1,629	18,041	2,444	7,770	5,898	1,929
Currency derivatives										
Currency swap contracts	18,914	2,739	10,210	4,908	1,057	14,174	985	6,920	5,212	1,057
	47,164	5,170	24,575	14,733	2,686	32,215	3,429	14,690	11,110	2,986
Derivatives designated as hedging instruments in cash flow hedges										
Currency derivatives										
Currency swap contracts	269	269	–	–	–	–	–	–	–	–
TOTAL	491,289	392,768	45,181	40,522	12,818	521,258	455,012	27,983	27,189	11,074

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund									
	Notional amounts with remaining life of									
	2020					2019				
	Total	3 months or less	1 year or less but over 3 months	5 years or less but over 1 year	Over 5 years	Total	3 months or less	1 year or less but over 3 months	5 years or less but over 1 year	Over 5 years
Derivatives categorised as held for trading										
Interest rate derivatives										
Interest rate swap contracts	**16,011**	**–**	**1,600**	**7,600**	**6,811**	15,873	–	1,600	8,000	6,273
Interest rate futures contracts	**–**	**–**	**–**	**–**	**–**	585	–	585	–	–
Swaption contracts	**312**	**192**	**120**	**–**	**–**	1,044	896	148	–	–
Equity derivatives										
Equity index futures contracts	**55,808**	**55,808**	**–**	**–**	**–**	51,179	51,179	–	–	–
Currency derivatives										
Forward foreign exchange contracts	**272,446**	**271,041**	**1,405**	**–**	**–**	354,131	352,026	2,105	–	–
Bond derivatives										
Bond futures contracts	**42,552**	**42,552**	**–**	**–**	**–**	33,786	33,786	–	–	–
Commodity derivatives										
Commodity futures contracts	**33,104**	**16,236**	**16,868**	**–**	**–**	20,643	13,673	6,970	–	–
TOTAL	**420,233**	**385,829**	**19,993**	**7,600**	**6,811**	477,241	451,560	11,408	8,000	6,273

13 DEBT SECURITIES MEASURED AT AMORTISED COST

	Group		Fund	
	2020	2019	**2020**	2019
At amortised cost				
Debt securities				
Listed in Hong Kong	**6,705**	7,271	**–**	–
Listed outside Hong Kong	**2,032**	2,193	**–**	–
Unlisted	**996**	2,571	**–**	–
	9,733	12,035	**–**	–
Less: allowances for expected credit losses	**(3)**	(1)	**–**	–
TOTAL	**9,730**	12,034	**–**	–

Fair value information of the above debt securities is provided in note 38.2.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

14 LOAN PORTFOLIO

	Group		Fund	
	2020	2019	**2020**	2019
At amortised cost				
Loans with special 100% guarantee under the SME Financing Guarantee Scheme[1]	**36,085**	–	**–**	–
Mortgage loans	**4,093**	4,910	**–**	–
Other loans	**9,419**	4,489	**–**	–
	49,597	9,399	**–**	–
Less: allowances for expected credit losses	**(164)**	(89)	**–**	–
TOTAL	**49,433**	9,310	**–**	–

[1] The Hong Kong Mortgage Corporation Limited (HKMC), a wholly-owned subsidiary of the Fund, launched the special 100% loan guarantee under the SME Financing Guarantee Scheme (SFGS) through a subsidiary, HKMC Insurance Limited, in April 2020. The loans, which are fully guaranteed by the HKSAR Government, are originated by the participating lenders and sold to the HKMC without recourse upon origination. Accordingly, the default losses of these loans are covered by the HKSAR Government's guarantee and no impairment allowance is recognised in view of the minimal default risk of the HKSAR Government.

15 GOLD

	Group and Fund	
	2020	2019
At fair value		
Gold		
66,798 ounces (2019: 66,798 ounces)	**979**	793

The fair value of gold is based on quoted price in an active market. It is classified under Level 1 of the fair value hierarchy.

16 OTHER ASSETS

	Group		Fund	
	2020	2019	**2020**	2019
Interest and dividends receivable	**10,674**	12,662	**10,234**	12,137
Unsettled sales and redemption of securities	**25,012**	103,350	**24,911**	102,348
Prepayments, receivables and other assets	**8,834**	10,886	**7,610**	8,872
Staff housing loans	**259**	237	**259**	237
Loan to the International Monetary Fund	**164**	239	**164**	239
Reinsurance assets	**378**	209	**–**	–
Tax recoverable	**21**	–	**–**	–
Deferred tax assets	**203**	83	**–**	–
TOTAL	**45,545**	127,666	**43,178**	123,833

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

17 INTERESTS IN SUBSIDIARIES

	Fund	
	2020	2019
Unlisted shares, at cost	**7,462**	7,392
Loans to subsidiaries	**193,244**	177,262
TOTAL	**200,706**	184,654

The following is a list of the principal subsidiaries which are wholly owned by the Fund (except for Hong Kong Note Printing Limited[1]) as at 31 December 2020:

Name of company	Principal activities	Issued equity capital
The Hong Kong Mortgage Corporation Limited	Investment in mortgages and loans	HK$7,000,000,000
HKMC Annuity Limited[2]	Long term insurance	HK$5,000,000,000
HKMC Insurance Limited[2]	General insurance	HK$3,000,000,000
HKMC Mortgage Management Limited[2]	Loan purchase, origination and servicing	HK$1,000,000
Hong Kong Note Printing Limited	Banknote printing	HK$255,000,000
Hong Kong FMI Services Limited	Performance of financial market infrastructure related operations	HK$167,000,000
Hong Kong Academy of Finance Limited	Financial leadership development	HK$150,000,000
BNR Finance Company Limited	Investment holding	HK$1
BNR Investment Company Limited	Investment holding	HK$1
Debt Capital Solutions Company Limited	Investment holding	HK$1
Drawbridge Investment Limited	Investment holding	HK$1
Eight Finance Investment Company Limited	Investment holding	HK$1
Stewardship Investment Company Limited	Investment holding	HK$1
Stratosphere Finance Company Limited	Investment holding	HK$1
Real Avenue Investment Company Limited	Investment properties holding	HK$1
Real Boulevard Investment Company Limited	Investment properties holding	HK$1
Real Gate Investment Company Limited	Investment properties holding	HK$1
Real Horizon Investment Company Limited	Investment properties holding	HK$1
Real Plaza Investment Company Limited	Investment properties holding	HK$1
Real Summit Investment Company Limited	Investment properties holding	HK$1
Real Zenith Investment Company Limited	Investment properties holding	HK$1

1 55% equity interest held by the Fund.

2 Subsidiaries indirectly held by the Fund through The Hong Kong Mortgage Corporation Limited.

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The place of incorporation and operation of the above subsidiaries are in Hong Kong.

The Fund has committed to inject additional funds up to HK$20 billion (2019: HK$20 billion) to The Hong Kong Mortgage Corporation Limited as equity for the purpose of financing The Hong Kong Mortgage Corporation Limited's additional capital injection to HKMC Annuity Limited for maintaining its margin of solvency above a certain level. Up to 31 December 2020, there had been no capital injection to The Hong Kong Mortgage Corporation Limited under this arrangement (2019: Nil).

The Fund has provided The Hong Kong Mortgage Corporation Limited with a revolving credit facility of HK$80 billion (2019: HK$30 billion) at prevailing market interest rates. As at 31 December 2020, there was no outstanding balance due from The Hong Kong Mortgage Corporation Limited under this facility (2019: Nil).

The Fund has committed to provide a funding support up to HK$300 million (2019: HK$300 million) to Hong Kong Academy of Finance Limited for the purpose of financing the company's operations. The outstanding commitment as at 31 December 2020 was HK$150 million (2019: HK$220 million).

Loans to subsidiaries which principally hold investments including properties are unsecured, interest-free and repayable on demand.

Placements by subsidiaries are disclosed in note 26.

The financial statements of the principal subsidiaries are audited by firms other than the Audit Commission. The aggregate assets and liabilities of these subsidiaries not audited by the Audit Commission amounted to approximately 11% (2019: 9%) and 3% (2019: 2%) of the Group's total assets and total liabilities, respectively.

18 INTERESTS IN ASSOCIATES AND JOINT VENTURES

	Group	
	2020	2019
Associates[1]		
Share of net assets	**2,011**	2,022
Joint ventures[2]		
Share of net assets	**11,589**	13,717
Due from joint ventures	**29,118**	30,789
	40,707	44,506
TOTAL	**42,718**	46,528

[1] Investment in an associate, comprising unlisted shares, is held directly by the Fund. In the Fund's balance sheet, the investment is stated at cost of HK$5,000 (2019: HK$5,000).

[2] The Fund does not directly hold investment in joint ventures.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

18.1 Interests in associates

The Group holds investments in two associates. One associate, incorporated in Hong Kong, provides interbank clearing services. Another associate, incorporated outside Hong Kong, holds investment funds. The Group holds equity interests in these associates ranging from 23% to 50%.

Aggregate information of the Group's associates, which are not individually material, is summarised below:

	Group	
	2020	2019
Share of (loss)/profit for the year	**(41)**	118
Share of other comprehensive income	**53**	56
Share of total comprehensive income	**12**	174
Aggregate carrying amount of interests in associates	**2,011**	2,022

As at 31 December 2020, the Group has no outstanding investment commitments to associates (2019: Nil).

18.2 Interests in joint ventures

The Group holds investments in 22 joint ventures, which are all incorporated outside Hong Kong. The principal activities of these joint ventures are holding overseas investment properties. The Group holds equity interests in these joint ventures ranging from 35% to 99%. Although the Group's equity interest in some of these joint ventures exceeds 50%, they are categorised as joint ventures because important business decisions relating to these joint ventures are required to be made with the consent of all parties. As at 31 December 2020, the aggregate interest in these joint ventures amounted to 0.85% of the Group's total assets.

Aggregate information of the Group's joint ventures, which are not individually material, is summarised below:

	Group	
	2020	2019
Share of (loss)/profit for the year	**(3,170)**	2,970
Share of other comprehensive income/(loss)	**1,042**	(209)
Share of total comprehensive (loss)/income	**(2,128)**	2,761
Aggregate carrying amount of interests in joint ventures	**40,707**	44,506

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Group's share of outstanding investment commitments to joint ventures is shown below:

	Group	
	2020	2019
Commitments to contribute funds	**2,988**	3,705

19 INVESTMENT PROPERTIES

	Group		Fund	
	2020	2019	**2020**	2019
At fair value				
At 1 January	**22,481**	25,800	**–**	–
Additions	**105**	107	**–**	–
Disposals	**–**	(3,886)	**–**	–
Change in fair value on revaluation	**(356)**	46	**–**	–
Exchange differences	**905**	414	**–**	–
At 31 December	**23,135**	22,481	**–**	–

The carrying amount of the Group's investment properties is analysed as follows:

	Group		Fund	
	2020	2019	**2020**	2019
Held outside Hong Kong				
on freehold	**9,426**	8,872	**–**	–
on long-term lease (over 50 years)	**13,709**	13,609	**–**	–
TOTAL	**23,135**	22,481	**–**	–

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Group's investment properties are leased to third parties under operating leases. The gross rental income received and receivable by the Group and the related expenses in respect of these investment properties are summarised as follows:

	Group		Fund	
	2020	2019	**2020**	2019
Gross rental income	**1,223**	1,328	**–**	–
Direct expenses	**(155)**	(207)	**–**	–
Net rental income	**1,068**	1,121	**–**	–

The Group's total future minimum lease payments receivable under non-cancellable operating leases are as follows:

	Group		Fund	
	2020	2019	**2020**	2019
Within one year	**1,027**	1,117	**–**	–
After one year but not later than five years	**2,808**	2,883	**–**	–
After five years but not later than ten years	**876**	1,401	**–**	–
After ten years but not later than fifteen years	**189**	283	**–**	–
After fifteen years but not later than twenty years	**–**	1	**–**	–
TOTAL	**4,900**	5,685	**–**	–

As at 31 December 2020, investment properties with a fair value of HK$22,731 million (2019: HK$21,976 million) were pledged to secure general banking facilities granted to the Group (note 28).

19.1 Fair value measurement of investment properties

The Group's investment properties are revalued by independent professional valuers on an open market value basis at each reporting date. The valuers have valued the Group's investment properties based on income approach with reference to comparable market evidence. The market value which is considered as the fair value of each investment property reflects, among other things, rental income from current leases and assumptions about rental income from future leases in light of the current market conditions. The fair value also reflects, on a similar basis, any cash outflows that could be expected in respect of the property. For all properties, their current use equates to the highest and best use. There has been no change to the valuation technique during the year.

Under the income approach, fair value is estimated using assumptions regarding the benefits and liabilities of ownership over the asset's life including the terminal value. This method involves the projection of a series of cash flows on a real property interest. To this projected cash flow series, a market-derived discount rate is applied to establish the present value of the income stream associated with the asset. The significant unobservable inputs used in the income approach are the selection of discount rates which ranged from 4.10% to 5.00% (2019: 4.25% to 5.10%), net initial yields which ranged from 4.31% to 9.64% (2019: 3.97% to 8.03%) and terminal capitalisation rates which ranged from 3.10% to 3.75% (2019: 3.25% to 3.80%). Significant increases or decreases in any of those inputs in isolation would result in significantly lower or higher fair value measurements, respectively.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

All of the Group's investment properties are classified under Level 3 of the fair value hierarchy. There were no transfers into or out of Level 3 during the year. The net losses recognised in the income and expenditure account relating to revaluation of investment properties held at the reporting date were HK$356 million (2019: HK$118 million).

20 PROPERTY, PLANT AND EQUIPMENT

	Group				
	Owned assets			Right-of-use assets	
	Premises	Plant and equipment	Computer software licences and system development costs	Premises	Total
Cost					
At 1 January 2019	3,852	1,469	459	428	6,208
Additions	2	104	46	2	154
Disposals	–	(9)	–	–	(9)
At 31 December 2019	3,854	1,564	505	430	6,353
At 1 January 2020	**3,854**	**1,564**	**505**	**430**	**6,353**
Additions	**–**	**126**	**30**	**400**	**556**
Disposals/write-offs	**–**	**(7)**	**–**	**(92)**	**(99)**
At 31 December 2020	**3,854**	**1,683**	**535**	**738**	**6,810**
Accumulated depreciation					
At 1 January 2019	1,337	1,032	371	–	2,740
Charge for the year	89	128	23	120	360
Written back on disposal	–	(8)	–	–	(8)
At 31 December 2019	1,426	1,152	394	120	3,092
At 1 January 2020	**1,426**	**1,152**	**394**	**120**	**3,092**
Charge for the year	**89**	**125**	**26**	**136**	**376**
Written back on disposal/write-offs	**–**	**(7)**	**–**	**(92)**	**(99)**
At 31 December 2020	**1,515**	**1,270**	**420**	**164**	**3,369**
Net book value					
At 31 December 2020	**2,339**	**413**	**115**	**574**	**3,441**
At 31 December 2019	2,428	412	111	310	3,261

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund				
	Owned assets			Right-of-use assets	
	Premises	Plant and equipment	Computer software licences and system development costs	Premises	Total
Cost					
At 1 January 2019	3,843	665	459	321	5,288
Additions	–	51	46	2	99
Disposals	–	(3)	–	–	(3)
At 31 December 2019	3,843	713	505	323	5,384
At 1 January 2020	**3,843**	**713**	**505**	**323**	**5,384**
Additions	**–**	**69**	**30**	**203**	**302**
At 31 December 2020	**3,843**	**782**	**535**	**526**	**5,686**
Accumulated depreciation					
At 1 January 2019	1,330	474	371	–	2,175
Charge for the year	87	72	23	65	247
Written back on disposal	–	(3)	–	–	(3)
At 31 December 2019	1,417	543	394	65	2,419
At 1 January 2020	**1,417**	**543**	**394**	**65**	**2,419**
Charge for the year	**88**	**62**	**26**	**75**	**251**
At 31 December 2020	**1,505**	**605**	**420**	**140**	**2,670**
Net book value					
At 31 December 2020	**2,338**	**177**	**115**	**386**	**3,016**
At 31 December 2019	2,426	170	111	258	2,965

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The net book value of owned premises comprises:

	Group		Fund	
	2020	2019	**2020**	2019
In Hong Kong				
Leasehold land and the building situated thereon (leasehold between 10 and 50 years)	**2,318**	2,406	**2,317**	2,404
Outside Hong Kong				
Freehold land and the building situated thereon	**21**	22	**21**	22
TOTAL	**2,339**	2,428	**2,338**	2,426

21 CERTIFICATES OF INDEBTEDNESS, GOVERNMENT-ISSUED CURRENCY NOTES AND COINS IN CIRCULATION

	Group and Fund			
	Certificates of Indebtedness		Government-issued currency notes and coins in circulation	
	2020	2019	**2020**	2019
Carrying amount	**556,204**	516,062	**12,844**	12,988
Reconciliation with face value:				
Hong Kong dollar face value	**559,515**	516,605	**12,920**	13,001
Linked exchange rate for calculating the US dollars required for redemption	**US$1=HK$7.80**	US$1=HK$7.80	**US$1=HK$7.80**	US$1=HK$7.80
US dollars required for redemption	**US$71,733 million**	US$66,231 million	**US$1,656 million**	US$1,667 million
Market exchange rate for translation into Hong Kong dollars	**US$1=HK$7.75385**	US$1=HK$7.7918	**US$1=HK$7.75385**	US$1=HK$7.7918
Carrying amount	**556,204**	516,062	**12,844**	12,988

Exchange Fund – Notes to the Financial Statements (continued)
(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

22 BALANCE OF THE BANKING SYSTEM

Under the interbank payment system based on Real Time Gross Settlement principles, all licensed banks maintain a Hong Kong dollar clearing account with the Hong Kong Monetary Authority (HKMA) for the account of the Fund. The aggregate amount in these clearing accounts, which must not have a negative balance, represents the total level of liquidity in the interbank market.

Under the weak-side Convertibility Undertaking, the HKMA undertakes to convert Hong Kong dollars in these clearing accounts into US dollars at the fixed exchange rate of US$1=HK$7.85. Likewise, under the strong-side Convertibility Undertaking, licensed banks can convert US dollars into Hong Kong dollars in these accounts, as the HKMA undertakes to buy US dollars at the fixed exchange rate of US$1=HK$7.75. Within the Convertibility Zone bounded by the two Convertibility Undertakings, the HKMA may choose to conduct market operations in a manner consistent with Currency Board principles. Such operations can result in matching changes in the balances of these accounts.

The balance of the banking system is repayable on demand and non-interest-bearing.

23 PLACEMENTS BY BANKS AND OTHER FINANCIAL INSTITUTIONS

	Group and Fund	
	2020	2019
At amortised cost		
Placements by banks	**87,650**	35,000
TOTAL	**87,650**	35,000

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

24 PLACEMENTS BY FISCAL RESERVES

	Group and Fund	
	2020	2019
Placements by Operating and Capital Reserves		
(i) with interest payable at a fixed rate determined annually		
General Revenue Account	**402,880**	566,451
Capital Works Reserve Fund	**175,609**	247,693
Civil Service Pension Reserve Fund	**42,770**	39,426
Disaster Relief Fund	**42**	38
Innovation and Technology Fund	**24,570**	25,265
Lotteries Fund	**21,350**	23,806
Capital Investment Fund	**5,772**	6,506
Loan Fund	**3,843**	3,771
	676,836	912,956
(ii) with interest payable at market-based rates		
General Revenue Account	**5**	4
	676,841	912,960
Placements by Future Fund with interest payable at a composite rate determined annually		
Land Fund	**200,191**	219,730
General Revenue Account	**4,800**	4,800
	204,991	224,530
TOTAL	**881,832**	1,137,490

Fiscal Reserves comprise Operating and Capital Reserves and the Future Fund.

Placements by Operating and Capital Reserves are repayable on demand. Interest on the majority of these placements is payable at a fixed rate determined every January. The rate is the average annual investment return of the Fund's Investment Portfolio for the past six years or the average annual yield of three-year Government Bond for the previous year subject to a minimum of zero percent, whichever is the higher. This rate was fixed at 3.7% per annum for 2020 (2019: 2.9%).

The Future Fund was established on 1 January 2016. Placements by Future Fund comprise an initial endowment from the balance of the Land Fund and periodic top-ups from the General Revenue Account as directed by the Financial Secretary. These placements are divided into two portions: one linked with the performance of the Investment Portfolio and another linked with the performance of the Long-Term Growth Portfolio. Interest on these placements is payable at a composite rate which is computed annually, on a weighted average basis, with reference to the above-mentioned fixed rate determined for placements by Operating and Capital Reserves and the annual rate of return linked with the performance of the Long-Term Growth Portfolio. The composite rate for 2020 was 12.3% (2019: 8.7%). Placements by Future Fund, together with the interest thereon (note 30), are repayable on 31 December 2025 unless otherwise directed by the Financial Secretary according to the terms of the placements. During the year, part of the placements by Future Fund amounting to HK$19,539 million (2019: Nil) was withdrawn as directed by the Financial Secretary.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

25 PLACEMENTS BY HKSAR GOVERNMENT FUNDS AND STATUTORY BODIES

	Group and Fund	
	2020	2019
Placements with interest payable at a fixed rate[1] determined annually		
Bond Fund	**150,846**	138,613
Community Care Fund	**9,806**	15,301
Elite Athletes Development Fund	**11,183**	5,591
Employees Retraining Board	**11,059**	13,723
Environment and Conservation Fund	**5,803**	5,674
Hospital Authority	**15,866**	23,415
Housing Authority	**38,151**	33,806
Language Fund	**6,429**	6,200
Research Endowment Fund	**49,990**	49,092
Samaritan Fund	**6,446**	6,216
Trading Funds	**9,597**	8,201
West Kowloon Cultural District Authority	**8,902**	8,585
Other funds[2]	**13,311**	12,980
	337,389	327,397
Placements with interest payable at market-based rates		
Deposit Protection Scheme Fund	**5,082**	1,009
TOTAL	**342,471**	328,406

1 The rate is the average annual investment return of the Fund's Investment Portfolio for the past six years or the average annual yield of three-year Government Bond for the previous year subject to a minimum of zero percent, whichever is the higher. This rate was fixed at 3.7% per annum for 2020 (2019: 2.9%).

2 This is a collective placement by 15 HKSAR Government funds (2019: 15 HKSAR Government funds).

26 PLACEMENTS BY SUBSIDIARIES

	Fund	
	2020	2019
Placements[1] by:		
HKMC Annuity Limited	**12,297**	9,539
HKMC Insurance Limited	**3,172**	3,058
TOTAL	**15,469**	12,597

1 Placements by subsidiaries are unsecured, interest-bearing and have fixed repayment terms from 6 to 10 years.

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

27 EXCHANGE FUND BILLS AND NOTES ISSUED

	Group and Fund	
	2020	2019
At fair value		
Exchange Fund Bills and Notes issued		
Exchange Fund Bills	**1,043,062**	1,126,087
Exchange Fund Notes	**26,118**	26,838
	1,069,180	1,152,925
Exchange Fund Bills held	**(300)**	(598)
TOTAL	**1,068,880**	1,152,327

Exchange Fund Bills and Notes (EFBN) issued are unsecured obligations of the Fund and are one of the components of the Monetary Base in the Currency Board Account. Exchange Fund Bills are issued by the Fund for maturities not exceeding one year. Exchange Fund Notes are issued by the Fund with maturities of 2 years or more.

Since January 2015, the Fund has ceased to issue Exchange Fund Notes with tenors of three years or above to avoid overlapping with Government Bonds of the same tenors. To maintain the overall size of Exchange Fund paper, the Fund has issued additional Exchange Fund Bills to replace maturing Exchange Fund Notes of those tenors.

Exchange Fund Bills held by the Fund as a result of market making activities are considered as redemption of the bills issued and are netted off.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

An analysis of the nominal value of EFBN issued at the beginning and the end of year is set out below:

	Group and Fund			
	2020		2019	
	Exchange Fund Bills	**Exchange Fund Notes**	Exchange Fund Bills	Exchange Fund Notes
Issued by the Currency Board Operations segment				
Nominal value at 1 January	**1,130,094**	**26,600**	1,102,302	32,200
Issuance	**3,313,257**	**4,800**	3,317,384	4,800
Redemption	**(3,400,221)**	**(6,400)**	(3,289,592)	(10,400)
Nominal value at 31 December	**1,043,130**	**25,000**	1,130,094	26,600
Long positions held by the Financial Stability and Other Activities segment				
Nominal value at 31 December	**(300)**	**–**	(600)	–
Total nominal value	**1,042,830**	**25,000**	1,129,494	26,600
Carrying amount, at fair value	**1,042,762**	**26,118**	1,125,489	26,838
Difference	**68**	**(1,118)**	4,005	(238)

The fair value changes of EFBN issued are attributable to changes in benchmark interest rates.

28 BANK LOANS

	Group		Fund	
	2020	2019	**2020**	2019
At amortised cost				
Bank loans repayable:				
After one year but not later than two years	**–**	3,747	**–**	–
After two years but not later than five years	**1,685**	–	**–**	–
After five years but not later than ten years	**10,365**	7,601	**–**	–
TOTAL	**12,050**	11,348	**–**	–

As at 31 December 2020, the banking facilities of the Group were secured by mortgage over the investment properties with a fair value of HK$22,731 million (2019: HK$21,976 million) (note 19).

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

29 OTHER DEBT SECURITIES ISSUED

	Group		Fund	
	2020	2019	**2020**	2019
Debt securities issued, carried at amortised cost	**18,158**	10,967	**–**	–
Debt securities issued, designated as hedged items under fair value hedge	**44,158**	29,256	**–**	–
Debt securities issued, designated as hedged items under cash flow hedge	**271**	–	**–**	–
Debt securities issued, measured at fair value	**–**	147	**–**	–
TOTAL	**62,587**	40,370	**–**	–

An analysis of the nominal value of other debt securities issued at the beginning and the end of year is set out below:

	Group		Fund	
	2020	2019	**2020**	2019
Total debt securities issued				
Nominal value at 1 January	**40,585**	38,146	**–**	–
Issuance	**58,372**	31,891	**–**	–
Redemption	**(37,027)**	(29,474)	**–**	–
Exchange differences	**23**	22	**–**	–
Nominal value at 31 December	**61,953**	40,585	**–**	–
Carrying amount	**62,587**	40,370	**–**	–
Difference	**(634)**	215	**–**	–
Debt securities issued, measured at fair value				
Nominal value	**–**	184	**–**	–
Carrying amount, at fair value	**–**	147	**–**	–
Difference	**–**	37	**–**	–

The fair value changes of debt securities issued measured at fair value are attributable to changes in benchmark interest rates. As at 31 December 2020, there were no debt securities issued measured at fair value.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

30 OTHER LIABILITIES

	Group		Fund	
	2020	2019	**2020**	2019
Unsettled purchases of securities	**46,598**	50,120	**46,598**	50,120
Housing Reserve[1]	**65,931**	63,572	**65,931**	63,572
Accrued interest on placements by Fiscal Reserves (Future Fund)[2]	**110,688**	73,540	**110,688**	73,540
Accrued interest on placements by a subsidiary	**–**	–	**868**	285
Other interest payable	**523**	599	**115**	166
Accrued charges and other liabilities	**11,089**	6,580	**1,502**	1,057
Lease liabilities	**990**	717	**409**	278
Insurance liabilities	**11,187**	6,502	**–**	–
Provision for expected credit losses on loan commitments	**41**	18	**–**	–
Tax payable	**600**	561	**–**	–
Deferred tax liabilities	**443**	511	**–**	–
TOTAL	**248,090**	202,720	**226,111**	189,018

1 In accordance with the directives made by the Financial Secretary in December 2014 and December 2015, the accrued interest on placements by Fiscal Reserves earned for 2014 and 2015 with a total of HK$72,642 million were not paid on 31 December of the respective years but were set aside for the Housing Reserve which was established for the purpose of financing the development of public housing and public housing-related projects and infrastructure. The Housing Reserve earns interest at the fixed rate (note 24) on an annual basis. The interest accrued on the Housing Reserve for 2020 was HK$2,359 million (2019: HK$2,387 million). As announced by the Financial Secretary in his 2019–20 Budget Speech in February 2019, the Housing Reserve will be paid and brought back to the Fiscal Reserves over four financial years ending 31 March 2020 to 2023. Part of the Housing Reserve amounting to HK$21,191 million was paid and brought back to the Fiscal Reserves in 2019. There was no such transaction during the year. In February 2021, an amount of HK$21,975 million was paid and brought back to the Fiscal Reserves.

2 In accordance with the directive made by the Financial Secretary in December 2015, the accrued interest on placements by Future Fund should be rolled over and compounded at the composite rate (note 24) on an annual basis and shall only be paid upon maturity of the placements (i.e. 31 December 2025) unless otherwise directed by the Financial Secretary according to the terms of the placements. As announced by the Financial Secretary in his 2021–22 Budget Speech in February 2021, starting from the financial year ending 31 March 2022, accrued interest on placements by Future Fund will be brought back to the Government's accounts on a progressive basis, with an amount of HK$25,000 million to be brought back in the first year.

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

31 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION

(a) Components of cash and cash equivalents

	Group		Fund	
	2020	2019	**2020**	2019
Cash and money at call	**148,947**	181,527	**145,255**	180,741
Placements with banks and other financial institutions	**134,355**	137,355	**120,527**	125,204
Treasury bills and commercial paper	**5,196**	33,563	**5,196**	33,563
Certificates of deposit	**–**	3,975	**–**	3,974
TOTAL	**288,498**	356,420	**270,978**	343,482

(b) Reconciliation of cash and cash equivalents

		Group		Fund	
	Note	**2020**	2019	**2020**	2019
Amounts shown in the balance sheet					
Cash and money at call	8	**148,947**	181,527	**145,255**	180,741
Placements with banks and other financial institutions	9	**143,154**	153,373	**121,799**	125,204
Treasury bills and commercial paper	10	**976,338**	740,795	**976,338**	740,795
Certificates of deposit	10	**194,020**	218,201	**194,020**	218,201
		1,462,459	1,293,896	**1,437,412**	1,264,941
Less: Amounts with original maturity beyond 3 months		**(1,173,961)**	(937,476)	**(1,166,434)**	(921,459)
Cash and cash equivalents in the statement of cash flows		**288,498**	356,420	**270,978**	343,482

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(c) Reconciliation of liabilities arising from financing activities

The table below shows changes in the liabilities arising from financing activities, which are liabilities for which cash flows were, or future cash flows will be, classified in the statement of cash flows as cash flows from financing activities.

	Group			Fund
	Bank loans (note 28)	Other debt securities issued (note 29)	Lease liabilities (note 30)	Lease liabilities (note 30)
At 1 January 2019	12,795	37,928	817	338
Changes from financing cash flows				
Bank loans raised	418	–	–	–
Repayment of bank loans	(2,104)	–	–	–
Proceeds from issue of other debt securities	–	31,844	–	–
Redemption of other debt securities issued	–	(29,474)	–	–
Principal portion of lease payments	–	–	(115)	(62)
Non-cash changes				
Increase in lease liabilities relating to new leases	–	–	2	2
Amortisation	31	67	18	8
Exchange differences	208	22	13	–
Change in fair value	–	(17)	–	–
Other changes				
Interest portion of lease payments	–	–	(18)	(8)
At 31 December 2019	11,348	40,370	717	278
At 1 January 2020	**11,348**	**40,370**	**717**	**278**
Changes from financing cash flows				
Bank loans raised	**183**	**–**	**–**	**–**
Proceeds from issue of other debt securities	**–**	**58,244**	**–**	**–**
Redemption of other debt securities issued	**–**	**(37,027)**	**–**	**–**
Principal portion of lease payments	**–**	**–**	**(122)**	**(72)**
Non-cash changes				
Increase in lease liabilities relating to new leases	**–**	**–**	**383**	**203**
Amortisation	**15**	**127**	**17**	**7**
Exchange differences	**504**	**22**	**12**	**–**
Change in fair value	**–**	**851**	**–**	**–**
Other changes				
Interest portion of lease payments	**–**	**–**	**(17)**	**(7)**
At 31 December 2020	**12,050**	**62,587**	**990**	**409**

The total cash outflows for leases of the Group and the Fund in 2020 were HK$158 million (2019: HK$143 million) and HK$79 million (2019: HK$70 million) respectively.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

32 OPERATING SEGMENT INFORMATION

The Group determines its operating segments based on the reports reviewed by the chief operating decision maker. As a central banking institution, the HKMA is responsible for managing the Fund and maintaining the monetary and banking stability of Hong Kong. The Group comprises operating segments as stated in note 2.21.

	Group							
	Currency Board Operations (note (a))		Reserves Management		Financial Stability and Other Activities		Total	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
Income								
Interest and dividend income	**14,277**	41,203	**31,559**	42,446	**1,610**	2,386	**47,446**	86,035
Investment gains/(losses)	**19,527**	5,705	**182,015**	174,133	**3,334**	(941)	**204,876**	178,897
Other income	**–**	–	**52**	54	**2,901**	2,426	**2,953**	2,480
	33,804	46,908	**213,626**	216,633	**7,845**	3,871	**255,275**	267,412
Expenditure								
Interest expense	**8,974**	19,120	**81,894**	63,581	**688**	994	**91,556**	83,695
Other expenses	**1,544**	1,387	**2,174**	2,175	**6,513**	4,987	**10,231**	8,549
	10,518	20,507	**84,068**	65,756	**7,201**	5,981	**101,787**	92,244
Surplus/(Deficit) before share of (loss)/profit of associates and joint ventures	**23,286**	26,401	**129,558**	150,877	**644**	(2,110)	**153,488**	175,168
Share of (loss)/profit of associates and joint ventures, net of tax	**–**	–	**(3,248)**	3,055	**37**	33	**(3,211)**	3,088
Gain on disposal of an associate	**–**	–	**–**	47	**–**	–	**–**	47
Surplus/(Deficit) before taxation	**23,286**	26,401	**126,310**	153,979	**681**	(2,077)	**150,277**	178,303

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group									
	Currency Board Operations (note (a))		Reserves Management		Financial Stability and Other Activities		Re-allocation (notes (b) & (c))		Total	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Assets										
Backing Assets										
Investment in designated US dollar assets	**2,302,796**	1,844,330	**–**	–	**–**	–	**–**	–	**2,302,796**	1,844,330
Interest receivable on designated US dollar assets	**3,509**	4,329	**–**	–	**–**	–	**–**	–	**3,509**	4,329
Other investments	**–**	–	**2,320,522**	2,327,804	**136,410**	114,040	**(300)**	12,802	**2,456,632**	2,454,646
Other assets	**–**	–	**40,444**	46,911	**6,427**	6,356	**1,194**	74,620	**48,065**	127,887
TOTAL ASSETS	**2,306,305**	1,848,659	**2,360,966**	2,374,715	**142,837**	120,396	**894**	87,422	**4,811,002**	4,431,192
Liabilities										
Monetary Base										
Certificates of Indebtedness	**556,204**	516,062	**–**	–	**–**	–	**–**	–	**556,204**	516,062
Government-issued currency notes and coins in circulation	**12,844**	12,988	**–**	–	**–**	–	**–**	–	**12,844**	12,988
Balance of the banking system	**457,466**	67,688	**–**	–	**–**	–	**–**	–	**457,466**	67,688
Exchange Fund Bills and Notes issued	**1,069,180**	1,152,925	**–**	–	**–**	–	**(300)**	(598)	**1,068,880**	1,152,327
Interest payable on Exchange Fund Notes	**110**	122	**–**	–	**–**	–	**–**	–	**110**	122
Net accounts (receivable)/payable	**(1,194)**	(87,991)	**–**	–	**–**	–	**1,194**	88,020	**–**	29
Placements by banks and other financial institutions	**–**	–	**87,650**	35,000	**–**	–	**–**	–	**87,650**	35,000
Placements by Fiscal Reserves	**–**	–	**881,832**	1,137,490	**–**	–	**–**	–	**881,832**	1,137,490
Placements by HKSAR Government funds and statutory bodies	**–**	–	**337,389**	327,397	**5,082**	1,009	**–**	–	**342,471**	328,406
Bank loans	**–**	–	**12,050**	11,348	**–**	–	**–**	–	**12,050**	11,348
Other debt securities issued	**–**	–	**678**	659	**61,909**	39,711	**–**	–	**62,587**	40,370
Other liabilities	**–**	–	**233,061**	195,597	**22,388**	13,184	**–**	–	**255,449**	208,781
TOTAL LIABILITIES	**2,094,610**	1,661,794	**1,552,660**	1,707,491	**89,379**	53,904	**894**	87,422	**3,737,543**	3,510,611

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(a) Currency Board Operations

Starting from 1 October 1998, specific US dollar assets of the Fund have been designated to back the Monetary Base, which comprises Certificates of Indebtedness, government-issued currency notes and coins in circulation, balance of the banking system and EFBN issued. While specific assets of the Fund have been earmarked for backing the Monetary Base, all the Fund's assets are available for the purpose of supporting the Hong Kong dollar exchange rate under the Linked Exchange Rate system.

In accordance with an arrangement approved by the Financial Secretary in January 2000, assets can be transferred between the Backing Portfolio and general reserves when the Backing Ratio reaches either the upper trigger point (112.5%) or the lower trigger point (105%). This arrangement allows transfer of excess assets out of the Backing Portfolio to maximise their earning potential while ensuring that there are sufficient liquid assets in the Backing Portfolio. The Backing Ratio stood at 109.93% as at 31 December 2020 (2019: 111.21%).

(b) Re-allocation of assets and liabilities

For the purpose of the Currency Board Operations segment, certain liabilities of the Fund are deducted from the Backing Assets and certain assets are deducted from the Monetary Base in order to allow proper computation of the Backing Ratio. The following items are re-allocation adjustments to reconcile the segmental information to the Group balance sheet:

(i) the Backing Assets are presented on a net basis in the Currency Board Operations. Accounts payable for unsettled purchases of securities and redemption of Certificates of Indebtedness are included in "net accounts payable" to offset corresponding investments in the Backing Assets. As at 31 December 2020, there were no "other liabilities" (2019: Nil) deducted from the Backing Assets; and

(ii) the Monetary Base is also presented on a net basis. As at 31 December 2020, deductions from the Monetary Base comprising "other assets" of HK$1,194 million (2019: HK$88,020 million) consisted of three components:

- as Hong Kong dollar interest rate swaps have been used as a means to manage the cost of issuing Exchange Fund Notes, interest receivable of HK$29 million (2019: HK$5 million) and unrealised gains of HK$1,165 million (2019: HK$431 million) on these interest rate swaps are included in "net accounts (receivable)/payable" to reduce the Monetary Base;

- when Hong Kong dollar overnight advances secured on EFBN have been made to banks under the Discount Window Operations, the advances are included in "net accounts (receivable)/payable" to reduce the Monetary Base. There were no such advances as at 31 December 2020 (2019: HK$13,400 million); and

- EFBN issued on tender date but not yet settled are included in "net accounts (receivable)/payable" to reduce the Monetary Base. There was no such receivable as at 31 December 2020 (2019: HK$74,184 million).

(c) Exchange Fund Bills and Notes held

EFBN held by the Financial Stability and Other Activities segment are treated as redemption of EFBN issued in the Currency Board Operations segment.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

33 PLEDGED ASSETS

Assets are pledged as margin for futures contracts and securities lending agreements and as collateral for securing general banking facilities. Securities lent do not include EFBN in issue. There are no financial assets pledged against contingent liabilities.

		Group		Fund	
	Note	**2020**	2019	**2020**	2019
Assets pledged					
Cash and money at call		**76**	92	**76**	92
Financial assets measured at fair value through income and expenditure account		**8,800**	4,842	**8,800**	4,842
Equity interests in associates		**1,739**	1,669	**–**	–
Investment properties	19	**22,731**	21,976	**–**	–
Secured liabilities					
Commodity futures contracts, at fair value		**–**	104	**–**	104
Equity index futures contracts, at fair value		**160**	76	**160**	76
Bank loans	28	**12,050**	11,348	**–**	–
Other debt securities issued		**678**	659	**–**	–

During the year, the Group entered into collateralised reverse repurchase agreements, repurchase agreements and securities lending transactions that may result in credit exposure in the event that the counterparty to the transaction is unable to fulfil its contractual obligations. The Group controls credit risk associated with these activities by monitoring counterparty credit exposure and collateral values on a daily basis and requiring additional collateral to be deposited with or returned to the Group when deemed necessary.

These transactions are conducted under terms that are usual and customary to standard lending, and securities borrowing and lending activities.

34 COMMITMENTS

(a) Capital commitments

Capital expenditure authorised but not provided for in the financial statements at the reporting date is as follows:

	Group		Fund	
	2020	2019	**2020**	2019
Contracted for	**13**	19	**6**	16
Authorised but not yet contracted for	**1,477**	784	**1,356**	732
TOTAL	**1,490**	803	**1,362**	748

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Credit facility to the International Monetary Fund

The Fund has participated in the New Arrangements to Borrow (NAB), a standby credit facility provided to the International Monetary Fund (IMF) for the purpose of managing instability in the international monetary system. The facility is subject to periodic review and renewal. As at 31 December 2020, the Fund had an undertaking under the NAB to lend foreign currencies to the IMF up to HK$3,809 million equivalent (2019: HK$3,672 million equivalent), in the form of a loan bearing prevailing market interest rates. The outstanding principal due from the IMF under the NAB amounted to HK$164 million equivalent (2019: HK$239 million equivalent) (note 16).

(c) Credit facility to the Hong Kong Deposit Protection Board

The Fund has provided the Hong Kong Deposit Protection Board (HKDPB) with a standby credit facility of HK$120 billion (2019: HK$120 billion) at prevailing market interest rates for meeting the necessary liquidity required for payment of compensation in the event of a bank failure. As at 31 December 2020, there was no outstanding balance due from the HKDPB under this facility (2019: Nil).

(d) Repurchase agreements with other central banks

The Fund has entered into bilateral repurchase agreements with various central banks in Asia and Australasia amounting up to HK$44,585 million equivalent (2019: HK$44,803 million equivalent). The arrangement allows each organisation to enhance the liquidity of its foreign reserve portfolio with minimal additional risk. As at 31 December 2020, there was no outstanding transaction with any central bank under this arrangement (2019: Nil).

(e) Chiang Mai Initiative Multilateralisation Agreement

The Chiang Mai Initiative Multilateralisation (CMIM) was established under the aegis of the 10 Association of Southeast Asian Nations (ASEAN) member countries together with China, Japan and Korea (ASEAN+3) to provide short-term US dollars through currency swap transactions to participants facing balance-of-payments and liquidity difficulties with a total size of US$240 billion (2019: US$240 billion). Hong Kong, through the HKMA, participates in the CMIM and has undertaken to commit up to US$8.4 billion (2019: US$8.4 billion) out of the Fund. Hong Kong has the right to request liquidity support up to US$6.3 billion (2019: US$6.3 billion) from the CMIM in case of emergency. Up to 31 December 2020, there had been no request to activate the CMIM (2019: Nil).

(f) Bilateral swap agreement

The People's Bank of China and the HKMA renewed a bilateral currency swap agreement in November 2020 for a term of five years, with the maximum size expanded from RMB400 billion/HK$470 billion to RMB500 billion/HK$590 billion. The arrangement helps facilitate the development of offshore renminbi business in Hong Kong. As at 31 December 2020, there was no currency swap activated under this arrangement (2019: Nil).

(g) Investment commitments

The Group's subsidiaries with principal activities of holding investments, including properties, had outstanding investment commitment of HK$232,512 million equivalent as at 31 December 2020 (2019: HK$232,366 million equivalent).

35 CONTINGENT LIABILITIES

(a) Uncalled portion of investment in the Bank for International Settlements

As at 31 December 2020, the Fund had a contingent liability of up to 16.1 million SDRs or HK$180 million equivalent (2019: 16.1 million SDRs or HK$174 million equivalent), in respect of the uncalled portion of its 4,285 shares (2019: 4,285 shares) in the Bank for International Settlements (note 11).

SDR is an international reserve asset created by the IMF. Its value is based on a basket of five major currencies comprising US dollar, euro, renminbi, Japanese yen and pound sterling. As at 31 December 2020, SDR 1 was valued at US$1.44498 (2019: US$1.38610).

(b) Financial guarantees

The Group has provided guarantees in respect of bank loans granted to joint ventures. The maximum liability as at 31 December 2020 was HK$1,583 million equivalent (2019: HK$1,606 million equivalent).

36 MATERIAL RELATED PARTY TRANSACTIONS

Transactions with related parties are conducted at rates determined by the Monetary Authority taking into account the nature of each transaction on a case-by-case basis.

All the material related party transactions and balances, including commitments, are disclosed in notes 4(b), 4(d), 14, 17, 18, 24, 25, 26, 30 and 34(c).

The Exchange Fund Advisory Committee (EFAC) and its Sub-Committees advise the Financial Secretary in his control of the Fund. Members of the EFAC and its Sub Committees are appointed in a personal capacity by the Financial Secretary for the expertise and experience that they can bring to the Committees. Transactions with companies related to members of the EFAC and its Sub-Committees, if any, have been conducted as a normal part of the operation of the Group and on terms consistent with its ongoing operations.

37 FINANCIAL RISK MANAGEMENT

This note presents information about the nature and extent of risks to which the Group is exposed, in particular those arising from financial instruments, and the risk management framework of the Group. The principal financial risks the Group is exposed to are credit risk, market risk and liquidity risk.

37.1 Governance

The Financial Secretary is advised by the EFAC in his control of the Fund. The EFAC is established under section 3(1) of the Exchange Fund Ordinance, which requires the Financial Secretary to consult the Committee in his exercise of control of the Fund. Members of the EFAC are appointed in a personal capacity by the Financial Secretary under the delegated authority of the Chief Executive of the HKSAR for the expertise and experience that they can bring to the Committee. Such expertise and experience include knowledge of monetary, financial, investment management and economic affairs, as well as of accounting, management, business and legal matters.

The EFAC is assisted in its work by five Sub-Committees, which monitor specific areas of the HKMA's work and report and make recommendations to the Financial Secretary through the EFAC.

Among these Sub-Committees, the Investment Sub-Committee (ISC) monitors the HKMA's investment management activities and makes recommendations on the investment policy and strategy of the Fund and on risk management and other related matters. Operating within the policies and guidelines endorsed by the EFAC or its delegated authority, the Exchange Fund Investment Office (EFIO) of the HKMA conducts the day-to-day management of the Fund's investment activities, with the Risk and Compliance Department, which is independent of the front office functions of the EFIO, carrying out the risk management activities of the Fund.

37.2 Investment management and control

Investment activities of the Fund are conducted in accordance with the investment benchmark derived from the Fund's investment objectives. The investment benchmark directs the strategic asset allocation of the Fund and is reviewed on a regular basis to ensure that it consistently meets the investment objectives. Changes to the investment benchmark, if required, must be endorsed by the EFAC.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Fund's target asset and currency mix are as follows:

	2020	2019
Asset type		
Bonds	**73%**	73%
Equities and related investments	**27%**	27%
	100%	100%
Currency		
US dollar and Hong Kong dollar	**88%**	89%
Others[1]	**12%**	11%
	100%	100%

[1] Other currencies included mainly euro, renminbi, pound sterling and Japanese yen.

In addition to the investment benchmark, the EFAC determines the risk tolerance level governing the extent to which the Fund's asset and currency mix may deviate from the investment benchmark, taking into account the risk volatility of and correlation across the asset classes and markets that the Fund is allowed to invest in. Authority to take medium term investment decisions is delegated to senior management of the HKMA down to the Executive Director level.

The Risk and Compliance Department is responsible for risk management and compliance monitoring regarding the investments of the Fund. It monitors the risk exposure of the Fund, checks compliance of investment activities against established guidelines and reports and follows up any identified breaches.

37.3 Credit risk

Credit risk is the risk of financial loss when a counterparty or a borrower fails to meet its contractual obligations. The Group's credit risk arises principally from the investments of the Fund and the loan portfolio held by the subsidiaries.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.3.1 *Management of credit risk*

The HKMA maintains effective credit risk management over the investments of the Fund. Based on the delegated authority of the EFAC, the Credit, Rules and Compliance Committee (CRCC) was established within the HKMA with the following responsibilities: (i) to establish and maintain the Credit Exposure Policy to govern the investments of the Fund; (ii) to review the adequacy of the existing credit risk management practices and, where necessary, formulate proposals for amendments; (iii) to conduct analysis of credit risk issues; (iv) to establish and review credit limits for the approved issuers and counterparties; (v) to review and consider proposals of amendments to the Operational Rules for Exchange Fund Investments as appropriate, and make recommendations to the Monetary Authority for endorsement; and (vi) to monitor the compliance of the investments of the Fund with the established policies and limits, and report and follow up any identified breaches. The CRCC is chaired by the Deputy Chief Executive (Monetary) whose responsibilities are independent of the day-to-day investment activities of the Fund, and includes representatives from the EFIO, the Risk and Compliance Department, the Monetary Management Department, and the Research Department of the HKMA.

In light of the rapidly evolving risk environment, the HKMA will remain vigilant in monitoring and managing the Fund's credit risk exposure, and will sustain the impetus for better credit risk management practices to support the investment activities of the Fund.

Credit limits are established in accordance with in-house methodologies as set out in the Operational Rules for Exchange Fund Investments and the Credit Exposure Policy to limit exposures to counterparty, issuer and country risks arising from the investments of the Fund.

(a) Counterparty risk

The Fund selects its counterparties in lending, placement, derivatives and trading transactions prudently and objectively. Since the Fund conducts transactions with a counterparty for a range of financial instruments, credit limits are established to limit the overall exposure to each authorised counterparty based on its credit ratings, financial strength and other relevant information.

Counterparty credit exposures are measured according to the risk nature of financial products involved in the transaction. Counterparty credit exposures of derivatives include an estimate for the potential future credit exposure of the derivative contracts, in addition to their positive mark-to-market replacement value.

(b) Issuer risk

Issuer risk arises from investments in debt securities. Credit limits for approved issuers are set on both individual and group levels to control the risk of loss arising from the default of debt securities issuers and to prevent undue risk concentration.

Moreover, to be qualified as an approved investment, a new market or financial instrument must meet the minimum credit, security and liquidity requirements of the Fund.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(c) Country risk

Country risk is broadly defined to include both the sovereign risk and the transfer risk. Sovereign risk denotes a government's ability and willingness to repay its obligations. Transfer risk is the risk that a borrower may not be able to secure foreign exchange to service its external obligations, for example, due to an action by the government to impose restrictions on the transfer of funds from the debtors in the country to foreign creditors. Under the existing framework, country limits are established to control the Fund's overall credit risk exposures to the countries endorsed by the CRCC.

The above credit limits are reviewed regularly. Credit exposure is monitored against these limits on a daily basis. To ensure prompt identification, proper approval and consistent monitoring of credit risk, the Fund has implemented a unified automated credit monitoring system which provides fully-integrated straight-through-processing linking the front, middle and back office functions. The pre-deal checking takes place in the front office prior to the commitment of any transaction to ensure that the intended transaction will not exceed the credit limits. The end-of-day compliance checking further verifies that the Fund complies with the established credit policies and procedures.

Any breaches of credit limits are reported to the CRCC and the ISC, and are followed up by the Risk and Compliance Department in a timely manner. The approval authorities to sanction these breaches are set out in the Credit Exposure Policy.

To manage the exposure to credit risk arising from the loan portfolio and mortgage insurance business, a prudent risk management framework is established to (i) select Approved Sellers carefully, (ii) adopt prudent mortgage purchasing criteria and insurance eligibility criteria, (iii) conduct effective and in-depth due diligence reviews, (iv) implement robust project structures and financing documentation, (v) perform an ongoing monitoring and reviewing mechanism, and (vi) ensure adequate protection for higher-risk mortgages.

37.3.2 Exposure to credit risk

The maximum exposure to credit risk of the financial assets of the Group and the Fund at the reporting date is equal to their carrying amounts. The maximum exposures to credit risk of off-balance sheet exposures are as follows:

		Group		Fund	
	Note	**2020**	2019	**2020**	2019
Risk in force – mortgage insurance	37.6	**54,543**	27,885	**–**	–
Risk in force – other guarantees and insurance	37.6	**15,020**	12,510	**–**	–
Loan commitments, guarantees and other credit related commitments		**239,115**	238,655	**313,513**	263,837
TOTAL		**308,678**	279,050	**313,513**	263,837

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.3.3 Credit quality and expected credit losses measurement

In general, expected credit losses are calculated using three main parameters, i.e. probability of default, loss given default and exposure at default. The 12-month expected credit losses are calculated by multiplying the 12-month probability of default, loss given default and exposure at default. Lifetime expected credit losses are calculated using the lifetime probability of default instead. The probability of default represents the expected point-in-time probability of a default over either (i) the next 12 months (i.e. 12-month probability of default) or (ii) the remaining lifetime of the financial instrument (i.e. lifetime probability of default), based on conditions existing at the reporting date and forward-looking information that affect credit risk. The exposure at default represents the expected balance at default, taking into account the repayment of principal and interest from the reporting date to the default event together with any expected drawdown of a committed loan. The loss given default represents expected losses on the exposure at default given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

While cash and money at call, loans with special 100% guarantee under the SFGS and financial guarantee contracts are subject to the impairment requirements, the Group has estimated that their expected credit losses are minimal and considers that no loss allowance is required. Credit quality and expected credit losses measurement for other financial instruments are analysed below.

(a) Placements with banks and other financial institutions

The Group has established an expected credit losses calculation methodology that is based on the probability of default assigned to each counterparty according to their external credit ratings and the related historical credit losses experience, adjusted for forward-looking information, to determine the amounts of loss allowances.

These financial assets are considered to have a low credit risk. The loss allowances are measured at amounts equal to 12-month expected credit losses.

The credit quality of placements with banks and other financial institutions is analysed below:

	Group		Fund	
	2020	2019	**2020**	2019
Credit rating[1]				
AA– to AA+	**61,755**	81,530	**61,560**	78,325
A– to A+	**42,996**	66,493	**25,362**	44,549
Lower than A– or un-rated[2]	**38,403**	5,350	**34,877**	2,330
Gross carrying amount	**143,154**	153,373	**121,799**	125,204
Less: allowances for expected credit losses	**(5)**	(4)	**(3)**	(3)
Carrying amount	**143,149**	153,369	**121,796**	125,201

1 This is the lowest of ratings designated by Moody's, Standard & Poor's and Fitch.
2 This included mainly balance with central banks which is not rated.

Exchange Fund – Notes to the Financial Statements (continued)
(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The movements in loss allowances for placements with banks and other financial institutions during the year are as follows:

	Group	Fund
At 1 January 2019	5	4
Decrease in loss allowances recognised in the income and expenditure account	(1)	(1)
At 31 December 2019	4	3
At 1 January 2020	**4**	**3**
Increase in loss allowances recognised in the income and expenditure account	**1**	**–**
At 31 December 2020	**5**	**3**

(b) Debt securities

The Group predominantly invests in liquid OECD member countries' government bonds and other quasi-government debt securities issues. As at 31 December 2020, approximately 69% (2019: 70%) of the debt securities held by the Group were rated "double-A" or above by Moody's, Standard & Poor's or Fitch.

For debt securities measured at amortised cost or fair value through other comprehensive income, the Group has established an expected credit losses calculation methodology that is based on the probability of default assigned to each issuer according to their external credit ratings and the related historical credit losses experience, adjusted for forward-looking information, to determine the amounts of loss allowances.

These debt securities are considered to have a low credit risk. The loss allowances are measured at amounts equal to 12-month expected credit losses.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The credit quality of debt securities is analysed below:

(i) Debt securities measured at fair value

	Group		Fund	
	2020	2019	**2020**	2019
Credit rating[1]				
Debt securities measured at fair value through income and expenditure account				
AAA	**464,536**	477,042	**464,536**	477,042
AA– to AA+	**1,763,112**	1,518,751	**1,763,112**	1,518,751
A– to A+	**450,126**	416,496	**450,126**	416,496
Lower than A – or un-rated[2]	**560,271**	444,276	**560,260**	444,266
TOTAL	**3,238,045**	2,856,565	**3,238,034**	2,856,555
Debt securities measured at fair value through other comprehensive income				
AA– to AA+	**3,022**	2,798	**–**	–
A– to A+	**1,397**	2,123	**–**	–
TOTAL	**4,419**	4,921	**–**	–

[1] This is the lowest of ratings designated by Moody's, Standard & Poor's and Fitch.
[2] This included mainly debt securities issued by the Bank for International Settlements which are not rated.

(ii) Debt securities measured at amortised cost

	Group	
	2020	2019
Credit rating[1]		
AAA	**77**	527
AA– to AA+	**1,169**	2,376
A– to A+	**8,487**	8,898
Lower than A– or un-rated	**–**	234
Gross carrying amount	**9,733**	12,035
Less: allowances for expected credit losses	**(3)**	(1)
Carrying amount	**9,730**	12,034

[1] This is the lowest of ratings designated by Moody's, Standard & Poor's and Fitch.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

There were no movements in loss allowances for debt securities measured at fair value through other comprehensive income in 2020 and 2019. The movements in loss allowances for debt securities measured at amortised cost during the year are as follows:

	Group	
	2020	2019
At 1 January	**1**	1
Increase in loss allowances recognised in the income and expenditure account	**2**	–
At 31 December	**3**	1

(c) Loan portfolio

The Group uses three categories for loans which reflect their credit risk and how the loss allowances are determined for each of those categories. These categories do not apply to loans with special 100% guarantee under the SFGS because their expected credit losses are minimal in view of the full guarantee provided by the HKSAR Government.

A summary of the assumptions underpinning the Group's expected credit loss model on loans is as follows:

Category	Group definition of category	Basis for calculation of expected credit losses
Stage 1	Loans that have a low credit risk with borrowers having a strong capacity to meet the contractual obligations at the reporting date or there have not been significant increases in credit risk since initial recognition	12-month expected credit losses
Stage 2	Loans for which there have been significant increases in credit risk since initial recognition, where significant increases in credit risk are presumed when contractual payments are more than 30 days past due	Lifetime expected credit losses – not credit impaired
Stage 3	Loans that have objective evidence of impairment including those that exhibit characteristics of non-repayment or those with contractual payments that are 90 days past due	Lifetime expected credit losses – credit impaired

Loans will be written off when there is no reasonable expectation of recovery on the delinquent interest and/or principal repayments.

Over the term of the loans, the Group accounts for its credit risk by appropriately providing for expected credit losses on a timely basis. In determining the expected credit losses, the Group considers historical credit risk information with reference to external or internal credit ratings and applies forward-looking factors, such as macroeconomic data and credit outlook of the borrowers, to perform multi-scenario analysis.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The credit quality of loan portfolio is analysed below:

	Group – 2020			
	Stage 1	**Stage 2**	**Stage 3**	**Total**
Loan portfolio with external credit rating[1]				
BBB– to BBB+	**1,236**	**–**	**–**	**1,236**
BB– to BB+	**1,531**	**–**	**–**	**1,531**
Lower than BB–	**3,118**	**272**	**296**	**3,686**
Gross carrying amount	**5,885**	**272**	**296**	**6,453**
Less: allowances for expected credit losses	**(35)**	**(23)**	**(103)**	**(161)**
	5,850	**249**	**193**	**6,292**
Loan portfolio with internal credit rating				
Gross carrying amount	**7,046**	**9**	**4**	**7,059**
Less: allowances for expected credit losses	**(2)**	**–**	**(1)**	**(3)**
	7,044	**9**	**3**	**7,056**
TOTAL	**12,894**	**258**	**196**	**13,348**

	Group – 2019			
	Stage 1	Stage 2	Stage 3	Total
Loan portfolio with external credit rating[1]				
BBB– to BBB+	139	–	–	139
BB– to BB+	1,346	–	–	1,346
Lower than BB–	701	–	284	985
Gross carrying amount	2,186	–	284	2,470
Less: allowances for expected credit losses	(13)	–	(75)	(88)
	2,173	–	209	2,382
Loan portfolio with internal credit rating				
Gross carrying amount	6,917	8	4	6,929
Less: allowances for expected credit losses	–	–	(1)	(1)
	6,917	8	3	6,928
TOTAL	9,090	8	212	9,310

[1] These are equivalent ratings of Moody's, Standard & Poor's or Fitch provided by an external institution.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The movements in loss allowances for loan portfolio during the year are as follows:

	Group			
	Stage 1	Stage 2	Stage 3	Total
At 1 January 2019	8	–	1	9
Increase in loss allowances for net new lending	6	–	29	35
Increase in loss allowances for change in credit risk	–	–	45	45
Transfers into Stage 3	(1)	–	1	–
At 31 December 2019	13	–	76	89
At 1 January 2020	**13**	**–**	**76**	**89**
Increase in loss allowances for net new lending	**23**	**7**	**3**	**33**
Increase in loss allowances for change in credit risk	**2**	**13**	**25**	**40**
Transfers into Stage 2	**(1)**	**1**	**–**	**–**
Exchange differences	**–**	**2**	**–**	**2**
At 31 December 2020	**37**	**23**	**104**	**164**

As at 31 December 2020, there was no repossessed asset obtained (2019: Nil).

(d) Loan commitments

The movements in provision for expected credit losses on loan commitments during the year are as follows:

	Group			
	Stage 1	Stage 2	Stage 3	Total
At 1 January 2019	5	–	–	5
Increase in provision for expected credit losses recognised in the income and expenditure account	13	–	–	13
At 31 December 2019	18	–	–	18
At 1 January 2020	**18**	**–**	**–**	**18**
Increase in provision for expected credit losses recognised in the income and expenditure account	**9**	**10**	**2**	**21**
Transfers into Stage 2	**(1)**	**1**	**–**	**–**
Exchange differences	**–**	**2**	**–**	**2**
At 31 December 2020	**26**	**13**	**2**	**41**

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.3.4 *Concentration of credit risk*

The majority of the Group's credit risk exposures are from the holding of highly liquid debt securities issued or guaranteed by OECD member countries' governments and other quasi-government entities. The maximum credit risk exposure by industry group is analysed below:

	Group		Fund	
	2020	2019	**2020**	2019
Governments and government agencies[1]	**2,406,068**	2,133,229	**2,368,487**	2,131,731
Supra-nationals	**194,355**	188,750	**194,053**	188,698
States, provinces and public-sector entities[2]	**180,898**	179,150	**260,590**	208,942
Financial institutions	**457,947**	516,392	**424,431**	477,828
Others[3]	**711,022**	607,999	**809,213**	721,275
TOTAL	**3,950,290**	3,625,520	**4,056,774**	3,728,474

1 These included debt securities guaranteed by governments.
2 These included debt securities guaranteed by states.
3 These included debt securities issued by the Bank for International Settlements.

37.4 Market risk

Market risk is the risk that changes in market variables such as interest rates, exchange rates and equity prices may affect the fair values or cash flows of investments.

37.4.1 *Types of market risk*

(a) Interest rate risk

Interest rate risk refers to the risk of loss arising from changes in market interest rates. This can be further classified into fair value interest rate risk and cash flow interest rate risk.

Fair value interest rate risk is the risk that the fair value of a financial instrument will fluctuate because of changes in market interest rates. The Group is exposed to fair value interest rate risk since a substantial portion of its investments is in fixed-rate debt securities. These securities are subject to interest rate risk as their fair values will fall when market interest rates increase. Other significant financial assets and financial liabilities with a fixed interest rate, and therefore subject to interest rate risk, include placements with banks and other financial institutions and EFBN issued.

Cash flow interest rate risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Because the Group has no significant floating-rate investments and liabilities, the Group's future cash flows are not materially affected by potential changes in market interest rates.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Currency risk

Currency risk is the risk of loss arising from changes in foreign exchange rates. A large portion of the Group's foreign currency assets is held in US dollars with the remaining mainly in other major international currencies. When the exchange rates of the relevant foreign currencies against the Hong Kong dollar fluctuate, the value of these foreign currency assets expressed in Hong Kong dollar will vary accordingly.

Due to the linked exchange rate of the US dollar relative to the Hong Kong dollar, the Group's currency risk principally arises from its assets and liabilities denominated in foreign currencies other than the US dollar.

(c) Equity price risk

Equity price risk is the risk of loss arising from changes in prices or valuation. The Group's equity and related investments are subject to price risk since the value of these investments will decline if market prices or valuation fall.

The majority of the equity securities held by the Group are constituent stocks of major stock market indexes and companies with large market capitalisation.

37.4.2 Management of market risk

The market risk of the Fund as a whole is regularly measured and monitored to prevent excessive risk exposure. The investment benchmark and tracking error limit of the Fund govern the asset allocation strategies. These, together with the volatility of asset markets, will affect the Fund's market risk exposure. The Fund uses derivative financial instruments to manage its exposures to market risk and facilitate the implementation of investment strategies. The market risk of the Fund is mainly measured and monitored using a Value-at-Risk (VaR) methodology.

VaR is calculated using the parametric approach based on a 95% confidence level and one-month time horizon. The result represents the maximum expected loss of the Fund over a one-month period under normal market conditions, with a 5% chance that the actual loss may exceed the calculated VaR. The Fund's absolute VaR and the relative VaR (i.e. the VaR of the Fund relative to its investment benchmark), expressed in dollar amounts, are measured by the Risk and Compliance Department and reported to management, the ISC and the EFAC on a regular basis.

The relative VaR of the Fund is also used to calculate the actual tracking error of the Fund against its investment benchmark. This is regularly monitored against the tracking error limit endorsed by the EFAC to ensure that the market risk exposure of the Fund is within its limit. The tracking error of a portfolio indicates how well the portfolio tracks its investment benchmark. The smaller the tracking error, the closer the portfolio tracks its benchmark. The tracking error limit is established to prevent the Fund from taking unduly large market risk with respect to its investment benchmark. The actual tracking error of the Fund is regularly reported to the ISC and the EFAC, and any breach of the limit is followed up in a timely manner.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

VaR is a widely accepted measure of market risk within the financial services industry. It provides users with a single amount to measure market risk and takes into account multiple risks. VaR should however be assessed in the context of some of its inherent limitations. The calculation of VaR involves a number of assumptions that may or may not be valid in a real life scenario, in particular in extreme market conditions. The calculation of VaR assumes that future events can be predicted by historical data, and that changes in risk factors follow a normal distribution. The end-of-day basis does not reflect intraday exposures. In addition, the confidence level on which calculation of VaR is based needs to be taken into account as it indicates the possibility that a larger loss could be realised.

To compensate for some of the limitations of VaR, the HKMA also conducts stress tests to estimate the potential losses under extremely adverse market conditions. This serves to identify the major attributes of market risk under extreme market conditions, and helps to prevent the Fund from being exposed to excessive market risk. The results of the stress tests are also reported to the ISC and the EFAC on a regular basis.

To manage the interest rate risk arising from the fixed-rate debt securities issued by the Group to fund the purchase of portfolios of loans, a major portion of the risk is hedged using fair value hedges in the form of interest rate swaps by swapping into floating-rate funding to better match the floating-rate assets.

The Fund's investment in less liquid assets (i.e. private equity and real estate) is grouped under the Long-Term Growth Portfolio. The investment risks of the less liquid assets are managed at the aggregate level through such measures as asset class approval, allocation limit and aggregate general partner exposure. The cap for the market value of the Long-Term Growth Portfolio is set at the sum of one-third of the accumulated surplus of the Fund, and the portion of the placements by Future Fund and placements by subsidiaries of the Fund linked to the Long-Term Growth Portfolio.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.4.3 Exposure to market risk

(a) Interest rate risk

The interest rate gap position in respect of the Group's major interest-bearing assets and liabilities, including the net repricing effect of interest rate derivatives is shown below. The assets and liabilities are stated at carrying amounts at the reporting date and categorised by the earlier of contractual repricing dates or maturity dates.

	Group – 2020 Repricing period of interest-bearing financial instruments							
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total	Non-interest-bearing financial instruments
Assets								
Cash and money at call	148,261	–	–	–	–	–	148,261	686
Placements with banks and other financial institutions	129,420	11,476	2,234	–	–	–	143,130	19
Financial assets measured at fair value through income and expenditure account	306,099	352,624	1,140,785	1,008,757	264,581	154,640	3,227,486	1,108,062
Financial assets measured at fair value through other comprehensive income	544	2,836	303	410	326	–	4,419	1,370
Debt securities measured at amortised cost	911	23	387	3,317	5,092	–	9,730	–
Loan portfolio	41,901	2,263	5,137	7	125	–	49,433	–
Interest-bearing assets	627,136	369,222	1,148,846	1,012,491	270,124	154,640	3,582,459	
Liabilities								
Placements by banks and other financial institutions	82,650	5,000	–	–	–	–	87,650	–
Placements by Fiscal Reserves with interest payable at market-based rates[1]	5	–	–	–	–	–	5	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	5,082	–	–	–	–	–	5,082	–
Exchange Fund Bills and Notes issued	279,369	535,634	234,213	14,339	5,325	–	1,068,880	–
Bank loans	5,738	–	–	–	6,312	–	12,050	–
Other debt securities issued	7,152	12,012	25,856	12,043	2,725	2,799	62,587	–
Interest-bearing liabilities	379,996	552,646	260,069	26,382	14,362	2,799	1,236,254	
Net interest-bearing assets/(liabilities)	247,140	(183,424)	888,777	986,109	255,762	151,841	2,346,205	
Interest rate derivatives (net position, notional amounts)	4,484	(24,830)	11,111	3,688	5,670	(5)	118	
Interest rate sensitivity gap	251,624	(208,254)	899,888	989,797	261,432	151,836	2,346,323	

[1] Placements by Fiscal Reserves, HKSAR Government funds and statutory bodies with interest payable at a fixed rate or a composite rate determined annually are excluded because their interest rates are not determined on the basis of market interest rates (notes 24 and 25). As at 31 December 2020, such placements amounted to HK$1,219,216 million.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2019							
	Repricing period of interest-bearing financial instruments							
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total	Non-interest-bearing financial instruments
Assets								
Cash and money at call	181,185	–	–	–	–	–	181,185	342
Placements with banks and other financial institutions	131,945	20,103	1,302	–	–	–	153,350	19
Financial assets measured at fair value through income and expenditure account	435,687	508,518	542,917	912,318	268,084	178,848	2,846,372	1,020,431
Financial assets measured at fair value through other comprehensive income	–	2,786	1,126	706	303	–	4,921	1,210
Debt securities measured at amortised cost	–	1,575	1,224	4,122	5,113	–	12,034	–
Loan portfolio	6,729	1,228	1,310	11	32	–	9,310	–
Interest-bearing assets	755,546	534,210	547,879	917,157	273,532	178,848	3,207,172	
Liabilities								
Placements by banks and other financial institutions	30,000	5,000	–	–	–	–	35,000	–
Placements by Fiscal Reserves with interest payable at market-based rates[1]	4	–	–	–	–	–	4	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	1,009	–	–	–	–	–	1,009	–
Exchange Fund Bills and Notes issued	359,947	468,255	303,695	14,274	6,156	–	1,152,327	–
Bank loans	5,385	–	–	–	5,963	–	11,348	–
Other debt securities issued	3,069	12,156	12,028	7,589	2,796	2,732	40,370	–
Interest-bearing liabilities	399,414	485,411	315,723	21,863	14,915	2,732	1,240,058	
Net interest-bearing assets	356,132	48,799	232,156	895,294	258,617	176,116	1,967,114	
Interest rate derivatives (net position, notional amounts)	4,877	(20,312)	5,829	4,551	4,696	–	(359)	
Interest rate sensitivity gap	361,009	28,487	237,985	899,845	263,313	176,116	1,966,755	

[1] Placements by Fiscal Reserves, HKSAR Government funds and statutory bodies with interest payable at a fixed rate or a composite rate determined annually are excluded because their interest rates are not determined on the basis of market interest rates (notes 24 and 25). As at 31 December 2019, such placements amounted to HK$1,464,883 million.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2020							
	Repricing period of interest-bearing financial instruments							
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total	Non-interest-bearing financial instruments
Assets								
Cash and money at call	144,968	–	–	–	–	–	144,968	287
Placements with banks and other financial institutions	121,021	775	–	–	–	–	121,796	–
Financial assets measured at fair value through income and expenditure account	306,099	352,624	1,140,785	1,008,757	264,581	154,640	3,227,486	753,671
Interest-bearing assets	572,088	353,399	1,140,785	1,008,757	264,581	154,640	3,494,250	
Liabilities								
Placements by banks and other financial institutions	82,650	5,000	–	–	–	–	87,650	–
Placements by Fiscal Reserves with interest payable at market-based rates[1]	5	–	–	–	–	–	5	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	5,082	–	–	–	–	–	5,082	–
Exchange Fund Bills and Notes issued	279,369	535,634	234,213	14,339	5,325	–	1,068,880	–
Interest-bearing liabilities	367,106	540,634	234,213	14,339	5,325	–	1,161,617	
Net interest-bearing assets/(liabilities)	204,982	(187,235)	906,572	994,418	259,256	154,640	2,332,633	
Interest rate derivatives (net position, notional amounts)	(618)	(13,813)	1,600	7,600	5,236	(5)	–	
Interest rate sensitivity gap	204,364	(201,048)	908,172	1,002,018	264,492	154,635	2,332,633	

[1] Placements by Fiscal Reserves, HKSAR Government funds and statutory bodies, and subsidiaries with interest payable at a fixed rate or a composite rate determined annually are excluded because their interest rates are not determined on the basis of market interest rates (notes 24, 25 and 26). As at 31 December 2020, such placements amounted to HK$1,234,685 million.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2019							
	Repricing period of interest-bearing financial instruments							
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total	Non-interest-bearing financial instruments
Assets								
Cash and money at call	180,600	–	–	–	–	–	180,600	141
Placements with banks and other financial institutions	124,422	779	–	–	–	–	125,201	–
Financial assets measured at fair value through income and expenditure account	435,687	508,518	542,917	912,318	268,084	178,848	2,846,372	739,873
Interest-bearing assets	740,709	509,297	542,917	912,318	268,084	178,848	3,152,173	
Liabilities								
Placements by banks and other financial institutions	30,000	5,000	–	–	–	–	35,000	–
Placements by Fiscal Reserves with interest payable at market-based rates[1]	4	–	–	–	–	–	4	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	1,009	–	–	–	–	–	1,009	–
Exchange Fund Bills and Notes issued	359,947	468,255	303,695	14,274	6,156	–	1,152,327	–
Interest-bearing liabilities	390,960	473,255	303,695	14,274	6,156	–	1,188,340	
Net interest-bearing assets	349,749	36,042	239,222	898,044	261,928	178,848	1,963,833	
Interest rate derivatives (net position, notional amounts)	19	(15,441)	1,600	8,000	5,822	–	–	
Interest rate sensitivity gap	349,768	20,601	240,822	906,044	267,750	178,848	1,963,833	

1 Placements by Fiscal Reserves, HKSAR Government funds and statutory bodies, and subsidiaries with interest payable at a fixed rate or a composite rate determined annually are excluded because their interest rates are not determined on the basis of market interest rates (notes 24, 25 and 26). As at 31 December 2019, such placements amounted to HK$1,477,480 million.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Currency risk

The currency exposure of the Group is summarised below:

	Group			
	2020		2019	
	Assets	**Liabilities**	Assets	Liabilities
	(in HK$ billion)	**(in HK$ billion)**	(in HK$ billion)	(in HK$ billion)
Hong Kong dollar	**276.6**	**3,082.9**	334.9	2,899.8
US dollar	**4,014.1**	**627.5**	3,615.4	585.9
	4,290.7	**3,710.4**	3,950.3	3,485.7
Others[1]	**520.3**	**27.1**	480.9	24.9
TOTAL	**4,811.0**	**3,737.5**	4,431.2	3,510.6

	Fund			
	2020		2019	
	Assets	**Liabilities**	Assets	Liabilities
	(in HK$ billion)	**(in HK$ billion)**	(in HK$ billion)	(in HK$ billion)
Hong Kong dollar	**221.0**	**3,033.0**	303.7	2,872.2
US dollar	**3,829.1**	**616.1**	3,482.4	579.6
	4,050.1	**3,649.1**	3,786.1	3,451.8
Others[1]	**449.1**	**6.9**	420.6	5.5
TOTAL	**4,499.2**	**3,656.0**	4,206.7	3,457.3

[1] Other currencies included mainly euro, renminbi, pound sterling and Japanese yen.

(c) Equity price risk

As at 31 December 2020 and 2019, the majority of equity investments were reported as "financial assets measured at fair value through income and expenditure account" as shown in note 10.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.4.4 *Sensitivity analysis*

The Value-at-Risk positions of the Fund as at 31 December and during the year, based on a 95% confidence level and one-month time horizon, are as follows:

	Fund	
	2020	2019
Value-at-Risk		
At 31 December[1]	**43,255**	30,779
During the year		
Average	**61,579**	34,400
Maximum	**108,318**	44,918
Minimum	**31,121**	28,954

[1] The amount represented 1.0% of the Fund's investments which were subject to VaR measurement as at 31 December 2020 (2019: 0.8%).

37.5 Liquidity risk

Liquidity risk refers to the risk that the Group may not have sufficient funds available to meet its liabilities as they fall due. In addition, the Group may not be able to liquidate its financial assets at a price close to fair value within a short period of time.

37.5.1 *Management of liquidity risk*

To ensure sufficient liquidity to meet liabilities and the ability to raise funds to meet exceptional needs, the Group invests primarily in liquid financial markets and instruments that are readily saleable to meet liquidity needs. There are internal investment restrictions to prevent undue concentrations in individual debt securities issues, debt securities issuers, and groups of closely related debt securities issuers. There are also limitations on the maximum proportion of assets that can be placed in fixed term deposits and less liquid assets, and requirements regarding the ability to convert foreign currency assets into cash. In addition, prudent liquidity control measures are imposed on the Fund's investments in less liquid credit assets such as asset-backed securities. All these restrictions and limits are designed to promote the liquidity of assets and consequently minimise the liquidity risk. The liquidity risk for the Fund's investment is monitored on an aggregate basis through appropriate portfolio mix with sufficient liquid assets to offset investments of less liquid assets. Compliance with these limits is monitored by the Risk and Compliance Department and any breaches are reported to the ISC and are promptly followed up.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.5.2 *Exposure to liquidity risk*

The remaining contractual maturities at the reporting date of major financial liabilities, commitments and derivative financial liabilities, which are based on contractual undiscounted cash flows and the earliest date on which the Group can be required to pay, are shown below:

	Group – 2020 Remaining maturity						
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total
Non-derivative cash outflows							
Certificates of Indebtedness	556,204	–	–	–	–	–	556,204
Government-issued currency notes and coins in circulation	12,844	–	–	–	–	–	12,844
Balance of the banking system	457,466	–	–	–	–	–	457,466
Placements by banks and other financial institutions	82,650	5,000	–	–	–	–	87,650
Placements by Fiscal Reserves	676,841	–	–	204,991	–	–	881,832
Placements by HKSAR Government funds and statutory bodies	185,869	15,000	24,000	91,272	26,330	–	342,471
Exchange Fund Bills and Notes issued	279,371	535,797	234,449	14,626	5,019	–	1,069,262
Bank loans	59	12	211	2,808	10,691	–	13,781
Other debt securities issued	6,417	8,529	27,276	16,139	3,078	3,916	65,355
Lease liabilities	11	25	92	456	116	2,037	2,737
Other liabilities (excluding lease liabilities)	117,183	16,985	35	110,798	–	–	245,001
Loan commitments, guarantees and other credit related commitments	239,115	–	–	–	–	–	239,115
TOTAL	2,614,030	581,348	286,063	441,090	45,234	5,953	3,973,718
Derivative cash outflows/(inflows)							
Derivative financial instruments settled:							
– on net basis	331	4	(5)	123	13	–	466
– on gross basis							
Total outflows	64,550	190,874	12,561	7,162	1,375	–	276,522
Total inflows	(63,238)	(185,840)	(12,678)	(7,101)	(1,360)	–	(270,217)
TOTAL	1,643	5,038	(122)	184	28	–	6,771

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2019 Remaining maturity						
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total
Non-derivative cash outflows							
Certificates of Indebtedness	516,062	–	–	–	–	–	516,062
Government-issued currency notes and coins in circulation	12,988	–	–	–	–	–	12,988
Balance of the banking system	67,688	–	–	–	–	–	67,688
Placements by banks and other financial institutions	30,000	5,000	–	–	–	–	35,000
Placements by Fiscal Reserves	912,960	–	–	–	224,530	–	1,137,490
Placements by HKSAR Government funds and statutory bodies	167,994	17,500	9,640	92,052	41,220	–	328,406
Exchange Fund Bills and Notes issued	360,203	469,906	306,271	15,254	6,340	–	1,157,974
Bank loans	55	7	209	4,559	7,966	–	12,796
Other debt securities issued	(388)	4,630	17,015	14,522	3,375	3,997	43,151
Lease liabilities	10	23	91	259	45	1,993	2,421
Other liabilities (excluding lease liabilities)	108,193	17,865	278	41	73,540	–	199,917
Loan commitments, guarantees and other credit related commitments	238,655	–	–	–	–	–	238,655
TOTAL	2,414,420	514,931	333,504	126,687	357,016	5,990	3,752,548
Derivative cash outflows/(inflows)							
Derivative financial instruments settled:							
– on net basis	311	11	(21)	132	31	2	466
– on gross basis							
Total outflows	176,683	122,903	8,322	7,112	1,303	–	316,323
Total inflows	(173,310)	(121,188)	(8,287)	(7,090)	(1,271)	–	(311,146)
TOTAL	3,684	1,726	14	154	63	2	5,643

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2020 Remaining maturity						
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total
Non-derivative cash outflows							
Certificates of Indebtedness	556,204	–	–	–	–	–	556,204
Government-issued currency notes and coins in circulation	12,844	–	–	–	–	–	12,844
Balance of the banking system	457,466	–	–	–	–	–	457,466
Placements by banks and other financial institutions	82,650	5,000	–	–	–	–	87,650
Placements by Fiscal Reserves	676,841	–	–	204,991	–	–	881,832
Placements by HKSAR Government funds and statutory bodies	185,869	15,000	24,000	91,272	26,330	–	342,471
Placements by subsidiaries	671	–	–	7,900	6,898	–	15,469
Exchange Fund Bills and Notes issued	279,371	535,797	234,449	14,626	5,019	–	1,069,262
Lease liabilities	7	15	58	302	41	–	423
Other liabilities (excluding lease liabilities)	97,260	16,765	33	111,400	–	–	225,458
Credit related commitments	313,513	–	–	–	–	–	313,513
TOTAL	2,662,696	572,577	258,540	430,491	38,288	–	3,962,592
Derivative cash outflows/(inflows)							
Derivative financial instruments settled:							
– on net basis	329	1	2	9	13	–	354
– on gross basis							
Total outflows	61,860	190,469	1,442	–	–	–	253,771
Total inflows	(60,448)	(185,398)	(1,406)	–	–	–	(247,252)
TOTAL	1,741	5,072	38	9	13	–	6,873

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2019 Remaining maturity						
	1 month or less	3 months or less but over 1 month	1 year or less but over 3 months	5 years or less but over 1 year	10 years or less but over 5 years	Over 10 years	Total
Non-derivative cash outflows							
Certificates of Indebtedness	516,062	–	–	–	–	–	516,062
Government-issued currency notes and coins in circulation	12,988	–	–	–	–	–	12,988
Balance of the banking system	67,688	–	–	–	–	–	67,688
Placements by banks and other financial institutions	30,000	5,000	–	–	–	–	35,000
Placements by Fiscal Reserves	912,960	–	–	–	224,530	–	1,137,490
Placements by HKSAR Government funds and statutory bodies	167,994	17,500	9,640	92,052	41,220	–	328,406
Placements by subsidiaries	365	–	–	4,900	7,332	–	12,597
Exchange Fund Bills and Notes issued	360,203	469,906	306,271	15,254	6,340	–	1,157,974
Lease liabilities	5	12	53	222	–	–	292
Other liabilities (excluding lease liabilities)	96,833	17,850	50	226	73,540	–	188,499
Credit related commitments	263,837	–	–	–	–	–	263,837
TOTAL	2,428,935	510,268	316,014	112,654	352,962	–	3,720,833
Derivative cash outflows/(inflows)							
Derivative financial instruments settled:							
– on net basis	297	6	(2)	25	14	–	340
– on gross basis							
Total outflows	175,665	121,820	1,006	–	–	–	298,491
Total inflows	(172,292)	(120,127)	(1,007)	–	–	–	(293,426)
TOTAL	3,670	1,699	(3)	25	14	–	5,405

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37.6 Insurance risk

The Group, through its life insurance subsidiary, offers annuity product to personal customers. Insurance risk arises from an inaccurate assessment of the risks entailed in writing and pricing an insurance policy. The major insurance risk is the longevity risk which arises from the possibility that actual life expectancy of annuitants being longer than expected.

Insurance risk is managed by adopting a prudent set of assumptions and conducting regular experience studies. Asset-liability mismatch risk inherent to the annuity product is due to asset volatility and return, uncertain annuity liabilities, cash flow mismatch and currency mismatch between assets and liabilities. To mitigate such risk, the Group actively monitors the performance and steadfastly maintains control over asset allocation.

The Group established Longevity Risk Committee to manage longevity risk of the Group. Its duties include approving longevity risk management policies and hedging transactions and reviewing longevity experiences and exposures of the Group. It also monitors and analyses the general trend, technological changes and their implications for human longevity.

The Group, through its general insurance subsidiary, provides mortgage insurance cover in respect of mortgage loans and reverse mortgage loans originated by participating lenders and secured on residential properties in Hong Kong, life insurance policies and, if applicable, other assets; and operates a scheme for the HKSAR Government providing financial guarantee on loans advanced by participating lenders for local SMEs. The Group faces insurance risk of the possibility of the insured event occurring and the uncertainty of the amount of the resulting claim.

Under the Mortgage Insurance Programme, the Group offers mortgage insurance that covers participating lenders for first credit losses, in general, of up to 40% of the value of properties financed under mortgage loans with loan-to-value ratio 90% or below at origination. The Group reinsures the exposure with approved reinsurers. As at 31 December 2020, the total risk-in-force was HK$54.5 billion (2019: HK$27.9 billion), of which HK$47.6 billion (2019: HK$23.1 billion) was retained by the Group after reinsurance.

The Group also provides financial guarantee cover to participating authorized institutions up to 50% to 70% of the banking facilities granted to SMEs in Hong Kong, and insurance cover in respect of reverse mortgage loans originated by participating lenders and secured on residential properties, life insurance policies and, if applicable, other assets. As at 31 December 2020, the total risk-in-force of the reverse mortgage loans was HK$15.0 billion (2019: HK$12.5 billion), of which HK$12.3 billion (2019: HK$11.2 billion) was retained by the Group after reinsurance.

For a portfolio of insurance contracts where the theory of probability is applied to pricing and provisioning, the principal risk that the Group faces under its insurance contracts is that the actual claims exceed the carrying amount of the insurance liabilities. This could occur because the frequency or severity of claims is greater than estimated. Insurance events are random and the actual number and amount of claims and benefits will vary from year to year from the estimate established using statistical techniques.

Experience shows that the larger the portfolio of similar insurance contracts, the smaller the relative variability about the expected outcome will be. In addition, a more diversified portfolio is less likely to be affected across the board by a change in any subset of the portfolio. The Group has developed a business strategy to diversify the type of insurance risks accepted and within each of the key categories to achieve a sufficiently large population of risks to reduce the variability of the expected outcome.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The frequency and severity of claims can be affected by several factors. The most significant factors are a downturn in the economy, a slump in local property market and a low mortality rate of reverse mortgage borrowers. Economic downturn, which may cause a rise in defaulted payment, affects the frequency of claims and collateral value. A drop in property prices, where the collateral values fall below the outstanding balance of the mortgage loans, will increase the severity of claims. Low mortality rate of reverse mortgage borrowers means longer payout period and larger loan balance will be over time. This will affect the frequency and severity of claims as there is a risk of the property value being insufficient to cover the outstanding loan balance in the future.

The Group manages these risks by adopting a set of prudent insurance underwriting eligibility criteria. To ensure sufficient provision is set aside for meeting future claim payments, the Group calculates technical reserves on prudent liability valuation assumptions and the methods prescribed in the regulatory guidelines. The Group also takes out quota-share reinsurance from its approved mortgage reinsurers in an effort to limit its risk exposure under the mortgage insurance business and reverse mortgage business. The reinsurers are selected according to prudent criteria and their credit ratings are reviewed regularly. For financial guarantee cover provided to participating lenders, the Group relies on the lenders' prudent credit assessment on the borrowers to mitigate default risk and any loss in the loan facility will be shared proportionately between the Group and the lender on a pari passu basis to minimise moral hazards. The mortality assumptions of reverse mortgages are also reviewed on a regular basis, to assess the risk of larger deviation between the actual and expected operating results.

37.7 Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Operational risk is inherent in all aspects of the Group's operations covering all business segments.

The Group's objective is to cost-effectively manage operational risk to prevent financial losses or damage to the Group's reputation.

The primary responsibility for the development and implementation of controls to address operational risk rests with line management, with oversight by an internal high-level Risk Committee. The Committee is chaired by the Chief Executive of the HKMA with the Deputy Chief Executives and the Senior Executive Director (Development) as members. The Risk Committee provides direction and guidance for line management in managing operational risk.

Operational risk management is supported by a formal risk assessment process. This is conducted annually and supplemented with quarterly updates. It requires each division to assess and rank the potential impact and likelihood of occurrence of financial and operational risks. It also requires divisions to review the procedures and controls in place for addressing the identified risks. This risk and control self-assessment is reviewed by the Internal Audit Division of the HKMA to ensure consistency and reasonableness before submission to the Risk Committee, which has the responsibility for ensuring that the identified risks are properly addressed. Results of this risk assessment are also taken into account, in conjunction with other risk factors, for the development of an annual Internal Audit work plan. The Internal Audit Division will audit the risk areas at various frequencies depending on the levels of risks and the results of past audits. It reports its findings regularly to the EFAC Audit Sub-Committee and the Chief Executive of the HKMA and follows up on outstanding issues to ensure that they are resolved in a proper manner.

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

Operational risk is also inherent in the investment activities and processes of the EFIO. To enhance its operational risk oversight, the Risk and Compliance Department formalised its operational risk management framework for the EFIO. The key elements of the framework include identification and monitoring of key risk indicators; reporting to the senior management of the HKMA on the operational risk profile of the EFIO; handling of operational risk incidents; and issuing monthly operational risk reports to relevant senior executives.

38 FAIR VALUE MEASUREMENT OF FINANCIAL INSTRUMENTS

38.1 Fair value of financial instruments measured at fair value on a recurring basis

38.1.1 Fair value hierarchy

The carrying values of financial instruments measured at fair value at the reporting date across the three levels of the fair value hierarchy are shown below:

	Group – 2020			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets measured at fair value through income and expenditure account				
Treasury bills and commercial paper	114,802	861,536	–	976,338
Certificates of deposit	–	194,020	–	194,020
Other debt securities	1,975,963	91,724	–	2,067,687
Equity securities	544,970	132,578	76,526	754,074
Investment funds	–	–	343,429	343,429
	2,635,735	1,279,858	419,955	4,335,548
Financial assets measured at fair value through other comprehensive income				
Debt securities	2,835	1,584	–	4,419
Equity securities	–	–	1,370	1,370
	2,835	1,584	1,370	5,789
Derivative financial instruments	306	2,282	–	2,588
TOTAL	2,638,876	1,283,724	421,325	4,343,925
Liabilities				
Exchange Fund Bills and Notes issued	–	1,068,880	–	1,068,880
Derivative financial instruments	329	7,140	–	7,469
TOTAL	329	1,076,020	–	1,076,349

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2019			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets measured at fair value through income and expenditure account				
Treasury bills and commercial paper	15,946	724,849	–	740,795
Certificates of deposit	–	218,201	–	218,201
Other debt securities	1,789,529	108,040	–	1,897,569
Equity securities	523,787	148,903	65,035	737,725
Investment funds	–	–	272,513	272,513
	2,329,262	1,199,993	337,548	3,866,803
Financial assets measured at fair value through other comprehensive income				
Debt securities	3,114	1,807	–	4,921
Equity securities	–	–	1,210	1,210
	3,114	1,807	1,210	6,131
Derivative financial instruments	117	1,172	–	1,289
TOTAL	2,332,493	1,202,972	338,758	3,874,223
Liabilities				
Exchange Fund Bills and Notes issued	–	1,152,327	–	1,152,327
Derivative financial instruments	297	5,915	–	6,212
Other debt securities issued, measured at fair value	–	147	–	147
TOTAL	297	1,158,389	–	1,158,686

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2020			
	Level 1	**Level 2**	**Level 3**	**Total**
Assets				
Financial assets measured at fair value through income and expenditure account				
Treasury bills and commercial paper	**114,802**	**861,536**	**–**	**976,338**
Certificates of deposit	**–**	**194,020**	**–**	**194,020**
Other debt securities	**1,975,952**	**91,724**	**–**	**2,067,676**
Equity securities	**544,716**	**132,578**	**65,829**	**743,123**
	2,635,470	**1,279,858**	**65,829**	**3,981,157**
Financial assets measured at fair value through other comprehensive income				
Equity securities	**–**	**–**	**1,370**	**1,370**
Derivative financial instruments	**306**	**1,485**	**–**	**1,791**
TOTAL	**2,635,776**	**1,281,343**	**67,199**	**3,984,318**
Liabilities				
Exchange Fund Bills and Notes issued	**–**	**1,068,880**	**–**	**1,068,880**
Derivative financial instruments	**329**	**6,694**	**–**	**7,023**
TOTAL	**329**	**1,075,574**	**–**	**1,075,903**

	Fund – 2019			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets measured at fair value through income and expenditure account				
Treasury bills and commercial paper	15,946	724,849	–	740,795
Certificates of deposit	–	218,201	–	218,201
Other debt securities	1,789,519	108,040	–	1,897,559
Equity securities	523,419	148,903	57,368	729,690
	2,328,884	1,199,993	57,368	3,586,245
Financial assets measured at fair value through other comprehensive income				
Equity securities	–	–	1,210	1,210
Derivative financial instruments	117	971	–	1,088
TOTAL	2,329,001	1,200,964	58,578	3,588,543
Liabilities				
Exchange Fund Bills and Notes issued	–	1,152,327	–	1,152,327
Derivative financial instruments	297	5,431	–	5,728
TOTAL	297	1,157,758	–	1,158,055

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Group's policy is to recognise transfers between levels of fair value hierarchy as at the reporting date in which they occur. During the year, there were no transfers of financial instruments between Level 1 and Level 2 of the fair value hierarchy.

An analysis of the movement between opening and closing balances of Level 3 financial assets, measured at fair value using a valuation technique with significant unobservable inputs, is shown below:

	2020			
	Group		Fund	
	Measured at fair value through income and expenditure account	Measured at fair value through other comprehensive income	Measured at fair value through income and expenditure account	Measured at fair value through other comprehensive income
At 1 January 2020	337,548	1,210	57,368	1,210
Net gains recognised in the income and expenditure account	46,042	–	5,232	–
Net gains recognised in other comprehensive income	–	160	–	160
Purchases	76,255	–	26,327	–
Sales	(42,791)	–	(25,743)	–
Exchange differences	256	–	–	–
Transfers into Level 3	3,260	–	3,260	–
Transfers out of Level 3	(615)	–	(615)	–
At 31 December 2020	419,955	1,370	65,829	1,370
Net gains recognised in the income and expenditure account relating to revaluation of those assets held at the reporting date	47,085	–	6,275	–

	2019			
	Group		Fund	
	Measured at fair value through income and expenditure account	Measured at fair value through other comprehensive income	Measured at fair value through income and expenditure account	Measured at fair value through other comprehensive income
At 1 January 2019	274,487	1,144	45,079	1,144
Net gains recognised in the income and expenditure account	17,996	–	4,241	–
Net gains recognised in other comprehensive income	–	66	–	66
Purchases	80,249	–	21,396	–
Sales	(34,155)	–	(12,377)	–
Exchange differences	(58)	–	–	–
Transfers into Level 3	1,299	–	1,299	–
Transfers out of Level 3	(2,270)	–	(2,270)	–
At 31 December 2019	337,548	1,210	57,368	1,210
Net gains recognised in the income and expenditure account relating to revaluation of those assets held at the reporting date	18,132	–	3,857	–

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

During the year, certain financial instruments were transferred between Level 2 and Level 3 of the fair value hierarchy reflecting changes in transparency of observable market data for these instruments.

38.1.2 *Valuation techniques and key inputs*

The fair value of financial instruments classified under Level 1 is based on quoted market prices in active markets for identical assets or liabilities at the reporting date.

In the absence of quoted market prices in active markets, the fair value of financial instruments classified under Level 2 is estimated using present value or other valuation techniques, with inputs based on market conditions existing at the reporting date. Specific valuation techniques and key inputs used to value these financial instruments include:

(a) quoted market price or broker quotes for similar instruments;

(b) derivative financial instruments are priced using models with observable market inputs including interest rate swap and foreign exchange contracts; and

(c) commercial paper and debt securities are priced using discounted cash flow techniques with observable yield curves.

For unlisted investment funds and certain unlisted equity securities which are classified under Level 3, their fair values are estimated by making reference to valuation reports provided by external investment managers. It is not practicable to quote a range of key unobservable inputs.

For certain unlisted equity securities valued by the Group, which are classified under Level 3, their fair values are derived from Comparable Company Valuation Model, which derives the valuation of an investment through the product of its earnings, earning multiples of comparable public companies and a discount factor for a lack of liquidity. Significant unobservable inputs used under this valuation method include earning multiples of similar companies and liquidity discount:

Significant unobservable inputs	**Quantitative amount**	
	2020	2019
Earning multiples of similar companies	**5.3 – 21.5**	5.8 – 18.1
Liquidity discount	**20%**	20%

The shareholding in the Bank for International Settlements (note 11) is also classified under Level 3. Its fair value is estimated based on the Group's interest in the net asset value of the Bank at the reporting date, discounted at 30% to reflect the discount rate used by the Bank for share repurchases.

If the fair values of these investments had increased/decreased by 10%, it would have resulted in an increase/a decrease in the Group's surplus for the year of HK$41,996 million (2019: HK$33,755 million) and in other comprehensive income of HK$137 million (2019: $121 million).

Exchange Fund – Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

38.2 Fair value of debt securities not measured at fair value on a recurring basis

The fair values of debt securities measured at amortised cost and other debt securities issued that were not measured at fair value are shown below:

		Group – 2020			
		Carrying value	**Fair value**		
	Note		**Level 1**	**Level 2**	**Total**
Financial assets					
Debt securities measured at amortised cost	13	**9,730**	**9,499**	**1,050**	**10,549**
Financial liabilities					
Other debt securities issued	29	**62,587**	**–**	**63,608**	**63,608**

		Group – 2019			
		Carrying value	Fair value		
	Note		Level 1	Level 2	Total
Financial assets					
Debt securities measured at amortised cost	13	12,034	9,913	2,604	12,517
Financial liabilities					
Other debt securities issued	29	40,223	–	40,703	40,703

In the absence of quoted market prices in active markets, the fair values of debt securities classified under Level 2 are estimated using present value or other valuation techniques, with inputs based on market conditions existing at the reporting date. The valuation technique for other debt securities issued is the use of discounted cash flow model based on a current yield curve appropriate for their remaining term to maturity.

All other financial instruments of the Group and the Fund are measured at fair value or carried at amounts not materially different from their fair values as at 31 December 2020 and 2019.

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

39 POSSIBLE IMPACT OF AMENDMENTS, NEW STANDARDS AND INTERPRETATIONS ISSUED BUT NOT YET EFFECTIVE FOR THE YEAR ENDED 31 DECEMBER 2020

Up to the date of issue of these financial statements, the HKICPA has issued a number of amendments, new standards and interpretations which are not yet effective for the year ended 31 December 2020 and which have not been adopted in these financial statements. The new standards include:

	Effective for accounting periods beginning on or after
HKFRS 17 "Insurance Contracts"	1 January 2023

The Group is in the process of assessing the possible impact on its financial statements in the period of initial application of HKFRS 17.

HKFRS 17 "Insurance Contracts"

HKFRS 17 establishes a comprehensive global insurance standard which provides guidance on the recognition, measurement, presentation and disclosure of insurance contracts. The standard requires entities to measure insurance contract liabilities at their current fulfilment values. The Group is yet to assess the full impact of the standard on its financial position and results of operations. The new standard is effective for annual periods beginning on or after 1 January 2023 and will be applied retrospectively with restatement of comparatives unless impracticable. At this stage, the Group does not intend to adopt the standard before its effective date.

40 APPROVAL OF FINANCIAL STATEMENTS

The financial statements were approved by the Financial Secretary on the advice of the Exchange Fund Advisory Committee on 1 April 2021.

Annex and Tables

Annex Authorized Institutions and Local Representative Offices

at 31 December 2020

LICENSED BANKS

Incorporated in Hong Kong

Airstar Bank Limited
Ant Bank (Hong Kong) Limited
Bank of China (Hong Kong) Limited
BANK OF COMMUNICATIONS (HONG KONG) LIMITED
Bank of East Asia, Limited (The)
China CITIC Bank International Limited
China Construction Bank (Asia) Corporation Limited
Chiyu Banking Corporation Limited
Chong Hing Bank Limited
CITIBANK (HONG KONG) LIMITED
CMB WING LUNG BANK LIMITED
DAH SING BANK, LIMITED
DBS BANK (HONG KONG) LIMITED
FUBON BANK (HONG KONG) LIMITED
Fusion Bank Limited
Hang Seng Bank, Limited
Hongkong and Shanghai Banking Corporation Limited (The)
Industrial and Commercial Bank of China (Asia) Limited
Livi Bank Limited
(formerly known as Livi VB Limited)
Morgan Stanley Bank Asia Limited
Mox Bank Limited
(formerly known as SC Digital Solutions Limited)
Nanyang Commercial Bank, Limited
OCBC Wing Hang Bank Limited
Ping An OneConnect Bank (Hong Kong) Limited
PUBLIC BANK (HONG KONG) LIMITED
Shanghai Commercial Bank Limited
Standard Chartered Bank (Hong Kong) Limited
Tai Sang Bank Limited
Tai Yau Bank, Limited
Welab Bank Limited
ZA Bank Limited

Incorporated outside Hong Kong

ABN AMRO Bank N.V.
AGRICULTURAL BANK OF CHINA LIMITED
Australia and New Zealand Banking Group Limited
Banco Bilbao Vizcaya Argentaria S.A.
Banco Santander, S.A.
Bangkok Bank Public Company Limited
Bank J. Safra Sarasin AG
also known as:
Banque J. Safra Sarasin SA
Banca J. Safra Sarasin SA
Bank J. Safra Sarasin Ltd
Bank Julius Baer & Co. Ltd.
Bank of America, National Association
Bank of Baroda
Bank of China Limited
Bank of Communications Co., Ltd.
Bank of India
Bank of Montreal
BANK OF NEW YORK MELLON (THE)
Bank of Nova Scotia (The)
BANK OF SINGAPORE LIMITED
BANK OF TAIWAN
BANK SINOPAC
Banque Pictet & Cie SA #
Barclays Bank PLC
BDO UNIBANK, INC.
also known as:
BDO
BDO Unibank
Banco De Oro
Banco De Oro Unibank
BDO Banco De Oro
BNP PARIBAS
BNP PARIBAS SECURITIES SERVICES
CA Indosuez (Switzerland) SA
Canadian Imperial Bank of Commerce
CANARA BANK
CATHAY BANK
CATHAY UNITED BANK COMPANY, LIMITED
Chang Hwa Commercial Bank, Ltd.
Chiba Bank, Ltd. (The)
CHINA BOHAI BANK CO., LTD. #
China Construction Bank Corporation
China Development Bank
China Everbright Bank Co., Ltd.
CHINA GUANGFA BANK CO., LTD. #
China Merchants Bank Co., Ltd.
CHINA MINSHENG BANKING CORP., LTD.
China Zheshang Bank Co., Ltd.
Chugoku Bank, Ltd. (The)
CIMB Bank Berhad
Citibank, N.A.
Commerzbank AG
Commonwealth Bank of Australia
Coöperatieve Rabobank U.A.
CREDIT AGRICOLE CORPORATE AND INVESTMENT BANK
CREDIT INDUSTRIEL ET COMMERCIAL
Credit Suisse AG
CTBC Bank Co., Ltd
DBS BANK LTD.
Deutsche Bank Aktiengesellschaft
DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main

Addition in 2020

Annex Authorized Institutions and Local Representative Offices at 31 December 2020 (continued)

E.Sun Commercial Bank, Ltd.
EAST WEST BANK
EFG Bank AG
also known as:
EFG Bank SA
EFG Bank Ltd
ERSTE GROUP BANK AG
FAR EASTERN INTERNATIONAL BANK
First Abu Dhabi Bank PJSC
First Commercial Bank, Ltd.
Hachijuni Bank, Ltd. (The)
HDFC BANK LIMITED
HONG LEONG BANK BERHAD
HSBC Bank plc
HSBC Bank USA, National Association
Hua Nan Commercial Bank, Ltd.
HUA XIA BANK CO., Limited
ICBC STANDARD BANK PLC
ICICI BANK LIMITED
Indian Overseas Bank
Industrial and Commercial Bank of China Limited
Industrial Bank Co., Ltd.
Industrial Bank of Korea
ING Bank N.V.
INTESA SANPAOLO SPA
JPMorgan Chase Bank, National Association
KBC Bank N.V.
KEB Hana Bank
Kookmin Bank
Land Bank of Taiwan Co., Ltd.
LGT Bank AG
also known as:
LGT Bank Ltd.
LGT Bank SA
MACQUARIE BANK LIMITED
MALAYAN BANKING BERHAD
Mashreq Bank — Public Shareholding Company
also known as Mashreqbank psc
MEGA INTERNATIONAL COMMERCIAL BANK CO., LTD.
MELLI BANK PLC
Mitsubishi UFJ Trust and Banking Corporation
Mizuho Bank, Ltd.
MUFG Bank, Ltd.
National Australia Bank Limited
National Bank of Pakistan
NATIXIS
NATWEST MARKETS PLC
O-Bank Co., Ltd.
Oversea-Chinese Banking Corporation Limited
Philippine National Bank
Pictet & Cie (Europe) S.A.
Ping An Bank Co., Ltd.
PT. Bank Negara Indonesia (Persero) Tbk.
Punjab National Bank
Qatar National Bank (Q.P.S.C.)
Royal Bank of Canada
Shanghai Commercial & Savings Bank, Ltd. (The)
Shanghai Pudong Development Bank Co., Ltd.
Shiga Bank, Ltd. (The)
Shinhan Bank
Shizuoka Bank, Ltd. (The)
Skandinaviska Enskilda Banken AB
Societe Generale
Standard Chartered Bank
State Bank of India
State Street Bank and Trust Company
Sumitomo Mitsui Banking Corporation
Sumitomo Mitsui Trust Bank, Limited
Svenska Handelsbanken AB (publ)
TAIPEI FUBON COMMERCIAL BANK CO., LTD.
TAISHIN INTERNATIONAL BANK CO., LTD
Taiwan Business Bank, Ltd.
Taiwan Cooperative Bank, Ltd.
Taiwan Shin Kong Commercial Bank Co., Ltd.
Toronto-Dominion Bank
UBS AG
UCO Bank
UniCredit Bank AG
UNION BANCAIRE PRIVÉE, UBP SA
also known as UNITED PRIVATE BANK, UBP LTD
Union Bank of India
United Overseas Bank Ltd.
Wells Fargo Bank, National Association
Westpac Banking Corporation
Woori Bank
Yuanta Commercial Bank Co., Ltd

Deletion in 2020

Allahabad Bank
Axis Bank Limited
Banca Monte dei Paschi di Siena S.p.A.
Coutts & Co AG
also known as:
Coutts & Co SA
Coutts & Co Ltd
HSBC Private Bank (Suisse) SA
NatWest Markets N.V.

Annex Authorized Institutions and Local Representative Offices at 31 December 2020 (continued)

RESTRICTED LICENCE BANKS

Incorporated in Hong Kong

ALLIED BANKING CORPORATION (HONG KONG) LIMITED

Banc of America Securities Asia Limited

Bank of China International Limited

Bank of Shanghai (Hong Kong) Limited

Citicorp International Limited

Goldman Sachs Asia Bank Limited

Habib Bank Zurich (Hong Kong) Limited

J.P. MORGAN SECURITIES (ASIA PACIFIC) LIMITED

KDB Asia Limited

Nippon Wealth Limited

ORIX ASIA LIMITED

SCOTIABANK (HONG KONG) LIMITED

Incorporated outside Hong Kong

EUROCLEAR BANK

PT. BANK MANDIRI (PERSERO) Tbk

RBC Investor Services Bank S.A.

Siam Commercial Bank Public Company Limited (The)

Thanakharn Kasikorn Thai Chamkat (Mahachon)
also known as KASIKORNBANK PUBLIC COMPANY LIMITED

DEPOSIT-TAKING COMPANIES

Incorporated in Hong Kong

BCOM Finance (Hong Kong) Limited

BPI International Finance Limited

Chau's Brothers Finance Company Limited

Chong Hing Finance Limited

Commonwealth Finance Corporation Limited

Corporate Finance (D.T.C.) Limited

FUBON CREDIT (HONG KONG) LIMITED

KEB Hana Global Finance Limited

KEXIM ASIA LIMITED

PUBLIC FINANCE LIMITED

Vietnam Finance Company Limited

WOORI GLOBAL MARKETS ASIA LIMITED

Deletion in 2020

Gunma Finance (Hong Kong) Limited

Incorporated outside Hong Kong

NIL

Annex Authorized Institutions and Local Representative Offices at 31 December 2020 (continued)

LOCAL REPRESENTATIVE OFFICES

ABC BANKING CORPORATION LTD
Ashikaga Bank, Ltd. (The)
BANCO BPM SOCIETA' PER AZIONI
Banco Bradesco S.A.
Banco Security
BANK OF BEIJING CO., LTD.
BANK OF DONGGUAN CO., LTD.
Bank of Fukuoka, Ltd. (The)
Bank of Kyoto, Ltd. (The)
Bank of Yokohama, Ltd. (The)
Banque Cantonale de Genève
Banque Transatlantique S.A.
BENDURA BANK AG
CAIXABANK S.A.
Citco Bank Nederland N.V. #
CLEARSTREAM BANKING S.A.
Doha Bank Q.P.S.C.
Dukascopy Bank SA
Export-Import Bank of China (The)
  also known as China Exim Bank
Gunma Bank, Ltd. (The)#
Habib Bank A.G. Zurich
Iyo Bank, Ltd. (The)
JIH SUN INTERNATIONAL Bank, Ltd.
Korea Development Bank (The)
Manulife Bank of Canada
Metropolitan Bank and Trust Company
Nanto Bank, Ltd. (The)
National Bank of Canada
Nishi-Nippon City Bank, Ltd. (The)
Norinchukin Bank (The)
Oita Bank, Ltd. (The)
P.T. Bank Central Asia
P.T. Bank Rakyat Indonesia (Persero)
Resona Bank, Limited
Shinkin Central Bank
Shoko Chukin Bank, Ltd. (The)
Silicon Valley Bank
Swissquote Bank SA
  also known as :
  Swissquote Bank AG
  Swissquote Bank Inc.
  Swissquote Bank Ltd
Union Bank of Taiwan
Unione di Banche Italiane S.p.A.
VP Bank Ltd
  also known as :
  VP Bank AG
  VP Bank SA
Yamaguchi Bank, Ltd. (The)
Yamanashi Chuo Bank, Ltd.

Deletion in 2020

CHINA BOHAI BANK CO., LTD.
CHINA GUANGFA BANK CO., LTD.

Addition in 2020

Table A Major Economic Indicators

	2016	2017	2018	2019	**2020**
I. Gross Domestic Product					
Real GDP growth (%)	2.2	3.8	2.8	(1.2)	**(6.1)**[(a)]
Nominal GDP growth (%)	3.8	6.8	6.6	1.1	**(5.4)**[(a)]
Real growth of major expenditure components of GDP (%)					
– Private consumption expenditure	2.0	5.5	5.3	(1.1)	**(10.1)**[(a)]
– Government consumption expenditure	3.4	2.8	4.2	5.1	**7.8** [(a)]
– Gross domestic fixed capital formation	(0.1)	3.1	1.7	(12.3)	**(11.5)**[(a)]
of which					
– Building and construction	5.9	(0.5)	(0.5)	(6.2)	**(8.2)**[(a)]
– Machinery, equipment and intellectual property products	(6.4)	3.8	8.8	(20.0)	**(19.2)**[(a)]
– Exports [(b)]	0.7	5.8	3.7	(5.6)	**(6.1)**[(a)]
– Imports [(b)]	0.9	6.6	4.5	(6.8)	**(6.2)**[(a)]
GDP at current market prices (US$ billion)	320.8	341.2	361.7	365.7	**349.4** [(a)]
Per capita GDP at current market prices (US$)	43,732	46,162	48,542	48,714	**46,707** [(a)]
II. External Trade (HK$ billion) [(b)]					
Trade in goods [(c)]					
– Exports of goods	3,892.9	4,212.8	4,453.4	4,292.6	**4,282.3** [(a)]
– Imports of goods	4,022.6	4,391.3	4,706.3	4,418.6	**4,329.1** [(a)]
– Balance of trade in goods	(129.7)	(178.5)	(253.0)	(126.0)	**(46.8)**[(a)]
Trade in services					
– Exports of services	764.7	811.3	886.9	792.9	**494.9** [(a)]
– Imports of services	578.1	605.9	639.9	618.2	**395.8** [(a)]
– Balance of trade in services	186.6	205.4	246.9	174.7	**99.1** [(a)]
III. Fiscal Expenditure and Revenue (HK$ million, fiscal year)					
Total government expenditure [(d)]	462,052	470,863	531,825	609,330	**820,385** [(a)]
Total government revenue [(e)]	573,125	619,836	599,774	598,756	**562,798** [(a)]
Consolidated surplus/(deficit)	111,073	148,973	67,949	(10,575)	**(257,587)**[(a)]
Reserve balance as at end of fiscal year [(f)]	953,960	1,102,934	1,170,882	1,160,308	**902,721** [(a)]
IV. Prices (annual change, %)					
Consumer Price Index (A)	2.8	1.5	2.7	3.3	**(0.5)**
Composite Consumer Price Index	2.4	1.5	2.4	2.9	**0.3**
Trade Unit Value Indices					
– Domestic exports	(1.4)	2.0	1.8	1.1	**0.3**
– Re-exports	(1.7)	1.8	2.4	1.1	**(0.6)**
– Imports	(1.7)	1.9	2.6	1.3	**(0.7)**
Property Price Indices					
– Residential flats	(3.6)	16.7	13.0	1.5	**(0.5)**[(a)]
– Office premises	(4.9)	14.1	13.9	(2.1)	**(13.7)**[(a)]
– Retail premises	(5.8)	6.0	5.9	(7.1)	**(5.6)**[(a)]
– Flatted factory premises	(4.3)	12.3	14.1	(0.0)	**(7.0)**[(a)]

Table A Major Economic Indicators (continued)

		2016	2017	2018	2019	**2020**
V.	**Labour**					
	Labour force (annual change, %)	0.4	0.7	0.8	(0.3)	**(2.0)**
	Employment (annual change, %)	0.4	1.0	1.1	(0.4)	**(4.9)**
	Unemployment rate (annual average, %)	3.4	3.1	2.8	2.9	**5.8**
	Underemployment rate (annual average, %)	1.4	1.2	1.1	1.1	**3.3**
	Employment ('000)	3,787.1	3,823.2	3,867.0	3,849.9	**3,661.6**
VI.	**Money Supply (HK$ billion)**					
	HK$ money supply					
	– M1	1,428.8	1,598.0	1,555.7	1,533.1	**1,972.7**
	– M2 [(g)]	6,280.2	7,010.3	7,262.5	7,438.8	**7,922.1**
	– M3 [(g)]	6,292.7	7,024.5	7,284.3	7,454.7	**7,937.0**
	Total money supply					
	– M1	2,214.0	2,431.5	2,421.6	2,484.7	**3,231.9**
	– M2	12,508.1	13,755.3	14,348.1	14,745.9	**15,606.6**
	– M3	12,551.3	13,803.8	14,403.7	14,786.4	**15,644.0**
VII.	**Interest Rates (end of period, %)**					
	Three-month interbank rate [(h)]	1.02	1.31	2.33	2.43	**0.35**
	Savings deposit	0.01	0.01	0.13	0.00	**0.00**
	One-month time deposit	0.01	0.01	0.14	0.12	**0.02**
	Banks' 'Best lending rate'	5.00	5.00	5.13	5.00	**5.00**
	Banks' 'Composite rate' [(i)]	0.31	0.38	0.89	1.09	**0.28**
VIII.	**Exchange Rates (end of period)**					
	USD/HKD	7.754	7.814	7.834	7.787	**7.753**
	Trade-weighted Effective Exchange Rate Index (Jan 2010=100)	108.8	100.9	104.8	105.9	**100.8**
IX.	**Foreign Currency Reserve Assets (US$ billion)** [(j)]	386.3	431.4	424.6	441.4	**491.9**
X.	**Stock Market (end of period figures)**					
	Hang Seng Index	22,001	29,919	25,846	28,190	**27,231**
	Average price/earnings ratio	10.5	16.3	10.5	13.3	**17.6**
	Market capitalisation (HK$ billion)	24,450.4	33,718.0	29,723.2	38,058.3	**47,392.2**

(a) The estimates are preliminary.
(b) Compiled based on the change of ownership principle in recording goods sent abroad for processing and merchanting.
(c) Includes non-monetary gold.
(d) Includes repayment of bonds and notes issued in July 2004.
(e) Includes net proceeds from issuance of green bonds under the Government Green Bond Programme.
(f) Includes changes in provision for loss in investments with the Exchange Fund.
(g) Adjusted to include foreign currency swap deposits.
(h) Refers to three-month Hong Kong Dollar Interest Settlement Rates.
(i) Calculated based on the new local "Interest Rate Risk in the Banking Book" (IRRBB) framework since June 2019. As such, the figures in 2019 and 2020 are not strictly comparable with those for previous years.
(j) Excludes unsettled forward transactions but includes gold.

Table B Performance Ratios of the Banking Sector[(a)]

	All Authorized Institutions					Retail Banks				
	2016 %	2017 %	2018 %	2019 %	**2020 %**	2016 %	2017 %	2018 %	2019 %	**2020 %**
Asset Quality [(b)]										
As % of total credit exposures [(c)]										
Total outstanding provisions/impairment allowances	0.49	0.48	0.49	0.49	**0.62**	0.29	0.26	0.34	0.36	**0.51**
Classified [(d)] exposures:										
– Gross	0.58	0.48	0.39	0.39	**0.66**	0.45	0.37	0.34	0.29	**0.57**
– Net of specific provisions/individual impairment allowances	0.35	0.26	0.19	0.19	**0.37**	0.31	0.25	0.20	0.15	**0.34**
– Net of all provisions/impairment allowances	0.09	0.00	(0.10)	(0.10)	**0.04**	0.17	0.11	(0.00)	(0.07)	**0.07**
As % of total loans [(e)]										
Total outstanding provisions/impairment allowances	0.76	0.71	0.70	0.70	**0.86**	0.51	0.45	0.52	0.56	**0.76**
Classified [(d)] loans:										
– Gross	0.85	0.68	0.55	0.57	**0.90**	0.72	0.56	0.51	0.48	**0.82**
– Net of specific provisions/individual impairment allowances	0.51	0.36	0.26	0.28	**0.50**	0.48	0.36	0.30	0.25	**0.46**
– Net of all provisions/impairment allowances	0.10	(0.04)	(0.15)	(0.13)	**0.04**	0.21	0.11	(0.02)	(0.08)	**0.06**
Overdue > 3 months and rescheduled loans	0.67	0.52	0.36	0.34	**0.57**	0.53	0.40	0.32	0.32	**0.48**
Profitability										
Return on assets (operating profit)	0.81	0.91	0.97	0.95	**0.66**	1.09	1.16	1.27	1.19	**0.77**
Return on assets (post-tax profit)	1.00	0.83	0.84	0.83	**0.58**	1.44	1.07	1.10	1.05	**0.70**
Net interest margin	1.04	1.12	1.20	1.23	**0.97**	1.32	1.45	1.62	1.63	**1.18**
Cost-to-income ratio	50.4	47.0	45.0	45.6	**50.6**	43.2	41.9	38.7	39.5	**46.8**
Loan impairment charges to total assets	0.10	0.10	0.06	0.09	**0.14**	0.07	0.06	0.05	0.08	**0.12**
Liquidity										
Loan to deposit ratio (all currencies)	68.4	73.0	72.6	75.3	**72.3**	57.0	59.5	60.1	62.3	**59.6**
Loan to deposit[(f)] ratio (Hong Kong dollar)	77.1	82.7	86.9	90.3	**83.5**	71.2	73.1	77.5	81.1	**75.9**

	Surveyed Institutions				
	2016 %	2017 %	2018 %	2019 %	**2020 %**
Asset Quality					
Delinquency ratio of residential mortgage loans	0.03	0.03	0.02	0.03	**0.04**
Credit card receivables					
– Delinquency ratio	0.24	0.22	0.21	0.25	**0.27**
– Charge-off ratio	1.92	1.75	1.51	1.57	**2.18**

	Locally Incorporated Licensed Banks				
	2016 %	2017 %	2018 %	2019 %	**2020 %**
Profitability					
Operating profit to shareholders' funds	10.9	11.7	12.9	11.6	**7.7**
Post-tax profit to shareholders' funds	14.6	10.9	11.2	10.2	**6.9**
Capital Adequacy					
Equity to assets ratio [(b)]	9.6	9.6	9.3	9.7	**9.3**

	All Locally Incorporated Authorized Institutions				
	2016 %	2017 %	2018 %	2019 %	**2020 %**
Capital Adequacy [(g)]					
Common Equity Tier 1 capital ratio	15.4	15.3	16.0	16.5	**16.7**
Tier 1 capital ratio	16.4	16.5	17.9	18.5	**18.7**
Total capital ratio	19.2	19.1	20.3	20.7	**20.7**

(a) Figures are related to Hong Kong offices only unless otherwise stated.
(b) Figures are related to Hong Kong offices. For locally incorporated AIs, figures include their overseas branches.
(c) Credit exposures include loans and advances, acceptances and bills of exchange held, investment debt securities issued by others, accrued interest, and commitments and contingent liabilities to or on behalf of non-banks.
(d) Denotes loans or exposures graded as "substandard", "doubtful" or "loss" in the HKMA's Loan Classification System.
(e) Figures are related to Hong Kong offices. For locally incorporated AIs, figures include their overseas branches and major overseas subsidiaries.
(f) Includes swap deposits.
(g) The ratios are on a consolidated basis.

Table C Authorized Institutions: Domicile and Parentage

	2016	2017	2018	2019	**2020**
Licensed Banks					
(i) Incorporated in Hong Kong	22	22	22	31	**31**
(ii) Incorporated outside Hong Kong	134	133	130	133	**130**
Total	156	155	152	164	**161**
Restricted Licence Banks					
(i) Subsidiaries of licensed banks:					
(a) incorporated in Hong Kong	1	1	1	1	**1**
(b) incorporated outside Hong Kong	5	5	4	4	**4**
(ii) Subsidiaries or branches of foreign banks which are not licensed banks in Hong Kong	10	7	7	7	**7**
(iii) Bank related	3	3	3	3	**3**
(iv) Others	3	3	3	2	**2**
Total	22	19	18	17	**17**
Deposit-taking Companies					
(i) Subsidiaries of licensed banks:					
(a) incorporated in Hong Kong	4	4	3	3	**3**
(b) incorporated outside Hong Kong	3	3	3	3	**3**
(ii) Subsidiaries of foreign banks which are not licensed banks in Hong Kong	6	6	6	4	**3**
(iii) Bank related	–	–	–	–	**–**
(iv) Others	4	4	4	3	**3**
Total	17	17	16	13	**12**
All Authorized Institutions	195	191	186	194	**190**
Local Representative Offices	54	49	48	43	**43**

Table D Authorized Institutions: Region/Economy of Beneficial Ownership

Region/Economy	Licensed Banks					Restricted Licence Banks					Deposit-taking Companies				
	2016	2017	2018	2019	**2020**	2016	2017	2018	2019	**2020**	2016	2017	2018	2019	**2020**
Asia & Pacific															
Hong Kong	7	7	7	9	**9**	–	–	–	–	**–**	2	2	2	1	**1**
Australia	5	5	5	5	**5**	–	–	–	–	**–**	–	–	–	–	**–**
Mainland China	21	22	22	30	**32**	2	2	2	2	**2**	3	3	2	2	**2**
India	12	12	12	12	**10**	–	–	–	–	**–**	1	1	1	1	**1**
Indonesia	1	1	1	1	**1**	1	1	1	1	**1**	–	–	–	–	**–**
Japan	11	11	10	10	**10**	2	2	2	2	**2**	1	1	1	1	**–**
Malaysia	4	4	4	4	**4**	–	–	–	–	**–**	1	1	1	1	**1**
Pakistan	1	1	1	1	**1**	1	1	1	1	**1**	1	1	1	–	**–**
Philippines	2	2	2	2	**2**	1	1	1	1	**1**	2	2	2	2	**2**
Singapore	6	6	6	6	**6**	–	–	–	–	**–**	–	–	–	–	**–**
South Korea	5	5	5	5	**5**	2	1	1	1	**1**	4	4	4	3	**3**
Taiwan	20	20	20	20	**20**	–	–	–	–	**–**	1	1	1	1	**1**
Thailand	1	1	1	1	**1**	3	2	2	2	**2**	–	–	–	–	**–**
Vietnam	–	–	–	–	**–**	–	–	–	–	**–**	1	1	1	1	**1**
Sub-Total	96	97	96	106	**106**	12	10	10	10	**10**	17	17	16	13	**12**
Europe															
Austria	1	1	1	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
Belgium	1	1	1	1	**1**	1	1	1	1	**1**	–	–	–	–	**–**
France	7	7	7	7	**7**	2	1	–	–	**–**	–	–	–	–	**–**
Germany	4	3	3	3	**3**	–	–	–	–	**–**	–	–	–	–	**–**
Italy	3	3	3	3	**2**	–	–	–	–	**–**	–	–	–	–	**–**
Liechtenstein	1	1	1	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
Netherlands	3	3	3	3	**3**	–	–	–	–	**–**	–	–	–	–	**–**
Spain	2	2	2	2	**2**	–	–	–	–	**–**	–	–	–	–	**–**
Sweden	2	2	2	2	**2**	–	–	–	–	**–**	–	–	–	–	**–**
Switzerland	8	7	6	6	**7**	–	–	–	–	**–**	–	–	–	–	**–**
United Kingdom	10	10	9	9	**6**	–	–	–	–	**–**	–	–	–	–	**–**
Sub-Total	42	40	38	38	**35**	3	2	1	1	**1**	0	0	0	0	**0**
Middle East															
Iran	1	1	1	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
Qatar	–	–	–	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
United Arab Emirates	2	2	2	2	**2**	–	–	–	–	**–**	–	–	–	–	**–**
Sub-Total	3	3	3	4	**4**	0	0	0	0	**0**	0	0	0	0	**0**
North America															
Canada	5	5	5	5	**5**	2	2	2	2	**2**	–	–	–	–	**–**
United States	9	9	9	10	**10**	5	5	5	4	**4**	–	–	–	–	**–**
Sub-Total	14	14	14	15	**15**	7	7	7	6	**6**	0	0	0	0	**0**
Brazil	1	1	1	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
Grand Total	156	155	152	164	**161**	22	19	18	17	**17**	17	17	16	13	**12**

Table E Presence of World's Largest 500 Banks in Hong Kong

Positions at 31.12.2020	Number of Overseas Banks[b]					Licensed Banks[c]					Restricted Licence Banks[c]				
	2016	2017	2018	2019	**2020**	2016	2017	2018	2019	**2020**	2016	2017	2018	2019	**2020**
World Ranking[a]															
1–20	20	20	20	20	**19**	36	34	33	33	**30**	6	5	4	4	**4**
21–50	27	27	27	27	**28**	27	28	28	30	**30**	4	4	4	3	**3**
51–100	28	28	30	31	**30**	21	22	24	27	**27**	3	2	2	1	**1**
101–200	32	34	36	37	**36**	22	24	24	25	**23**	–	1	2	3	**4**
201–500	56	47	42	39	**35**	32	29	27	26	**20**	3	2	1	1	**1**
Sub-total	163	156	155	154	**148**	138	137	136	141	**130**	16	14	13	12	**13**
Others	31	31	31	27	**30**	18	18	16	23	**31**	6	5	5	5	**4**
Total	194	187	186	181	**178**	156	155	152	164	**161**	22	19	18	17	**17**

Positions at 31.12.2020	Deposit-Taking Companies[c]					Local Representative Offices				
	2016	2017	2018	2019	**2020**	2016	2017	2018	2019	**2020**
World Ranking[a]										
1–20	–	1	1	1	**–**	–	–	–	–	**–**
21–50	2	1	–	–	**1**	2	2	2	2	**2**
51–100	3	3	3	2	**2**	8	8	8	6	**5**
101–200	1	1	1	1	**2**	10	10	10	10	**11**
201–500	4	5	4	4	**2**	19	13	12	10	**12**
Sub-total	10	11	9	8	**7**	39	33	32	28	**30**
Others	7	6	7	5	**5**	15	16	16	15	**13**
Total	17	17	16	13	**12**	54	49	48	43	**43**

(a) Top 500 banks/banking groups in the world ranked by total assets. Figures are extracted from *The Banker*, July 2020 issue.

(b) The sum of the number of licensed banks, restricted licence banks, deposit-taking companies and local representative offices exceeds the number of overseas banks with presence in Hong Kong due to the multiple presence of some of the overseas banks.

(c) Consist of branches and subsidiaries of overseas banks.

Table F Balance Sheet: All Authorized Institutions and Retail Banks

All Authorized Institutions

	2016			2017			2018[d]			2019			**2020**		
(HK$ billion)	HK$	F/CY	Total	HK$	F/CY	Total	HK$	F/CY	Total	HK$	F/CY	Total	**HK$**	**F/CY**	**Total**
Assets															
Loans to customers	4,479	3,544	8,023	5,360	3,954	9,314	5,836	3,886	9,723	6,219	4,157	10,377	**6,107**	**4,392**	**10,499**
– Inside Hong Kong [a]	3,988	1,651	5,639	4,653	1,860	6,513	4,988	1,788	6,776	5,324	1,935	7,259	**5,278**	**2,100**	**7,378**
– Outside Hong Kong [b]	491	1,893	2,384	707	2,093	2,801	849	2,099	2,947	895	2,223	3,118	**829**	**2,292**	**3,120**
Interbank lending	720	4,513	5,233	652	5,343	5,995	692	5,906	6,598	648	5,128	5,776	**528**	**5,149**	**5,678**
– Inside Hong Kong	401	673	1,074	327	690	1,017	338	764	1,102	311	604	915	**290**	**590**	**880**
– Outside Hong Kong	318	3,841	4,159	326	4,653	4,978	354	5,142	5,496	337	4,524	4,861	**238**	**4,560**	**4,798**
Negotiable certificates of deposit (NCDs)	209	355	564	172	429	601	168	394	562	146	373	519	**171**	**343**	**514**
Negotiable debt instruments, other than NCDs	1,160	2,906	4,067	1,274	3,092	4,365	1,358	3,441	4,799	1,395	3,690	5,086	**1,306**	**4,076**	**5,383**
Other assets	1,049	1,716	2,766	924	1,497	2,421	875	1,487	2,361	1,033	1,672	2,705	**1,454**	**2,338**	**3,792**
Total assets	7,617	13,036	20,652	8,382	14,315	22,697	8,929	15,114	24,043	9,442	15,020	24,462	**9,567**	**16,299**	**25,865**
Liabilities															
Deposits from customers [c]	5,809	5,918	11,727	6,485	6,268	12,752	6,715	6,671	13,386	6,884	6,887	13,772	**7,311**	**7,202**	**14,514**
Interbank borrowing	888	3,842	4,730	829	4,653	5,482	945	4,849	5,794	959	4,514	5,473	**851**	**4,748**	**5,599**
– Inside Hong Kong	533	740	1,273	458	756	1,214	517	776	1,293	499	606	1,105	**464**	**605**	**1,069**
– Outside Hong Kong	355	3,101	3,457	371	3,897	4,268	428	4,073	4,501	461	3,908	4,368	**387**	**4,142**	**4,530**
Negotiable certificates of deposit	265	525	790	235	720	955	220	595	815	181	623	803	**229**	**655**	**884**
Other liabilities	1,563	1,843	3,405	1,618	1,889	3,507	1,853	2,195	4,048	2,200	2,214	4,414	**2,115**	**2,754**	**4,869**
Total liabilities	8,525	12,128	20,652	9,167	13,530	22,697	9,733	14,310	24,043	10,224	14,238	24,462	**10,507**	**15,359**	**25,865**

Retail Banks

	2016			2017			2018[d]			2019			**2020**		
(HK$ billion)	HK$	F/CY	Total	HK$	F/CY	Total	HK$	F/CY	Total	HK$	F/CY	Total	**HK$**	**F/CY**	**Total**
Assets															
Loans to customers	3,611	1,601	5,212	4,171	1,819	5,991	4,600	1,831	6,431	4,988	1,939	6,927	**5,005**	**2,106**	**7,111**
– Inside Hong Kong [a]	3,340	907	4,247	3,818	995	4,813	4,157	993	5,150	4,468	1,075	5,543	**4,473**	**1,156**	**5,629**
– Outside Hong Kong [b]	271	694	965	353	825	1,178	443	838	1,281	520	864	1,384	**532**	**950**	**1,482**
Interbank lending	372	1,683	2,054	383	1,993	2,376	445	2,364	2,809	407	2,039	2,445	**316**	**2,237**	**2,553**
– Inside Hong Kong	264	357	621	246	384	630	272	453	725	255	381	636	**219**	**374**	**593**
– Outside Hong Kong	108	1,325	1,433	137	1,609	1,746	173	1,911	2,084	152	1,657	1,809	**97**	**1,863**	**1,960**
Negotiable certificates of deposit (NCDs)	153	124	277	119	123	242	136	123	259	105	117	223	**130**	**124**	**254**
Negotiable debt instruments, other than NCDs	931	2,047	2,978	995	2,036	3,031	1,048	2,243	3,292	1,106	2,502	3,608	**1,082**	**2,805**	**3,888**
Other assets	771	1,217	1,989	733	1,118	1,851	722	1,116	1,838	871	1,272	2,143	**1,166**	**1,699**	**2,865**
Total assets	5,838	6,672	12,510	6,400	7,090	13,490	6,952	7,677	14,630	7,477	7,870	15,346	**7,701**	**8,971**	**16,671**
Liabilities															
Deposits from customers [c]	5,073	4,072	9,145	5,704	4,356	10,061	5,939	4,754	10,693	6,149	4,972	11,122	**6,595**	**5,329**	**11,924**
Interbank borrowing	365	535	900	304	587	891	354	714	1,068	373	635	1,008	**373**	**857**	**1,230**
– Inside Hong Kong	250	242	492	193	248	440	234	263	497	244	160	404	**245**	**230**	**475**
– Outside Hong Kong	115	293	408	111	340	451	120	451	572	129	475	604	**128**	**626**	**754**
Negotiable certificates of deposit	50	85	136	46	125	171	42	79	121	57	87	144	**94**	**80**	**174**
Other liabilities	1,235	1,094	2,329	1,316	1,051	2,367	1,528	1,220	2,748	1,815	1,257	3,072	**1,712**	**1,632**	**3,344**
Total liabilities	6,723	5,787	12,510	7,370	6,120	13,490	7,862	6,767	14,630	8,395	6,951	15,346	**8,775**	**7,897**	**16,671**

(a) Defined as loans for use in Hong Kong plus trade finance.
(b) Includes "others" (i.e. unallocated).
(c) Hong Kong dollar customer deposits include swap deposits.
(d) The 2018 figures for loans to customers inside/outside Hong Kong have been restated to reflect authorized institutions' reclassification of working capital loans.
Figures may not add up to total because of rounding.

Table G Major Balance Sheet Items by Region/Economy of Beneficial Ownership of Authorized Institutions

(HK$ billion)		Mainland China	Japan	US	Europe	Others	Total
Total Assets	2019	8,816	1,430	1,285	3,438	9,492	24,462
	2020	**9,195**	**1,451**	**1,409**	**3,629**	**10,182**	**25,865**
Deposits from Customers	2019	5,107	358	686	1,662	5,958	13,772
	2020	**5,371**	**319**	**761**	**1,786**	**6,276**	**14,514**
Loans to Customers	2019	3,940	578	353	1,413	4,093	10,377
	2020	**4,050**	**586**	**336**	**1,459**	**4,067**	**10,499**
Loans to Customers	2019	2,633	307	287	820	3,213	7,259
Inside Hong Kong [(a)]	**2020**	**2,736**	**316**	**270**	**850**	**3,207**	**7,378**
Loans to Customers	2019	1,307	271	66	593	880	3,118
Outside Hong Kong [(b)]	**2020**	**1,314**	**271**	**66**	**609**	**860**	**3,120**

(a) Defined as loans for use in Hong Kong plus trade finance.
(b) Includes "others" (i.e. unallocated).
Figures may not add up to total because of rounding.

Table H Flow of Funds for All Authorized Institutions and Retail Banks

All Authorized Institutions

Increase/(Decrease) in (HK$ billion)	2019 HK$	2019 F/CY	2019 Total	**2020 HK$**	**2020 F/CY**	**2020 Total**
Assets						
Loans to customers	383	271	654	**(112)**	**234**	**122**
– Inside Hong Kong [(a)]	336	147	483	**(46)**	**165**	**119**
– Outside Hong Kong [(b)]	47	124	171	**(67)**	**69**	**2**
Interbank lending	(44)	(778)	(822)	**(119)**	**21**	**(98)**
– Inside Hong Kong	(27)	(160)	(187)	**(21)**	**(14)**	**(35)**
– Outside Hong Kong	(17)	(618)	(635)	**(98)**	**35**	**(63)**
All other assets	174	413	587	**357**	**1,023**	**1,380**
Total assets	513	(93)	419	**125**	**1,278**	**1,403**
Liabilities						
Deposits from customers [(c)]	169	216	385	**427**	**315**	**742**
Interbank borrowing	15	(335)	(320)	**(108)**	**234**	**126**
– Inside Hong Kong	(18)	(170)	(188)	**(35)**	**(1)**	**(36)**
– Outside Hong Kong	33	(165)	(133)	**(73)**	**235**	**161**
All other liabilities	307	47	355	**(36)**	**572**	**535**
Total liabilities	491	(71)	419	**283**	**1,120**	**1,403**
Net Interbank Borrowing/(Lending)	59	443	502	**11**	**213**	**224**
Net Customer Lending/(Borrowing)	214	55	269	**(540)**	**(81)**	**(620)**

Retail Banks

Increase/(Decrease) in (HK$ billion)	2019 HK$	2019 F/CY	2019 Total	**2020 HK$**	**2020 F/CY**	**2020 Total**
Assets						
Loans to customers	388	108	495	**18**	**167**	**184**
– Inside Hong Kong [(a)]	311	81	392	**5**	**81**	**86**
– Outside Hong Kong [(b)]	77	26	103	**13**	**86**	**98**
Interbank lending	(39)	(326)	(364)	**(90)**	**198**	**108**
– Inside Hong Kong	(17)	(72)	(89)	**(36)**	**(7)**	**(43)**
– Outside Hong Kong	(21)	(254)	(275)	**(54)**	**205**	**151**
All other assets	176	410	585	**297**	**736**	**1,033**
Total assets	524	192	717	**224**	**1,101**	**1,325**
Liabilities						
Deposits from customers [(c)]	210	219	429	**446**	**357**	**802**
Interbank borrowing	19	(79)	(60)	**(0)**	**221**	**221**
– Inside Hong Kong	10	(103)	(92)	**1**	**70**	**71**
– Outside Hong Kong	9	24	33	**(1)**	**151**	**150**
All other liabilities	303	44	347	**(66)**	**367**	**302**
Total liabilities	533	184	717	**380**	**945**	**1,325**
Net Interbank Borrowing/(Lending)	58	247	305	**90**	**23**	**113**
Net Customer Lending/(Borrowing)	177	(111)	66	**(428)**	**(190)**	**(618)**

(a) Defined as loans for use in Hong Kong plus trade finance.
(b) Includes "others" (i.e. unallocated).
(c) Hong Kong dollar customer deposits include swap deposits.
Figures may not add up to total because of rounding.

Table I Loans to and Deposits from Customers by Category of Authorized Institutions

	Loans to Customers				Deposits from Customers[a]			
(HK$ billion)	HK$	F/CY	Total	%	HK$	F/CY	Total	%
2016								
Licensed banks	4,447	3,507	7,954	99	5,797	5,893	11,689	100
Restricted licence banks	20	33	52	1	7	25	32	–
Deposit-taking companies	12	5	17	–	5	1	6	–
Total	4,479	3,544	8,023	100	5,809	5,918	11,727	100
2017								
Licensed banks	5,330	3,921	9,251	99	6,471	6,239	12,710	100
Restricted licence banks	17	27	45	–	9	28	37	–
Deposit-taking companies	12	5	18	–	5	1	6	–
Total	5,360	3,954	9,314	100	6,485	6,268	12,752	100
2018								
Licensed banks	5,802	3,847	9,650	99	6,695	6,646	13,341	100
Restricted licence banks	22	33	55	1	15	25	40	–
Deposit-taking companies	12	5	18	–	6	1	6	–
Total	5,836	3,886	9,723	100	6,715	6,671	13,386	100
2019								
Licensed banks	6,192	4,118	10,310	99	6,869	6,871	13,740	100
Restricted licence banks	21	34	55	1	9	16	26	–
Deposit-taking companies	7	5	12	–	6	1	6	–
Total	6,219	4,157	10,377	100	6,884	6,887	13,772	100
2020								
Licensed banks	**6,084**	**4,352**	**10,436**	**99**	**7,298**	**7,183**	**14,481**	**100**
Restricted licence banks	**17**	**35**	**52**	**–**	**8**	**19**	**27**	**–**
Deposit-taking companies	**6**	**5**	**10**	**–**	**5**	**1**	**6**	**–**
Total	**6,107**	**4,392**	**10,499**	**100**	**7,311**	**7,202**	**14,514**	**100**

(a) Hong Kong dollar customer deposits include swap deposits.

The sign "–" denotes a figure of less than 0.5.

Figures may not add up to total because of rounding.

Table J Loans to Customers inside Hong Kong by Economic Sector

All Authorized Institutions

Sector	2016		2017		2018[b]		2019		**2020**	
(HK$ billion)	HK$	%	HK$	%	HK$	%	HK$	%	**HK$**	**%**
Hong Kong's visible trade	455	8	494	8	456	7	453	6	**425**	**6**
Manufacturing	247	4	293	4	300	4	303	4	**309**	**4**
Transport and transport equipment	295	5	342	5	332	5	326	4	**350**	**5**
Building, construction and property development, and investment	1,260	22	1,470	23	1,526	23	1,631	22	**1,635**	**22**
Wholesale and retail trade	413	7	409	6	390	6	378	5	**350**	**5**
Financial concerns (other than authorized institutions)	546	10	821	13	858	13	908	13	**918**	**12**
Individuals:										
– to purchase flats in the Home Ownership Scheme, the Private Sector Participation Scheme and the Tenants Purchase Scheme	43	1	51	1	58	1	78	1	**94**	**1**
– to purchase other residential properties	1,122	20	1,226	19	1,340	20	1,466	20	**1,580**	**21**
– other purposes	519	9	605	9	663	10	779	11	**777**	**11**
Others	740	13	801	12	854	13	936	13	**941**	**13**
Total [a]	5,639	100	6,513	100	6,776	100	7,259	100	**7,378**	**100**

Retail Banks

Sector	2016		2017		2018[b]		2019		**2020**	
(HK$ billion)	HK$	%	HK$	%	HK$	%	HK$	%	**HK$**	**%**
Hong Kong's visible trade	312	7	327	7	315	6	316	6	**296**	**5**
Manufacturing	171	4	201	4	213	4	213	4	**209**	**4**
Transport and transport equipment	192	5	213	4	217	4	211	4	**237**	**4**
Building, construction and property development, and investment	949	22	1,085	23	1,154	22	1,216	22	**1,233**	**22**
Wholesale and retail trade	255	6	245	5	260	5	258	5	**228**	**4**
Financial concerns (other than authorized institutions)	284	7	425	9	464	9	512	9	**488**	**9**
Individuals:										
– to purchase flats in the Home Ownership Scheme, the Private Sector Participation Scheme and the Tenants Purchase Scheme	43	1	51	1	58	1	78	1	**94**	**2**
– to purchase other residential properties	1,115	26	1,220	25	1,333	26	1,464	26	**1,578**	**28**
– other purposes	430	10	482	10	532	10	627	11	**610**	**11**
Others	498	12	566	12	604	12	648	12	**657**	**12**
Total [a]	4,247	100	4,813	100	5,150	100	5,543	100	**5,629**	**100**

(a) Defined as loans for use in Hong Kong plus trade finance.
(b) The 2018 figures for loans to customers inside Hong Kong by economic sector have been restated to reflect authorized institutions' reclassification of working capital loans.

Figures may not add up to total because of rounding.

Table K Deposits from Customers

	All Authorized Institutions				Retail Banks			
(HK$ billion)	Demand	Savings	Time	Total	Demand	Savings	Time	Total
Hong Kong Dollar [(a)]								
2016	1,038	2,715	2,055	5,809	925	2,669	1,479	5,073
2017	1,160	3,067	2,258	6,485	1,022	3,005	1,677	5,704
2018	1,093	2,806	2,817	6,715	988	2,757	2,193	5,939
2019	1,036	2,641	3,207	6,884	945	2,594	2,610	6,149
2020	**1,432**	**3,373**	**2,507**	**7,311**	**1,302**	**3,302**	**1,991**	**6,595**
Foreign Currency								
2016	785	2,224	2,909	5,918	448	1,939	1,684	4,072
2017	833	2,263	3,172	6,268	494	1,964	1,898	4,356
2018	874	2,118	3,678	6,671	559	1,845	2,350	4,754
2019	952	2,295	3,641	6,887	612	2,013	2,347	4,972
2020	**1,259**	**2,967**	**2,976**	**7,202**	**820**	**2,631**	**1,877**	**5,329**
Total								
2016	1,824	4,939	4,964	11,727	1,373	4,608	3,164	9,145
2017	1,993	5,330	5,430	12,752	1,517	4,969	3,575	10,061
2018	1,967	4,924	6,495	13,386	1,547	4,602	4,543	10,693
2019	1,987	4,936	6,848	13,772	1,557	4,607	4,958	11,122
2020	**2,691**	**6,340**	**5,483**	**14,514**	**2,122**	**5,934**	**3,868**	**11,924**

(a) Hong Kong dollar customer deposits include swap deposits.
Figures may not add up to total because of rounding.

Table L Geographical Breakdown of Net External Claims/(Liabilities) of All Authorized Institutions

Region/Economy [(a)] (HK$ billion)	2019 Net Claims on/(Liabilities to) Banks Outside Hong Kong	2019 Net Claims on/(Liabilities to) Non-Bank Customers Outside Hong Kong	2019 Total Net Claims/ (Liabilities)	2020 Net Claims on/(Liabilities to) Banks Outside Hong Kong	2020 Net Claims on/(Liabilities to) Non-Bank Customers Outside Hong Kong	2020 Total Net Claims/ (Liabilities)
Developed Countries	353	1,509	1,861	**528**	**1,636**	**2,164**
United States of America	141	595	736	**280**	**529**	**809**
Japan	31	497	529	**(17)**	**555**	**538**
Australia	283	122	405	**248**	**131**	**379**
Canada	107	62	169	**124**	**95**	**219**
Luxembourg	60	20	80	**40**	**35**	**75**
France	(44)	67	23	**(8)**	**78**	**71**
Ireland	(0)	61	61	**1**	**63**	**64**
United Kingdom	50	(37)	13	**75**	**(36)**	**40**
New Zealand	20	25	45	**17**	**20**	**37**
Germany	(39)	36	(3)	**(38)**	**74**	**36**
Sweden	1	12	13	**1**	**23**	**24**
Liechtenstein	15	(0)	15	**13**	**(1)**	**13**
Norway	7	5	12	**7**	**3**	**10**
Belgium	(4)	1	(2)	**2**	**6**	**8**
Finland	5	2	7	**1**	**4**	**5**
Switzerland	(16)	(3)	(18)	**3**	**(0)**	**2**
Denmark	1	1	2	**1**	**(0)**	**1**
Malta	(0)	1	1	**(0)**	**1**	**1**
Greece	(0)	(1)	(1)	**(0)**	**(1)**	**(1)**
Portugal	0	(0)	0	**0**	**(1)**	**(1)**
Cyprus	0	(3)	(3)	**0**	**(2)**	**(2)**
Austria	(11)	1	(11)	**(13)**	**0**	**(12)**
Netherlands	(141)	49	(92)	**(97)**	**63**	**(34)**
Italy	(44)	(1)	(45)	**(38)**	**(1)**	**(38)**
Spain	(69)	(5)	(74)	**(78)**	**(3)**	**(81)**
Others	(0)	(0)	(0)	**(0)**	**(0)**	**(0)**
Offshore centres	3	164	167	**57**	**169**	**226**
West Indies UK	0	174	175	**1**	**196**	**197**
Cayman Islands	(10)	84	74	**(11)**	**86**	**75**
Jersey	(0)	5	5	**(0)**	**12**	**12**
Mauritius	4	7	12	**3**	**6**	**9**
Panama	1	4	5	**1**	**4**	**5**
Bahrain	4	3	7	**(0)**	**3**	**3**
Singapore	84	(62)	23	**81**	**(80)**	**1**
Vanuatu	(0)	(1)	(1)	**(0)**	**(1)**	**(1)**
Curacao	0	(0)	(0)	**0**	**(1)**	**(1)**
Guernsey	(0)	1	1	**(0)**	**(1)**	**(1)**
Barbados	0	(1)	(1)	**0**	**(1)**	**(1)**
Bahamas	(8)	(8)	(16)	**0**	**(3)**	**(3)**
Bermuda	(0)	2	2	**(0)**	**(5)**	**(5)**
Samoa	(0)	(26)	(26)	**0**	**(24)**	**(24)**
Macao SAR	(72)	(18)	(90)	**(17)**	**(22)**	**(39)**
Others	(0)	(0)	(0)	**(0)**	**(0)**	**(0)**
Developing Europe	(5)	(80)	(85)	**2**	**(28)**	**(26)**
Turkey	4	(2)	2	**3**	**0**	**3**
Czech Republic	(0)	1	1	**(0)**	**2**	**2**
Hungary	1	(2)	(1)	**(0)**	**(2)**	**(2)**
Russia	(1)	(77)	(78)	**(1)**	**(28)**	**(29)**
Others	(8)	0	(8)	**0**	**(0)**	**(0)**

Table L Geographical Breakdown of Net External Claims/(Liabilities) of All Authorized Institutions (continued)

Region/Economy [a] (HK$ billion)	2019 Net Claims on/(Liabilities to) Banks Outside Hong Kong	2019 Net Claims on/(Liabilities to) Non-Bank Customers Outside Hong Kong	2019 Total Net Claims/ (Liabilities)	**2020 Net Claims on/(Liabilities to) Banks Outside Hong Kong**	**2020 Net Claims on/(Liabilities to) Non-Bank Customers Outside Hong Kong**	**2020 Total Net Claims/ (Liabilities)**
Developing Latin America and Caribbean	14	8	22	**17**	**(0)**	**17**
Venezuela	12	(0)	12	**13**	**(0)**	**13**
Brazil	2	2	4	**4**	**3**	**7**
Chile	1	(0)	1	**2**	**5**	**7**
Peru	0	7	7	**1**	**6**	**6**
Argentina	0	0	0	**(1)**	**0**	**(0)**
Mexico	0	7	7	**0**	**(7)**	**(7)**
Others	(2)	(8)	(9)	**(1)**	**(7)**	**(8)**
Developing Africa and Middle East	59	24	84	**65**	**15**	**81**
United Arab Emirates	58	31	89	**50**	**30**	**80**
Qatar	19	20	40	**36**	**16**	**52**
Saudi Arabia	(4)	14	10	**5**	**10**	**15**
South Africa	6	2	8	**3**	**(1)**	**3**
Oman	(0)	2	2	**0**	**2**	**2**
Kenya	1	1	2	**0**	**2**	**2**
Egypt	(1)	1	1	**(0)**	**1**	**1**
Israel	1	(1)	(0)	**1**	**(1)**	**(0)**
Algeria	(0)	(0)	(0)	**(0)**	**(0)**	**(1)**
Ghana	(1)	0	(1)	**(1)**	**0**	**(1)**
Liberia	0	(3)	(3)	**0**	**(2)**	**(2)**
Kuwait	(1)	(0)	(2)	**0**	**(3)**	**(3)**
Nigeria	(13)	(12)	(26)	**(20)**	**(7)**	**(27)**
Others	(4)	(31)	(36)	**(9)**	**(32)**	**(41)**
Developing Asia and Pacific	844	(179)	664	**366**	**(223)**	**143**
Republic of Korea	281	71	352	**250**	**80**	**330**
Thailand	67	(72)	(5)	**73**	**(16)**	**56**
Malaysia	40	1	41	**40**	**(1)**	**38**
Indonesia	15	24	40	**7**	**23**	**30**
Bangladesh	18	(0)	18	**18**	**(2)**	**15**
India	(32)	95	63	**(66)**	**75**	**9**
Sri Lanka	5	3	8	**4**	**3**	**7**
Laos	1	0	1	**3**	**0**	**4**
Mongolia	(1)	2	1	**(1)**	**3**	**3**
Papua New Guinea	(1)	3	2	**(0)**	**3**	**2**
Myanmar	(1)	1	1	**(1)**	**1**	**0**
Pakistan	(0)	(0)	(1)	**1**	**(2)**	**(1)**
Maldives	(1)	(1)	(2)	**(0)**	**(1)**	**(2)**
Cambodia	(6)	(3)	(9)	**0**	**(2)**	**(2)**
Mainland China	338	32	370	**84**	**(87)**	**(2)**
Kazakhstan	(1)	(4)	(6)	**1**	**(5)**	**(4)**
Vietnam	(18)	16	(2)	**(22)**	**16**	**(6)**
Nepal	(8)	(2)	(10)	**(9)**	**(1)**	**(11)**
Philippines	(1)	(17)	(18)	**(19)**	**(15)**	**(34)**
Taiwan	153	(339)	(186)	**12**	**(306)**	**(294)**
Others	(5)	11	6	**(9)**	**13**	**4**
International organisations	0	92	92	**0**	**116**	**116**
Overall Total	1,267	1,539	2,807	**1,036**	**1,685**	**2,721**

(a) Regions and economies are classified according to the Bank for International Settlements' (BIS) Guidelines for Reporting the BIS International Banking Statistics issued in March 2013.

Figures may not add up to total because of rounding.

Abbreviations used in this Report

AI	–	Artificial intelligence *(International Financial Centre chapter)*
AIs	–	Authorized institutions
AML/CFT	–	Anti-money laundering and counter-financing of terrorism
AMBs	–	Approved money brokers
AMCM	–	Monetary Authority of Macao
AoF	–	Hong Kong Academy of Finance
ARRs	–	Alternative reference rates
ASEAN	–	Association of Southeast Asian Nations
ATMs	–	Automated teller machines
BCPs	–	Business continuity plans
BIS	–	Bank for International Settlements
BO	–	Banking Ordinance
BP	–	Backing Portfolio
C-RAF	–	Cyber Resilience Assessment Framework
CASG	–	Green and Sustainable Finance Cross-Agency Steering Group
CBC	–	Currency Board Sub-Committee
CBDC	–	Central Bank Digital Currency
CDI	–	Commercial Data Interchange
CHATS	–	Clearing House Automated Transfer System
CMGs	–	Crisis management groups
CMU	–	Central Moneymarkets Unit
CoP	–	Code of Practice
COVID-19	–	Coronavirus disease 2019
CPMI	–	Committee on Payments and Market Infrastructures
CRA	–	Credit reference agency
CRST	–	Climate risk stress test
CSDs	–	Central securities depositories
CTCs	–	Corporate treasury centres
CUs	–	Convertibility Undertakings
DPS	–	Deposit Protection Scheme
D-SIBs	–	Domestic systemically important banks
DTCA	–	DTC Association
ECF	–	Enhanced Competency Framework
EFAC	–	Exchange Fund Advisory Committee
EFBNs	–	Exchange Fund Bills and Notes
EIF standard	–	Capital Requirements for Banks' Equity Investments in Funds
EMEAP	–	Executives' Meeting of East Asia-Pacific Central Banks
ESG	–	Environmental, social and governance
FATF	–	Financial Action Task Force
FFO	–	Fintech Facilitation Office
FIN	–	Financial Innovation Network
FIRO	–	Financial Institutions (Resolution) Ordinance
FMIs	–	Financial market infrastructures
FMLIT	–	Fraud and Money Laundering Intelligence Taskforce
FMR	–	Focused Meeting on Resolution
FO	–	Family office
FPS	–	Faster Payment System
FS	–	Financial Secretary
FSB	–	Financial Stability Board
G20	–	Group of Twenty
GBA	–	Guangdong-Hong Kong-Macao Greater Bay Area
GDP	–	Gross Domestic Product
GSC	–	Governance Sub-Committee
G-SIBs	–	Global systemically important banks
HIBOR	–	Hong Kong Interbank Offered Rate
HKAB	–	Hong Kong Association of Banks
HKDPB	–	Hong Kong Deposit Protection Board
HKIMR	–	Hong Kong Institute for Monetary and Financial Research
HKMA	–	Hong Kong Monetary Authority
HKMC	–	Hong Kong Mortgage Corporation Limited
HKTR	–	Hong Kong Trade Repository
IA	–	Insurance Authority
IFC	–	International Finance Corporation
IMF	–	International Monetary Fund
IOSCO	–	International Organization of Securities Commissions
IP	–	Investment Portfolio
IPO	–	Initial public offering
LAC	–	Loss-absorbing capacity
LCR	–	Liquidity Coverage Ratio
LERS	–	Linked Exchange Rate System
LIBOR	–	London Interbank Offered Rate
LMR	–	Liquidity Maintenance Ratio
LPF	–	Limited Partnership Fund
LTGP	–	Long-Term Growth Portfolio
ML/TF	–	Money laundering and terrorist financing
MoU	–	Memorandum of Understanding
MPF	–	Mandatory Provident Fund
non-F2F	–	Non-face-to-face
NMEG	–	Non-Bank Monitoring Experts Group
OCIR	–	Operational continuity in resolution
OECD	–	Organisation for Economic Co-operation and Development
Open API	–	Open Application Programming Interface
OTC	–	Over-the-counter
PBoC	–	People's Bank of China
PCPD	–	Privacy Commissioner for Personal Data
PE	–	Private equity
PFMI	–	Principles for Financial Market Infrastructures
PSG	–	Policy and Standards Group
PSSVFO	–	Payment Systems and Stored Value Facilities Ordinance
PvP	–	Payment-versus-payment
Regtech	–	Regulatory technology
ReSG	–	Resolution Steering Group
RI	–	Responsible investment
RIs	–	Registered institutions *(Banking Stability chapter)*
RMB	–	Renminbi
RPSs	–	Retail payment systems
RTGS	–	Real Time Gross Settlement
SFC	–	Securities and Futures Commission
SFO	–	Securities and Futures Ordinance
SGR	–	Study Group on Resolution
SME	–	Small and medium-sized enterprise
SPM	–	Supervisory Policy Manual
Suptech	–	Supervisory technology
SVFs	–	Stored value facilities
TLAC	–	Total loss-absorbing capacity
TMA	–	Treasury Markets Association
WGFM	–	Working Group on Financial Markets
WMC	–	Wealth Management Connect

Reference Resources

The *HKMA Annual Report* is usually published in April each year. A number of other HKMA publications provide explanatory and background information on the HKMA's policies and functions. These include:

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