HONG KONG MONETARY AUTHORITY
香港金融管理局

2017
ANNUAL REPORT

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 2017 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

In 2017, the global economy and financial markets performed much better than expected: the real economy saw steady growth; inflation remained subdued; the three interest rate hikes and the reduction in the balance sheet by the US Federal Reserve during the year did not result in capital outflows from emerging market economies or a strengthening of the US dollar. Amid bullish sentiment, global stock markets, including the three major US stock indices, kept hitting new highs. The MSCI Emerging Markets Index surged by 34%. The Hang Seng Index gained nearly 8,000 points (or 36%) in 2017 and surpassed the 30,000-point level to reach an all-time high in January 2018.

Many investors were filled with optimism, even exuberance, in such a favourable environment. However, this was until early February this year when the latest data showed a higher than expected wage increase in the US, prompting investors to reappraise inflation risks and triggering significant corrections to global stock markets. The Dow Jones Index fell more than 1,000 points in two days during the second week of February, and the Hang Seng Index dropped more than 3,000 points in the same week. The 10-year US Treasury yield surged to as high as 2.95%. The swift reversal of fund flows indicated that the record high market valuation was not built on a solid foundation. It also reminded us of the importance of a sound and robust financial system for Hong Kong to meet the challenges brought by asset market volatility and capital outflows.

Banking system resilience boosted by precautionary measures

As the saying goes, "prevention is better than cure". The HKMA implemented further risk mitigation measures in 2017 to safeguard the stability of Hong Kong's banking and financial systems. In May, we introduced the eighth round of countercyclical measures for banks' mortgage loans and strengthened banks' credit risk management on lending to property developers, with the aim of enhancing the banking system's resilience to shocks arising from any downturn in the property market. With the several rounds of measures, the average loan-to-value ratio of new residential mortgage loans fell to 49% at the end of 2017 from 64% in September 2009, while the average debt servicing ratio also declined to 35% from 41% in August 2010.

In 2017, we established the Resolution Office to implement international standards on the resolution of non-viable financial institutions that are considered "too big to fail". This will help prevent a recurrence of a global financial crisis similar to the one in 2008 where public money was used to save failing financial institutions, and will minimise the impact of their closures on the financial system, the economy and the community at large.

Robust risk management is the cornerstone of steady and sustainable development of the banking sector. The liquidity ratio and capital adequacy ratio of Hong Kong's banking system are well above the applicable statutory requirements and among the highest in the world. This undoubtedly reflects the high resilience of Hong Kong's banking system. Indeed, the banking sector registered strong growth in 2017, with total loans increasing by 16%, while the asset quality also held up well. The classified loan ratio of retail banks fell to 0.54% from 0.72% in 2016, well below the long-term average of 2.2% since 2000. The banking industry's overall return on equity (based on pre-tax operating profits) reached 11.74% in 2017, a very healthy level compared with other international financial centres.

Sound banking the key to long-term financial stability

The 2008 global financial crisis revealed the limitations of relying solely on rules and regulations to restrain the financial industry from pursuing profitability without regard to their primary responsibilities. In light of this, the HKMA has stepped up the promotion of "sound banking" practices in recent years, encouraging banks to develop and pursue good corporate culture and values. In particular, to address the issue of bank staff pursuing short-term profits at the expense of the long-term interests of their customers or banks, we are encouraging banks to put in place appropriate incentive systems that are in line with their corporate culture and values. As part of this campaign, we arranged the inaugural Annual Conference for Independent Non-Executive Directors (INEDs) in March 2017 to highlight the importance of establishing a good banking culture and to empower the INEDs to perform their oversight and monitoring roles more effectively.

With the support of the banking industry, 2017 was a successful year for the HKMA in the advancement of financial inclusion. Six physical bank branches and three mobile branches began operating in remote areas. The Hong Kong Association of Banks worked out an arrangement with EPS and a convenience store chain to launch a pilot scheme allowing the elderly to withdraw cash from the stores in remote areas without the need to make purchases. Hongkong Post is also launching this year a cash withdrawal service for the elderly at seven Post Offices mainly on outlying islands and in the New Territories. Regarding account opening, the HKMA last year set up a webpage and an email account with a dedicated team to follow up public enquiries or complaints relating to the opening of bank accounts. Thanks to the concerted efforts of various stakeholders, there has been a significant improvement in customer experience in opening individual and corporate bank accounts.

Fintech a game changer for the banking industry

In an era of rapid technological advancement, fintech has been gradually integrated into our daily lives. In this ever changing technological environment, banks must embrace new developments and pursue innovation in their application of fintech. With the new era of Smart Banking, the HKMA launched seven initiatives in September (see page 106 for details) promoting the adoption of fintech in banking to improve the quality of banking products and services for customers. While these initiatives are independent of one another, they are complementary and will be a game changer for the future landscape of payment and banking services in Hong Kong. Customers will not only enjoy more convenient, efficient and secure payment and banking services, they will also have more choices and greater control over their financial transactions. Fintech will be the key to banks' future business success, and moving into the new era of Smart Banking will be a great opportunity for the banks to upgrade and transform themselves.

Chief Executive's Statement

Enormous opportunities created by the Belt and Road and the Bay Area Initiatives

With competition among international financial centres becoming more intense, a diversified financial industry is of paramount importance to Hong Kong. In 2017, the HKMA stepped up its work on enhancing Hong Kong's competitiveness as an international financial centre. Given Hong Kong's unparalleled advantage of "having the Mainland as our hinterland while maintaining an international outlook", the Belt and Road Initiative and the development of the Guangdong-Hong Kong-Macao Bay Area (Bay Area) will offer enormous opportunities for the financial and banking sectors and give new impetus to the economic growth of Hong Kong. The HKMA Infrastructure Financing Facilitation Office, which was established in response to the Belt and Road Initiative, saw the number of its partners grow to around 90 since launch, laying a solid foundation for promoting Hong Kong as a financing hub for infrastructure investments. The issuance of the first Belt and Road bond in Hong Kong by the China Development Bank in 2017 highlighted the pivotal role Hong Kong can play in facilitating the financing of these infrastructure projects.

In addition to infrastructure financing, we are actively involved in the development of Hong Kong as a hub for corporate treasury centres, private equity funds and Asian derivatives businesses, by attracting multinational corporations and major financial institutions to manage their funds, assets and various financial risks in the city. These initiatives will further consolidate and upgrade Hong Kong's financial and related professional services sectors. The HKMA also maintains close dialogue with the relevant authorities responsible for the development of the Bay Area to strengthen collaboration with a view to contributing to the financial development of the area as a world-class city cluster.

Over the years, Hong Kong's financial industry has been developing under the theme of "leveraging Hong Kong's advantages, meeting the country's needs". With the introduction of the Shanghai-Hong Kong Stock Connect in 2014, the Shenzhen-Hong Kong Stock Connect in 2016 and the Northbound Trading of Bond Connect in July last year, the mutual market access between the Mainland and the rest of the world through Hong Kong's financial platform has been expanded from stock markets to bond markets. This underscores Hong Kong's unique role as a financial intermediary in facilitating global investors' access to the Mainland's financial markets. In 2017, Hong Kong maintained its position as the leading global hub for offshore renminbi business. Average daily turnover of the renminbi Real Time Gross Settlement system stood at RMB900 billion. In addition, according to SWIFT statistics, more than 70% of global renminbi payment transactions were handled through Hong Kong during the year. The offshore renminbi market continued to operate smoothly and develop steadily.

Nurturing talent to strengthen the soft power of the banking industry

With the continuing growth of the financial industry, nurturing talent is crucial to its sustainable development. The HKMA attaches great importance to the soft power of the banking industry, and we have been encouraging and supporting ongoing capacity building of banking practitioners. Following the introduction of two modules on anti-money laundering and counter-financing of terrorism and cybersecurity under the Enhanced Competency Framework, we expanded its coverage last year by including retail wealth management and treasury management to enhance the level of core competence of banking practitioners through continuing professional development. The HKMA is also committed to nurturing young talent for the banking industry. In 2017, we launched the Pilot Apprenticeship Programme for Private Wealth Management and the Fintech Career Accelerator Scheme in collaboration with the industry. Given the overwhelming response, the coverage of these programmes will be further expanded in the future.

Prudent investment strategy achieving a reasonable and stable return over the medium to long term

On the back of strong global economic growth, the Exchange Fund achieved a record high investment income of HK$264 billion last year with gains across the board, including equities, bonds and foreign exchange. The overall investment return was 7.4%. The Investment Portfolio achieved a rate of return of 12.1%, while the Backing Portfolio gained 1.8%. The Long-Term Growth Portfolio (LTGP)'s annualised internal rate of return since its inception in 2009 reached as high as 13.7%. While the investment performance last year was satisfactory, the increasingly complex investment environment requires the HKMA to continue its prudent management of the Exchange Fund. We will remain agile and nimble, monitor market developments closely and deploy defensive measures as and when appropriate. Investments under the LTGP will also be further expanded. As always, the investment principle of "capital preservation first, long-term growth next" within acceptable risk levels will be adhered to when managing the wealth for the people of Hong Kong.

While the global real economy is extending last year's growth momentum, uncertainties and risks still abound in 2018. These include a faster-than-expected pace of US interest rate hikes in case inflation picks up, escalating trade frictions and a deteriorating geopolitical landscape. Should these downside risks materialise, they will have significant and widespread implications for global financial markets, and knock-on effects for Hong Kong's fund flows, asset prices and real economy. It is therefore advisable that we should all manage the risks prudently.

In the coming months, it is likely Hong Kong dollar interest rate movements will remain in the spotlight. The US Federal Reserve has raised interest rates six times since December 2015. With widening spreads between Hong Kong dollar interest rates and their US dollar counterparts, there is a greater incentive for funds to flow from the Hong Kong dollar into the US dollar. The Hong Kong dollar has been under weakening pressure recently and the 7.85 weak-side Convertibility Undertaking (CU) has been triggered. As we have repeatedly stated, when the 7.85 weak-side CU is triggered, the HKMA will act as a "super money changer" by buying Hong Kong dollars and selling US dollars in the market to ensure that the Hong Kong dollar exchange rate will not weaken beyond the 7.85 level. Such operations are normal and in accordance with the design of the Linked Exchange Rate System. This should not cause any concern. Indeed, the Exchange Fund currently holds more than HK$4 trillion worth of assets, of which the Hong Kong dollar Monetary Base amounts to about HK$1.7 trillion, providing a strong buffer in the event of fund outflows. Over the years, the HKMA has put in place various lines of defence to safeguard the stability of the banking and financial systems. From a positive perspective, capital outflows will lead to a gradual increase in Hong Kong dollar interest rates, which will be conducive to the normalisation of the interest rate environment in Hong Kong and hence the sustainable development of the local economy and asset markets. During this process, the HKMA will stay vigilant and make every effort to maintain monetary and banking stability in Hong Kong.

This year marks the 25th anniversary of the establishment of the HKMA. In the past quarter century, the HKMA has been shouldering the important responsibility of maintaining the monetary, banking and financial stability of Hong Kong. While it is no easy task, we strive for continuous improvement and innovation, maintaining systemic stability while enhancing the city's competitiveness as an international financial centre that supports economic development. Over the past 25 years, the HKMA, together with the people of Hong Kong, has weathered several financial crises including the Asian financial crisis in 1997–98, the global financial crisis in 2008 and the European debt crisis in 2011. From these testing times, we have learnt the importance of staying vigilant, pursuing continuous improvement, and taking precautionary measures to prepare for the worst. Hong Kong's status as an international financial centre has not come easily. The HKMA will continue to use its best endeavours to contribute to society and the country.

Norman T.L. Chan
Chief Executive

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
55/F, Two International Finance Centre
8 Finance Street, Central, Hong Kong
Telephone : (852) 2878 8196
Fax : (852) 2878 8197
E-mail : hkma@hkma.gov.hk

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.

KEY FIGURES FOR 2017

Monetary Stability

Hong Kong dollar exchange rate	**7.814 HK$/US$**
Monetary Base	**HK$1,694.9 billion**
Aggregate Balance	**HK$179.8 billion**
Base Rate	**1.75%**
Backing Ratio	**108.1%**

Banking Stability

Total assets	**HK$22.7 trillion**
Capital adequacy ratio	**19.1%**
Liquidity coverage ratio	**155.1%**
Liquidity maintenance ratio	**49.4%**
Growth in loans and advances	**16.1%**
Classified loan ratio *(retail banks)*	**0.54%**
Loan-to-deposit ratio	**73%**
Average loan-to-value ratio for new residential mortgage loans (RMLs) approved	**49%**
Average debt servicing ratio for new RMLs approved	**35%**
Authorized institutions	**155** licensed banks **19** restricted licence banks **17** deposit-taking companies
Global systemically important banks for which the Monetary Authority is the lead resolution authority	**25**

International Financial Centre

Number of Infrastructure Financing Facilitation Office partners	**87** *(as at end-January 2018)*
Renminbi customer deposits and outstanding certificates of deposit	**RMB618.4 billion** *(World's largest offshore renminbi liquidity pool)*
Dim sum bonds outstanding	**RMB212.4 billion** *(World's largest offshore renminbi bond market)*
Percentage of world's renminbi payment processed by Hong Kong *(SWIFT survey)*	**>70%**
Average daily turnover of renminbi Real Time Gross Settlement (RTGS) system	**RMB903.6 billion**
Average daily turnover of Hong Kong dollar RTGS system	**HK$731.7 billion**
Availability of four RTGS systems and the Central Moneymarkets Unit	**100%**
Number of stored value facility (SVF) accounts in use	**46.73 million** *(up 15.4% yoy)*
Number and value of SVF transactions in 2017	**5.6 billion** and **HK$134.9 billion** respectively

Reserves Management

Exchange Fund (EF) investment income in 2017	**HK$264 billion** *(a record high)* **7.4%** return
EF compounded annual investment return since 1994	**4.9%** *(higher than compounded annual HK composite consumer price index of **2.1%** over the same period)*
Annualised internal rate of return of the Long-Term Growth Portfolio (LTGP)	**13.7%** *(since inception in 2009)*
Total EF assets	**HK$4,015.3 billion**
Market value of investments under the LTGP	**HK$235.6 billion**

Figures in this section refer to positions as at end-2017, unless otherwise stated.

Highlights of 2017

Economic and Financial Environment

The Hong Kong economy grows at a faster pace on the back of synchronised expansion of the global economy. The local stock market rallies and residential property market maintains its upward momentum, while housing affordability stretches further.

The Hong Kong banking sector remains safe and sound, with strong capital and liquidity positions and healthy asset quality.

Monetary Stability

The Hong Kong dollar eases against the US dollar as a result of the widening negative interest rate spreads between the two currencies. Nevertheless, the public remains highly confident in the Linked Exchange Rate System.

The money markets continue to operate smoothly with ample interbank liquidity. The Base Rate in Hong Kong is adjusted upwards by a total of 75 basis points to 1.75%, in tandem with the increase in the target range for the US federal funds rate.

Banking Stability

The HKMA places its supervisory focus on the effectiveness of banks' risk governance framework, including credit, liquidity and technology risk management. The eighth round of countercyclical macro-prudential measures is introduced to strengthen the resilience of the banking sector against any downturn in the property market.

On the policy side, substantial progress is made on the local implementation of international supervisory standards. The resolution regime comes into operation, establishing a new line of defence for banking stability. The Resolution Office is established as part of the HKMA's efforts to make the resolution regime operational for the Hong Kong banking sector.

International Financial Centre

Seven new initiatives are introduced to embrace the enormous opportunities brought about by the convergence of banking and technology and to promote Hong Kong as a fintech hub in Asia. Hong Kong's international profile as a financing hub for infrastructure investments is raised further, thanks to a series of efforts on network and capacity building.

Hong Kong maintains its leading position in offshore renminbi business. The launch of the Bond Connect reinforces Hong Kong's role as the main gateway to opportunities in Mainland China.

Reserves Management

Benefiting from a favourable investment environment, the Exchange Fund achieves a record high investment income of HK$264 billion, representing an investment return of 7.4%.

Efforts on investment diversification continue, especially through the Long-Term Growth Portfolio (LTGP). The LTGP records an annualised internal rate of return of 13.7% since its inception in 2009.

Corporate Functions

The HKMA maintains effective communication with the community and the market through the media, public education programmes, and other various channels to facilitate public understanding of its policies and operations.

The HKMA continues to improve corporate governance by supporting professional development of staff, instituting rigorous financial discipline, and enhancing IT security to cope with challenges arising from the implementation of new initiatives and the increasing complexity of work.

Calendar of Events 2017

01

17 JANUARY

The HKMA Infrastructure Financing Facilitation Office (IFFO) organises two infrastructure investment and financing events at the 10th Asian Financial Forum.

27 JANUARY

The HKMA announces that the countercyclical capital buffer for Hong Kong will increase to 1.875% from 1.25% with effect from 1 January 2018.

02

22 FEBRUARY

The Government announces the successful offering of its third sukuk under the Government Bond Programme.

28 FEBRUARY

The Hong Kong Association of Banks (HKAB) and IFFO jointly organise the Seminar on "Risk Mitigation Techniques in Infrastructure Financing for the Belt and Road Initiative (BRI)".

03

16 MARCH

The HKMA announces an upward adjustment of the Base Rate by 25 basis points to 1.25%, according to a pre-set formula, following a hike in the US federal funds rate on 15 March (US time).

The HKMA hosts the inaugural Annual Conference titled "Cultivating Culture in the Banking Industry in Hong Kong" for Independent Non-Executive Directors in Hong Kong.

23–24 MARCH

IFFO organises high-level Debt Financing and Investors' Roundtables for participants to share experience and opportunities in co-financing initiatives and programmes provided by the public and private sector institutions. IFFO also develops a Reference Term Sheet for Infrastructure Investments in Emerging Markets during the roundtable, listing out the parameters for investing in emerging markets.

24 MARCH

The HKMA launches a webpage on its website and a dedicated email account to receive comments and answer queries regarding opening and maintenance of bank accounts.

Website: http://www.hkma.gov.hk/eng/other-information/ac-opening/
Dedicated email account:
accountopening@hkma.gov.hk

27 MARCH

The HKMA and the Hong Kong Institute of Bankers host the Hong Kong ICT Awards 2017: Best Fintech Award Presentation Ceremony.

04

1 APRIL

The HKMA establishes the Resolution Office to operationalise the Hong Kong resolution regime for banks under the Financial Institutions (Resolution) Ordinance (Cap. 628) (FIRO).

5 APRIL

The HKMA and the Private Wealth Management Association (PWMA) announce the launch of The Pilot Apprenticeship Programme for Private Wealth Management.

Calendar of Events 2017

6 APRIL

The Government and the financial regulators, namely the HKMA, the Insurance Authority and the Securities and Futures Commission (SFC), release conclusion on the public consultation relating to the protected arrangements regulation to be made as subsidiary legislation under section 75 of the FIRO.

10 APRIL

The Hong Kong Mortgage Corporation Limited announces that its Board of Directors has approved in principle to introduce a brand new life annuity scheme which intends to provide immediate lifetime payouts to annuitants aged 65 or above after a lump-sum premium payment.

11 APRIL

The HKMA, Invest Hong Kong and the Hong Kong Chinese Enterprises Association jointly host a seminar on the BRI, to promote Hong Kong as an ideal platform for Mainland enterprises in Hong Kong with global expansion plans amid the national policy.

27 APRIL

The Fourth Hong Kong-Australia Renminbi Trade and Investment Dialogue is held in Sydney, Australia, continuing the collaborative effort to promote offshore renminbi business.

05

12 MAY

The Government publishes in the Gazette the Financial Institutions (Resolution) Ordinance (Commencement) Notice and the Financial Institutions (Resolution) (Protected Arrangements) Regulation.

The HKMA introduces measures to strengthen the risk management of banks for lending to property developers.

14 MAY

The Chief Executive of the HKMA attends the Belt and Road Forum for International Cooperation in Beijing and speaks in a thematic session on Financial Connectivity.

19 MAY

The HKMA introduces the eighth round of countercyclical macro-prudential measures for property mortgage loans to strengthen banks' risk management and resilience.

Calendar of Events 2017

25 MAY

The FX Global Code is launched after it is endorsed at the Global Foreign Exchange Committee meeting held in London. The HKMA is a member of the Global Foreign Exchange Committee.

26 MAY

The HKMA, in collaboration with the Police and HKAB, launches a 12-month pilot project, namely Fraud and Money Laundering Intelligence Taskforce, in a bid to enhance the public-private collaboration in detection, prevention and disruption of serious financial crime and money laundering threats.

06

2 JUNE

The HKMA and the Office of Financial Development Service, the People's Government of Shenzhen Municipality (OFDS) agree to strengthen co-operation between Hong Kong and Shenzhen, with a view to creating a more favourable environment for the development and use of fintech by banks and other financial institutions.

7 JUNE

Hong Kong becomes a member of the Asian Infrastructure Investment Bank (AIIB).

8 JUNE

The HKMA announces the PWMA's adoption of the Treat Customers Fairly Charter for the Private Wealth Management Industry.

15 JUNE

The HKMA announces an upward adjustment of the Base Rate by 25 basis points to 1.50%, according to a pre-set formula, following a hike in the US federal funds rate on 14 June (US time).

23 JUNE

The second Silver Bond is issued under the Government Bond Programme.

27 JUNE

The HKMA and the Guangzhou Branch of the People's Bank of China (PBoC) jointly host the launching ceremony for cross-boundary electronic bill presentment and payment between Hong Kong and Guangdong Province in Guangzhou to mark the launch of the service.

The HKMA and the SFC publish conclusions on a joint consultation paper which proposes adjusting the scope of "OTC derivative product" under the OTC derivatives regulatory regime.

Calendar of Events 2017

28 JUNE

The Chief Executive of the HKMA hosts a signing ceremony between the International Finance Corporation (IFC), a member of the World Bank Group, and Eastspring Investments, both IFFO partners, to raise US$500 million for IFC's Managed Co-lending Portfolio Program (MCPP) Infrastructure that mobilises funds from institutional investors for infrastructure projects in emerging markets.

07

3 JULY

Bond Connect is launched, providing a cross-border platform that facilitates efficient trading by overseas institutional investors in the Mainland bond market.

4 JULY

Hong Kong's Renminbi Qualified Foreign Institutional Investor quota is expanded to RMB500 billion from RMB270 billion as approved by the State Council.

7 JULY

The resolution regime under the FIRO commences operation and the Monetary Authority is designated by the Financial Secretary under the FIRO as the lead resolution authority of 25 cross-sectoral groups.

18 JULY

The HKMA hosts a sharing session with the AIIB following Hong Kong becoming a member of AIIB on 7 June.

27 JULY

The HKMA and the Hong Kong Applied Science and Technology Research Institute jointly hold the Fintech Career Accelerator Scheme Induction Day.

31 JULY – 4 AUGUST

IFFO hosts a Senior Executive Training Program with IFC and the Harvard Kennedy School on Public-Private Partnerships and Project Finance.

08

4 AUGUST

Four retail payment systems are designated by the HKMA under the Payment Systems and Stored Value Facilities Ordinance (Cap. 584).

15 AUGUST

The HKMA hosts the Open Application Programming Interface (API) Workshop.

25 AUGUST

The HKMA, HKAB and the DTC Association jointly announce the expansion of coverage of commercial credit data sharing through a Commercial Credit Reference Agency in Hong Kong from 1 December 2017.

09

5–7 SEPTEMBER

The HKMA and the China Banking Regulatory Commission jointly organise the "Hong Kong Senior Bankers' Seminar 2017".

11 SEPTEMBER

IFFO hosts a panel discussion at the Belt and Road Summit to promote Hong Kong's unique advantages in capturing financing opportunities from the BRI.

18 SEPTEMBER

The Treasury Markets Summit 2017, jointly organised by the HKMA and the Treasury Markets Association, is held in Hong Kong.

Calendar of Events 2017

19 SEPTEMBER

The HKMA signs an agreement in London with the IFC committing US$1 billion to the MCPP for emerging markets, to support IFC in financing projects across more than 100 countries, including in infrastructure, telecom, manufacturing, agri-business and services.

The HKMA and the State Secretariat for International Financial Matters under the Swiss Federal Department of Finance launch the First Hong Kong-Switzerland Financial Dialogue in Bern, Switzerland.

19–21 SEPTEMBER

The HKMA and Hong Kong Cyberport bring the largest fintech delegation to London, with a view to fostering collaboration and developing business and investment opportunities, as well as promoting Hong Kong's role as the leading fintech hub of Asia.

21 SEPTEMBER

The HKMA leads a seminar on "Hong Kong: Gateway to Belt and Road Opportunities" in London. The seminar is part of the "Think Asia, Think Hong Kong" promotion programme organised by the Hong Kong Trade Development Council in London.

29 SEPTEMBER

The HKMA unveils a number of initiatives that prepare Hong Kong to move into a New Era of Smart Banking. The initiatives include Faster Payment System, enhanced Fintech Supervisory Sandbox 2.0, promotion of virtual banking, Banking Made Easy initiative, Open API, closer cross-border collaboration and enhanced research and talent development.

10

20 OCTOBER

The Banking (Capital) (Amendment) Rules 2017, the Banking (Liquidity) (Amendment) Rules 2017 and the Banking (Specification of Multilateral Development Bank) (Amendment) Notice 2017 are gazetted.

25 OCTOBER

The HKMA organises the HKMA Fintech Day with panel discussions on cross-border collaboration, distributed ledger technology (DLT), regulatory dialogue, and Open API, as well as workshops on payment, DLT, big data, artificial intelligence and Open API.

The HKMA and the Monetary Authority of Singapore (MAS) sign and exchange a Co-operation Agreement in Hong Kong to strengthen co-operation on fintech.

The HKMA announces the strengthening of collaboration with the OFDS on fintech, including joint organisation of the fintech award, reciprocal soft-landing support and talent development programme.

The HKMA publishes its second whitepaper on DLT, confirming the promising nature of DLT while acknowledging that DLT cannot be a universal solution for all financial applications.

The Ministry of Finance holds a roadshow in Hong Kong for its US dollar sovereign bond issuance.

27 OCTOBER

The HKMA issues a circular requiring Registered Institutions to enhance the security of their internet trading services so as to address hacking risks associated with internet trading.

11

1 NOVEMBER

The HKMA and the PWMA announce that the 2018-2019 cycle of the Pilot Apprenticeship Programme for Private Wealth Management will be expanded to offer around 50 apprenticeship positions.

10 NOVEMBER

The HKMA supports a seminar on BRI co-organised by the State-owned Assets Supervision and Administration Commission of the State Council and Hong Kong Exchanges and Clearing Limited.

Calendar of Events 2017

15 NOVEMBER

The HKMA and MAS exchange a Memorandum of Understanding in Singapore to jointly develop the Global Trade Connectivity Network, a cross-border infrastructure based on DLT, to digitalise trade and trade finance between the two cities with an aim to expanding the network in the region and globally.

24 NOVEMBER

The HKMA and the SFC issue a circular highlighting observations from their joint thematic reviews on the potential conflicts of interest arising from the sale of in-house products by registered institutions and licensed corporations within a single financial group.

HKAB announces that the banking industry has worked together with EPS Company and a convenience store chain to launch in early March 2018 a pilot scheme that provides cash withdrawal service to the elderly at 34 convenience stores via EPS service without the need to make purchases.

27 NOVEMBER

The PBoC and the HKMA announce that the currency swap agreement with the size of RMB400 billion is renewed for a term of another three years.

28 NOVEMBER

The HKMA launches the Fintech Supervisory Chatroom as a new feature of the Fintech Supervisory Sandbox 2.0.

29 NOVEMBER

The International Monetary Fund issues the Concluding Statement for the 2017 Article IV Consultation with the Hong Kong Special Administrative Region (HKSAR), commending that the HKSAR is well placed to navigate through challenges given its strong buffers and robust policy frameworks, including ample fiscal reserves, strong financial regulatory and supervisory frameworks, and the Linked Exchange Rate System.

12

7 DECEMBER

The HKMA and the Dubai Financial Services Authority of Dubai International Financial Centre enter into a Co-operation Agreement to step up fintech collaboration between the two authorities, with a view to facilitating financial innovation in the two jurisdictions.

14 DECEMBER

The HKMA announces an upward adjustment of the Base Rate by 25 basis points to 1.75%, according to a pre-set formula, following a hike in the US federal funds rate on 13 December (US time).

18 DECEMBER

The seventh private sector-led Hong Kong-London Financial Services Forum convenes in Hong Kong, with City of London joining as a partner of the HKMA's IFFO and the two sides agreeing to explore cooperation on digitisation of trade finance.

20 DECEMBER

The HKMA welcomes China Development Bank's issuance of its first Belt and Road bond in Hong Kong to finance projects across Belt and Road countries.

28 DECEMBER

The HKMA, HKAB and the Equal Opportunities Commission jointly publish the information on banking services in seven languages commonly used by ethnic minority community.

29 DECEMBER

The HKMA completes its annual assessment of the list of Domestic Systemically Important Banks (D-SIBs) and announces the designation of six banks as D-SIBs.

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.

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 their Exchange of Letters dated 25 June 2003. This Exchange of Letters discloses the 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 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 designates the Monetary Authority as the resolution authority for authorized institutions and certain financial market infrastructure. Under the Ordinance, the Monetary Authority is vested with a range of powers to effect the orderly resolution of a non-viable systemically important bank 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 empower the Monetary Authority to supervise the selling of securities and mandatory provident fund products by banks.

The Insurance Ordinance confers on the Monetary Authority the supervisory power in respect of insurance selling activities of banks.

The Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) Ordinance (AMLO) empowers the Monetary Authority to supervise banks' compliance with the legal and supervisory requirements under AMLO and the relevant guideline.

Under the Deposit Protection Scheme Ordinance, the Monetary Authority is charged with the responsibility to decide on triggering of the Deposit Protection Scheme (DPS) for making compensation to depositors of a failed bank and to assist in the operation of the DPS.

The Payment Systems and Stored Value Facilities Ordinance provides a statutory regime for the Monetary Authority to designate and oversee clearing and settlement systems that are material to the monetary or financial stability of Hong Kong or to the functioning of Hong Kong as an international financial centre. It also empowers the Monetary Authority to implement a licensing regime for stored value facilities and to designate retail payment systems to ensure their operations are safe and efficient.

THE HKMA AND THE HONG KONG SPECIAL ADMINISTRATIVE REGION GOVERNMENT

The HKMA is an integral part of the Hong Kong Special Administrative Region 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
- 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.

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.

About the HKMA

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;

- 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 special sections on research, statistics, consumer information and other topics. 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. The HKMA also organises public education programmes to inform the public, and in particular students, about the work of the HKMA through seminars and guided tours at the Information Centre. Further information on the HKMA's media work, publications and public education programmes is contained in the chapter on *Corporate Functions*.

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 (EFAC) and the reports on Currency Board operations. The supervisory policies and guidelines on banking have been published on the 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 meetings from time to time to explain and discuss particular issues, and committee meetings to assist Members in their scrutiny of draft legislation.

ADVISORY AND OTHER COMMITTEES

Exchange Fund Advisory Committee

In his control of the Exchange Fund, the Financial Secretary is advised by 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 2017 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.

The *Governance Sub-Committee* monitors the performance of the HKMA and makes recommendations on remuneration and human resources policies, and on budgetary, administrative and governance issues. The Sub-Committee met four times in 2017 to consider a range of subjects including the HKMA's expenditure budget, the

HKMA's performance assessment, the annual pay review and strategic planning matters. The Sub-Committee also received regular reports on the work of the HKMA.

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 three times in 2017 and received reports on the work of the Internal Audit Division.

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. In 2017 the Sub-Committee met four times.

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 2017.

The *Financial Infrastructure and Market Development Sub-Committee*[1] 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 2017 the Sub-Committee met four times.

[1] Formerly known as the Financial Infrastructure Sub-Committee.

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.

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.

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.

Chief Executive's Committee

The Chief Executive's Committee comprises the Chief Executive of the HKMA, who chairs the Committee, the Deputy Chief Executives, the Senior Executive Directors 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.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

Chairman

1 March 2018

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary
(from 16 January 2017)

The Honourable John TSANG Chun-wah, GBM, JP
The Financial Secretary
(until 15 January 2017)

Members

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

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

Mr Benjamin HUNG Pi-cheng, BBS, JP
Regional Chief Executive Officer, Greater China & North Asia
Chief Executive Officer, Retail Banking
Standard Chartered Bank

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

Mr Carlson TONG, SBS, JP
Chairman
Securities and Futures Commission

Dr David WONG Yau-kar, GBS, JP
Managing Director
United Overseas Investments Limited

Advisory Committees

Professor Stephen CHEUNG Yan-leung, BBS, JP
President
The Education University of Hong Kong

Mrs Angelina LEE WONG Pui-ling, SBS, JP
Partner
Woo, Kwan, Lee & Lo

Mr Philip TSAI Wing-chung, BBS, JP
Chairman
Deloitte China

Mr T. Brian STEVENSON, SBS, JP

Mr Nicky LO Kar-chun, SBS, JP

Mr Silas YANG Siu-shun, JP

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

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

Advisory Committees

The Honourable Bernard Charnwut CHAN, GBS, JP
President
Asia Financial Holdings Limited
(from 1 August 2017)

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited
(from 1 August 2017)

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young
(from 12 February 2018)

Mr GAO Yingxin
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
(from 20 February 2018)

Mr YUE Yi
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
(until 31 December 2017)

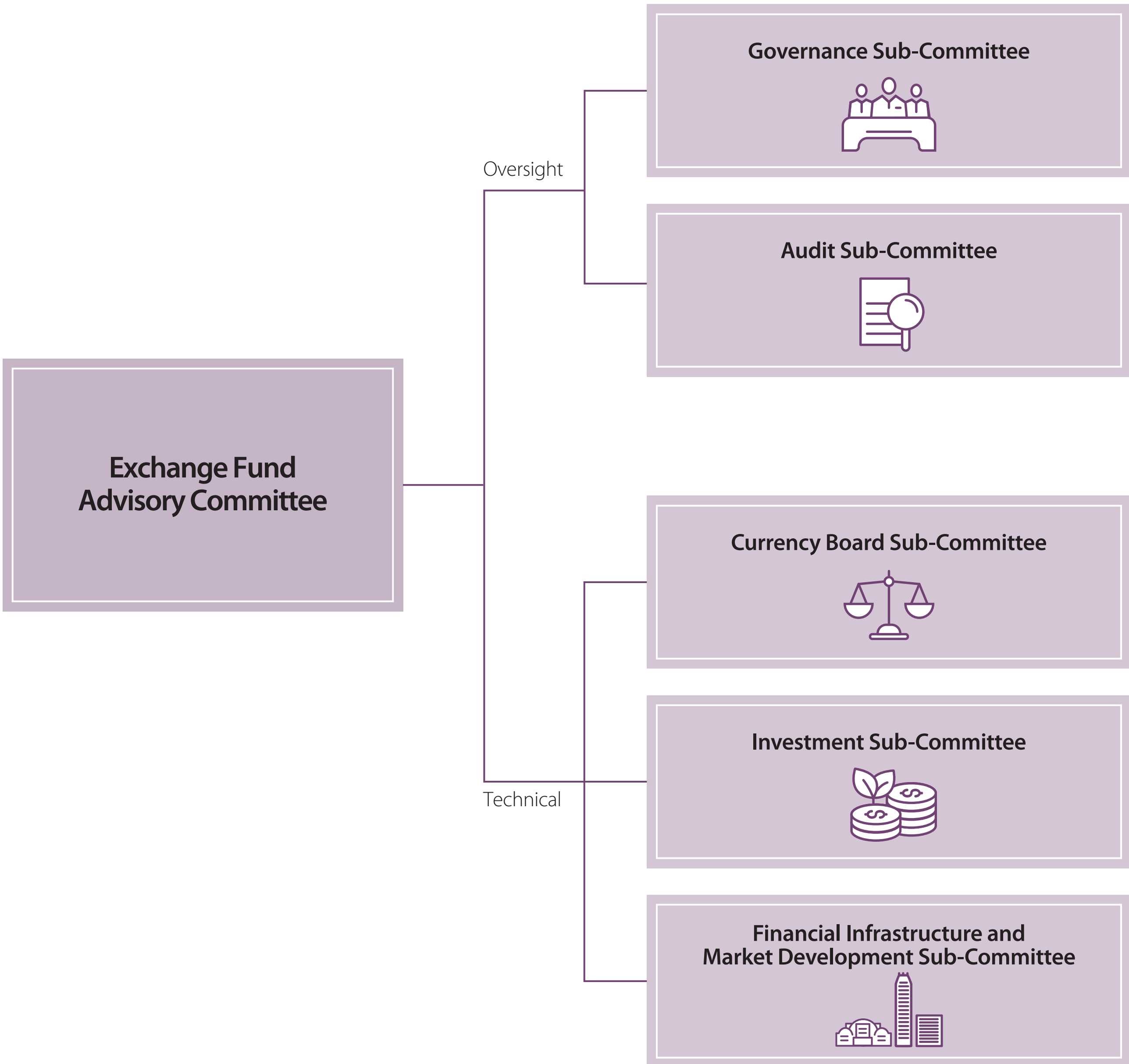
Dr LO Ka-shui, GBS, JP
Chairman and Managing Director
Great Eagle Holdings Limited
(until 31 January 2018)

Secretary

Ms Carrie CHAN

THE EXCHANGE FUND ADVISORY COMMITTEE

SUB-COMMITTEE STRUCTURE



Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

GOVERNANCE SUB-COMMITTEE

Chairman

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

Members

Mr Carlson TONG, SBS, JP
Chairman
Securities and Futures Commission

Mrs Angelina LEE WONG Pui-ling, SBS, JP
Partner
Woo, Kwan, Lee & Lo

Mr T. Brian STEVENSON, SBS, JP

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

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited
(from 1 August 2017)

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young
(from 12 February 2018)

Dr LO Ka-shui, GBS, JP
Chairman and Managing Director
Great Eagle Holdings Limited
(until 31 January 2018)

Dr David WONG Yau-kar, GBS, JP
Managing Director
United Overseas Investments Limited

Mr Philip TSAI Wing-chung, BBS, JP
Chairman
Deloitte China

Mr Nicky LO Kar-chun, SBS, JP

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

The Honourable Bernard Charnwut CHAN, GBS, JP
President
Asia Financial Holdings Limited
(from 19 September 2017)

Professor Stephen CHEUNG Yan-leung, BBS, JP
President
The Education University of Hong Kong
(until 18 September 2017)

Secretary

Ms Carrie CHAN

Terms of Reference

(1) To monitor the performance of the HKMA in carrying out its functions and responsibilities and in its use of resources, and to formulate recommendations to the Financial Secretary through the Exchange Fund Advisory Committee on

(a) the remuneration and human resources policies of the HKMA;

(b) remuneration for HKMA staff, taking account of the Sub-Committee's assessment of the quality and effectiveness of the HKMA's work; and

(c) the use of resources of the HKMA, including its annual administrative budget.

(2) To consider recommendations and provide advice to the Financial Secretary on the appointment and dismissal of staff at the level of Executive Director and above.

(3) To keep under review the governance arrangements for the HKMA and to make recommendations to the Financial Secretary through the Exchange Fund Advisory Committee as appropriate.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

AUDIT SUB-COMMITTEE

Chairman

Mr Carlson TONG, SBS, JP
Chairman
Securities and Futures Commission

Members

Mr Philip TSAI Wing-chung, BBS, JP
Chairman
Deloitte China

Mr T. Brian STEVENSON, SBS, JP

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited
(from 1 August 2017)

Mrs Angelina LEE WONG Pui-ling, SBS, JP
Partner
Woo, Kwan, Lee & Lo

Mr Silas YANG Siu-shun, JP

Ms Agnes CHAN Sui-kuen
Managing Partner, Hong Kong and Macau
Ernst & Young
(from 12 February 2018)

Secretary

Ms Carrie CHAN

Terms of Reference

(1) The objectives of the Audit Sub-Committee are as follows:

(a) to help Members of the Exchange Fund Advisory Committee to discharge their responsibilities for ensuring the proper and smooth running of the HKMA operations and management of the Exchange Fund;

(b) to consider any matters relating to the financial affairs of the HKMA and the internal and external audit of the HKMA's financial statements as the Sub-Committee may think necessary or desirable;

(c) to encourage higher quality accounting and audit and provide more credible and objective financial reporting of the HKMA; and

(d) to consider any other matters referred to it by the Exchange Fund Advisory Committee; and to report on all such matters to the Committee.

(2) The functions of the Sub-Committee include, but are not restricted to, the following:

(a) reviewing the HKMA's financial statements, the composition and accounting principles adopted in such statements, whether these are intended to be audited or published or not;

(b) advising on the form and content of the financial statements of the HKMA;

(c) examining and reviewing with both the external and internal auditors the scope and results of their audits;

(d) reviewing the findings, recommendations or criticisms of the auditors, including their annual management letter and management's response;

(e) reviewing the HKMA's management procedures to ensure the effectiveness of internal systems of accounting and control, and management's efforts to correct deficiencies discovered in audits; and

(f) initiating investigations or audit reviews into any activities of the HKMA which may be of concern or interest to the Sub-Committee.

(3) Authority

The Sub-Committee shall be entitled to obtain any information it requires from any member or employee of the HKMA, and all such members and employees shall be instructed to assist the Sub-Committee to the fullest extent possible. The Sub-Committee may also take such independent legal or other professional advice as it considers necessary. The Sub-Committee shall have no executive powers as regards its findings and recommendations.

(4) Meetings

The Sub-Committee shall meet at least twice a year. The Secretary to the Exchange Fund Advisory Committee shall attend its meetings and take minutes, copies of which shall be circulated to the Committee. The Chief Executive of the HKMA shall be entitled to attend the Sub-Committee's meetings. In all other respects, the Sub-Committee shall decide its own procedures.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

CURRENCY BOARD SUB-COMMITTEE

Chairman

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

Members

Mr Eddie YUE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

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

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

Dr PENG Wensheng
Global Chief Economist and Head of Research
Everbright Securities Limited

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

Mr YUE Yi
Chairperson
The Hong Kong Association of Banks
(until 31 December 2017)

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

Dr John GREENWOOD
Group Chief Economist
Invesco Asset Management Limited

Dr David WONG Yau-kar, GBS, JP
Managing Director
United Overseas Investments Limited

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

Ms Diana CESAR
Chairperson
The Hong Kong Association of Banks
(from 1 January 2018)

Secretary

Ms Carrie CHAN

Terms of Reference

(1) To ensure that the operation of the Currency Board arrangements in Hong Kong is in accordance with the policies determined by the Financial Secretary in consultation with the Exchange Fund Advisory Committee.

(2) To report to the Financial Secretary through the Exchange Fund Advisory Committee on the operation of the Currency Board arrangements in Hong Kong.

(3) To recommend, where appropriate, to the Financial Secretary through the Exchange Fund Advisory Committee, measures to enhance the robustness and effectiveness of the Currency Board arrangements in Hong Kong.

(4) To ensure a high degree of transparency in the operation of the Currency Board arrangements in Hong Kong through the publication of relevant information on the operation of such arrangements.

(5) To promote a better understanding of the Currency Board arrangements in Hong Kong.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

INVESTMENT SUB-COMMITTEE

Chairman

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

Members

Mr Eddie YUE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mrs Angelina LEE WONG Pui-ling, SBS, JP
Partner
Woo, Kwan, Lee & Lo

Mr Silas YANG Siu-shun, JP

Dr David WONG Yau-kar, GBS, JP
Managing Director
United Overseas Investments Limited

Dr LO Ka-shui, GBS, JP
Chairman and Managing Director
Great Eagle Holdings Limited
(until 31 January 2018)

Mr Benjamin HUNG Pi-cheng, BBS, JP
Regional Chief Executive Officer, Greater China & North Asia
Chief Executive Officer, Retail Banking
Standard Chartered Bank

Mr T. Brian STEVENSON, SBS, JP

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

Mr Nicky LO Kar-chun, SBS, JP

Secretary

Ms Carrie CHAN

Terms of Reference

(1) To monitor the investment management work of the HKMA.

(2) To make recommendations to the Financial Secretary, through the Exchange Fund Advisory Committee, on

(a) the investment benchmark for the Exchange Fund;

(b) the investment policy and risk management of the Fund;

(c) the investment strategy for the Fund; and

(d) any other matters referred to the Sub-Committee in connection with the investment management of the Exchange Fund.

Advisory Committees

THE EXCHANGE FUND ADVISORY COMMITTEE

FINANCIAL INFRASTRUCTURE AND MARKET DEVELOPMENT SUB-COMMITTEE

Chairman

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

Members

Mr Eddie YUE, JP
Deputy Chief Executive
Hong Kong Monetary Authority

Mr Arthur YUEN, JP
Deputy Chief Executive
Hong Kong Monetary Authority
(from 1 August 2017)

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

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

Mrs Ayesha MACPHERSON LAU, JP
Managing Partner, Hong Kong
KPMG

Mr Vincent CHUI Yik-chiu
Chief Executive
Morgan Stanley Asia International Limited

Ms DING Chen
Chief Executive Officer
CSOP Asset Management Limited

Mr Harold WONG Tsu-hing
Managing Director and Chief Executive
Dah Sing Bank, Limited

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

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

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

The Honourable Bernard Charnwut CHAN, GBS, JP
President
Asia Financial Holdings Limited
(from 1 August 2017)

Mr Ericson CHAN
Chief Executive Officer
Ping An Technology
(from 1 August 2017)

Mr Leong CHEUNG
Executive Director, Charities and Community
The Hong Kong Jockey Club
(from 1 August 2017)

Ms Mary HUEN Wai-yi
Executive Director and Chief Executive Officer
Standard Chartered Bank (Hong Kong) Limited
(from 1 August 2017)

Mrs Ann KUNG YEUNG Yun-chi
Deputy Chief Executive
Bank of China (Hong Kong) Limited
(from 1 August 2017)

Ms Miranda KWOK Pui-fong
President and Executive Director
China Construction Bank (Asia)
(from 1 August 2017)

Ms Amy LO Choi-wan
Group Managing Director
Country Head & Chief Executive, Hong Kong
UBS
(from 1 August 2017)

Ms Helen WONG Pik-kuen, JP
Chief Executive, Greater China
The Hongkong and Shanghai Banking Corporation Limited
(from 1 August 2017)

Mr Lawrence LAM Yuk-kun
Senior Advisor, Greater China
National Australia Bank
(until 30 June 2017)

Mr TSE Kam-keung
Chief Executive Officer
Tradelink Electronic Commerce Limited
(until 30 June 2017)

Ms Anita FUNG Yuen-mei, BBS, JP
Director
Hong Kong Exchanges and Clearing Limited
(until 30 June 2017)

Mr LAU Ming-wai, GBS, JP
Chairman
Chinese Estates Holdings Limited
(until 30 June 2017)

Secretary

Ms Carrie CHAN

Terms of Reference

(1) To recommend to the Financial Secretary through the Exchange Fund Advisory Committee 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 –

(a) measures to promote the development, operational excellence, safety and efficiency of the financial infrastructure in Hong Kong, particularly payment and settlement arrangements;

(b) measures to promote the development of Hong Kong as an offshore renminbi centre;

(c) measures to foster the development of other enabling factors that would help enhance the competitiveness of Hong Kong's financial services; and

(d) initiatives for the HKMA, in discharging its responsibilities for maintaining the stability and integrity of the monetary and financial systems of Hong Kong, to promote the development of the financial infrastructure and financial markets in Hong Kong under (a) to (c) above.

(2) To monitor the work of the HKMA in relation to the initiatives identified in (1) above.

Advisory Committees

THE BANKING ADVISORY COMMITTEE

Chairman

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary
(from 16 January 2017)

The Honourable John TSANG Chun-wah, GBM, JP
The Financial Secretary
(until 15 January 2017)

Ex Officio Member

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

Members

The Honourable James H. LAU Jr., JP
Secretary for Financial Services and the Treasury
(from 1 July 2017)

Mr GAO Yingxin
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
Representing Bank of China (Hong Kong) Limited
(from 1 January 2018)

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-yee
Executive Director and Chief Executive Officer
Standard Chartered Bank (Hong Kong) Limited
Representing Standard Chartered Bank (Hong Kong) Limited
(from 1 March 2017)

Mr Carlson TONG, SBS, JP
Chairman
Securities and Futures Commission
Representing Securities and Futures Commission

The Honourable CHAN Chun-ying
Member
Legislative Council

Mr Peter LO Chi-wai
Chief Country Officer, Hong Kong
Deutsche Bank AG

Ms KWANG Kam-shing
Managing Director
Senior Country Officer, Hong Kong
JPMorgan Chase Bank, N.A.

Mr Yusuke ONO
General Manager
Sumitomo Mitsui Banking Corporation
Hong Kong Branch
(from 15 August 2017)

Professor the Honourable K.C. CHAN, GBS, JP
Secretary for Financial Services and the Treasury
(until 30 June 2017)

Mr YUE Yi
Vice Chairman and Chief Executive
Bank of China (Hong Kong) Limited
Representing Bank of China (Hong Kong) Limited
(until 31 December 2017)

Ms May TAN Siew-boi
Chief Executive Officer
Standard Chartered Bank (Hong Kong) Limited
Representing Standard Chartered Bank (Hong Kong) Limited
(until 28 February 2017)

Mr Toshihide MOTOSHITA
Executive Officer
Regional Head for Hong Kong and General Manager
The Bank of Tokyo-Mitsubishi UFJ, Limited
Hong Kong Branch
(until 26 May 2017)

Secretary

Ms Jasmin FUNG

THE DEPOSIT-TAKING COMPANIES ADVISORY COMMITTEE

Chairman

The Honourable Paul CHAN Mo-po, GBM, GBS, MH, JP
The Financial Secretary
(from 16 January 2017)

The Honourable John TSANG Chun-wah, GBM, JP
The Financial Secretary
(until 15 January 2017)

Ex Officio Member

Mr Norman T.L. CHAN, GBS, JP
The Monetary Authority

Members

The Honourable James H. LAU Jr., JP
Secretary for Financial Services and the Treasury
(from 1 July 2017)

Mr LEE Huat-oon
Acting Chairman
The DTC Association (The Hong Kong Association of Restricted Licence Banks and Deposit-taking Companies)
Representing The DTC Association

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

Dr the Honourable Elizabeth QUAT, BBS, JP
Member
Legislative Council

Mr Vincent CHUI Yik-chiu
Chief Executive
Morgan Stanley Asia International Limited

Mr Andy POON Shiu-chung
Chief Executive
Scotiabank (Hong Kong) Limited

Mr Jack CHAN Hoi
Managing Director, Financial Services
Greater China
EY

Professor the Honourable K.C. CHAN, GBS, JP
Secretary for Financial Services and the Treasury
(until 30 June 2017)

Secretary

Ms Jasmin FUNG

Chief Executive's Committee

1 March 2018

Norman T.L. CHAN, GBS, JP
Chief Executive

Eddie YUE, JP
Deputy Chief Executive

Arthur YUEN, JP
Deputy Chief Executive

Howard LEE, JP
Deputy Chief Executive
(from 1 January 2018)
Senior Executive Director
(until 31 December 2017)

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

Chief Executive's Committee

Stefan GANNON, JP
Commissioner, Resolution Office
(from 1 April 2017)
General Counsel
(until 31 March 2017)

Francis CHU, JP
Executive Director (Reserves Management)

Karen KEMP, JP
General Counsel
(from 1 April 2017)
Executive Director (Banking Policy)
(until 31 March 2017)

Carmen CHU, JP
Executive Director (Enforcement and AML)
(from 12 December 2017)
Executive Director (Banking Conduct)
(until 11 December 2017)

Vincent LEE, JP
Executive Director (External)

Henry CHENG, JP
Executive Director (Monetary Management)

Chief Executive's Committee

Darryl CHAN, JP
Executive Director (Corporate Services)

Grace LAU, JP
Executive Director (Risk and Compliance)

Lillian CHEUNG, JP
Executive Director (Research)

Raymond CHAN, JP
Executive Director (Banking Supervision)

LI Shu-pui, JP
Executive Director (Financial Infrastructure)

Daryl HO
Executive Director (Banking Policy)
(from 1 April 2017)

Alan Au
Executive Director (Banking Conduct)
(from 12 December 2017)

Meena DATWANI, JP
Executive Director (Enforcement and AML)
(until 11 December 2017)

HKMA Organisation Chart

1 March 2018

- **Chief Executive** Norman T.L. CHAN
  - **Deputy Chief Executive** Arthur YUEN
    - **Executive Director (Banking Conduct)** Alan AU
      - **Head (Banking Conduct) 1** Tess LEUNG
      - **Head (Banking Conduct) 2** Sarah KWOK
      - **Head (Banking Conduct) 3** Daniel LEONG
    - **Executive Director (Banking Policy)** Daryl HO
      - **Head (Banking Policy) A** Frank LEUNG
      - **Head (Banking Policy) B** Richard CHU
      - **Head (Soft Infrastructure & Deposit Protection)** Alice LEE
    - **Executive Director (Banking Supervision)** Raymond CHAN
      - **Head (Case Management) 1** CHENG Ying-ying
      - **Head (Case Management) 2** Stephen WAN
      - **Head (Case Management) 3** Tony SUEN
      - **Head (Credit Risk)** Sunny YUNG
      - **Head (Operational and Technology Risk)** Brian LEE
    - **Executive Director (Enforcement & AML)** Carmen CHU
      - **Head (Enforcement) 1** Steve LAU
      - **Head (Enforcement) 2** Elizabeth COUPE
      - **Head (Anti-Money Laundering and Financial Crime Risk)** Stewart MCGLYNN
  - **Deputy Chief Executive** Eddie YUE
    - **Executive Director (External)** Vincent LEE
      - **Head (External) 1** Archie NG
      - **Head (External) 2** Kyle HUNG
      - **Head (Market Development)** Enoch FUNG
      - **Chief Representative (New York Representative Office)** Lawrence CHEUNG
    - **Executive Director (Research)** Lillian CHEUNG
      - **Head (Economic Research)**
      - **Head (Market Research)** HUI Cho-hoi
    - **Executive Director (Reserves Management)** Francis CHU
      - **Head (Asset Allocation)** Martin MATSUI
      - **Head (External Managers)** Albert GOH
      - **Head (Fixed Income)** Christopher CHAN
    - **Chief Investment Officer (Private Markets)** Clara CHAN
      - **Private Markets**
      - **Head (Real Estate)** Samson WONG
  - **Deputy Chief Executive** Howard LEE
    - **Executive Director (Financial Infrastructure)** LI Shu-pui
      - **Head (Currency & Settlement)** Lydia CHAN
      - **Head (Financial Infrastructure Development)** Kitty LAI
      - **Head (Payment Systems Operation)** Stanley CHAN
      - **Chief Fintech Officer (Fintech Facilitation Office)** Nelson CHOW
    - **Executive Director (Monetary Management)** Henry CHENG
      - **Head (Financial Stability Surveillance)** Kevin CHENG
      - **Head (Monetary Operations)** Barry YIP
      - **Head (Retail Payment Oversight)** Clement LAU
  - **General Counsel** Karen KEMP
    - **Deputy General Counsel 1** Joanna WONG
    - **Deputy General Counsel 2** Stephen LAW
    - **Deputy General Counsel 3** Mayanna TO
  - **Executive Director (Corporate Services)** Darryl CHAN
    - **Head (Administration)** Loretta WONG
    - **Head (Corporate Development)** Carrie CHAN
    - **Head (Finance)** Angus CHAN
    - **Head (Information Technology)** TAN Yong-wah
  - **Head (Internal Audit)** Thomas YIP
  - **Administrative Assistant/CE** Clement CHAN
  - **Executive Director (Risk & Compliance)** Grace LAU
    - **Head (Risk Management & Compliance)** Kim CHONG
  - **Commissioner, Resolution Office** Stefan GANNON
    - **Head (Resolution Office)** Eamonn WHITE

Economic and Financial Environment

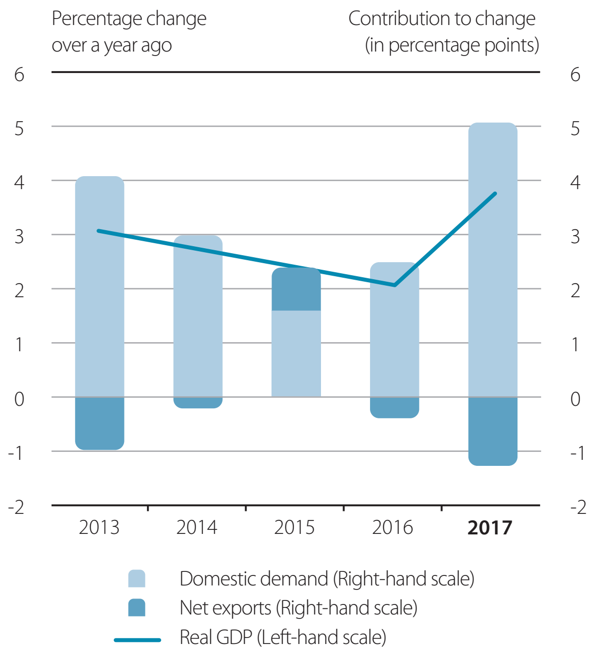
Against the backdrop of a more synchronised expansion of the global economy, Hong Kong saw faster economic growth, tighter labour market conditions and subdued inflationary pressures in 2017. Economic growth for 2018 is expected to remain solid.

THE ECONOMY IN REVIEW

Real activities

Amid a more synchronised expansion of the global economy, the Hong Kong economy grew faster in 2017. Growth in real Gross Domestic Product (GDP) increased to 3.8%, much higher than the 2.1% growth in 2016 and the long-term growth of about 3% over the past decade (Chart 1 and Table 1). Domestic demand firmed up, with private consumption growth accelerating and overall investment spending reviving. Stronger domestic demand reflected favourable job and income conditions, booming asset prices and improved business sentiment. Externally, Hong Kong's exports of goods expanded at a faster pace due to increased global trade flows, and exports of services recovered because of vibrant trade and cargo flows and improving inbound tourism. Imports of goods recorded stronger growth on export-induced demand, and imports of services increased steadily amid strong travel interest among residents. On a net basis, the overall trade surplus shrank, making a negative contribution to GDP growth.

Chart 1 Real GDP growth by contribution



Source: Census and Statistics Department.

Economic and Financial Environment

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

(%Period-over-period, unless otherwise specified)	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2017	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2016
Gross Domestic Product	0.9	0.9	0.8	0.8	**3.8**	-0.1	1.3	1.0	1.1	2.1
(year-on-year growth)	4.3	3.9	3.7	3.4		1.1	1.8	2.2	3.3	
Private consumption expenditure	0.8	1.8	2.0	1.4	**5.4**	0.9	0.2	1.2	1.5	1.9
Government consumption expenditure	0.6	1.0	1.8	-0.3	**3.4**	0.9	1.0	0.3	1.0	3.3
Gross domestic fixed capital formation	–	–	–	–	**4.2**	–	–	–	–	-0.1
Exports										
Exports of goods	1.2	0.2	0.7	1.1	**5.9**	-3.2	3.9	0.7	3.5	1.6
Exports of services	1.1	-1.1	2.8	1.1	**3.5**	-1.4	-0.4	1.7	1.0	-3.4
Imports										
Imports of goods	0.8	0.4	1.5	2.4	**6.9**	-4.2	4.1	1.7	3.3	0.7
Imports of services	0.2	1.2	-1.2	0.5	**1.8**	1.9	-2.0	1.1	1.6	2.1
Overall trade balance (% of GDP)	0.6	-4.2	5.2	1.1	**0.8**	2.1	-2.8	5.8	3.6	2.3

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

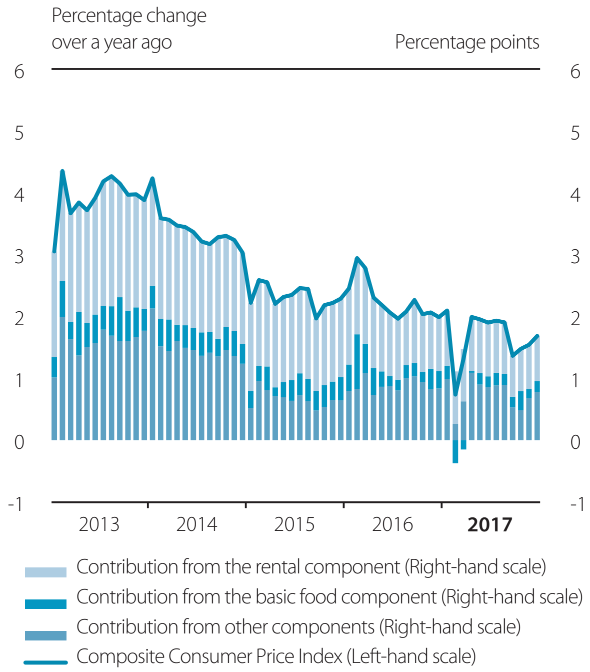
Monetary conditions

On the monetary front, the Hong Kong dollar exchange rate generally eased against the US dollar driven primarily by interest rate arbitrage activities amid the negative interest rate differentials between the Hong Kong dollar and the US dollar. This reflected the normal functioning of the Linked Exchange Rate System in accordance with its design. While still at relatively low levels, Hong Kong dollar interbank interest rates faced more upward pressures towards the end of 2017 due to Initial Public Offering-related funding demand and banks' year-end liquidity needs. For credit growth, after two years of single-digit growth, total bank loans increased at a notably faster pace of 16.1% in 2017, reflecting improving economic conditions and positive financial market sentiment. Despite faster loan growth, there were no signs of loosening of banks' credit underwriting standards, and overall loan quality remained good.

Inflation

Inflationary pressures remained well contained throughout 2017 (Chart 2). Netting out the effects of the Government's one-off relief measures, the underlying inflation rate declined to 1.7%, down from 2.3% in 2016. In particular, the housing component of the price index increased at a milder pace, reflecting the filter-through of slower increases in fresh-letting private residential rentals in 2016. More broadly, milder increases in nominal wages and earnings amid strong output growth helped keep local cost pressures in check. Import price inflation was also tame, in line with low inflation in Hong Kong's major import sources despite a weaker US dollar.

Chart 2 Underlying consumer price inflation

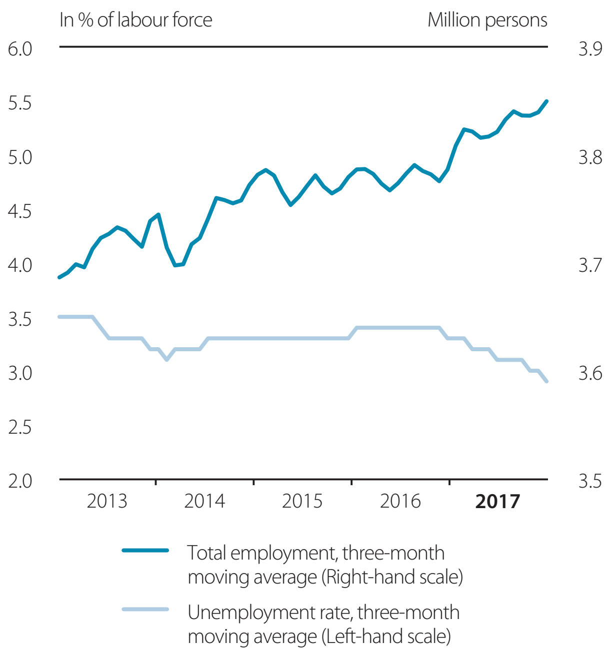


Source: Census and Statistics Department.

Labour market

The labour market tightened in 2017 along with above-par economic growth. The seasonally adjusted unemployment rate fell from 3.4% in 2016 to 2.9% towards the end of 2017, below 3% for the first time in nearly 20 years (Chart 3). Most major economic sectors registered decreases in their respective unemployment rates, with more notable declines seen in the retail, financing and professional and business services sectors. As total employment grew faster and the number of private-sector vacancies picked up, overall labour demand continued to strengthen. The labour force also expanded, partly reflecting more active participation of older-age workers (aged 55 and above). Consistent with tighter labour market conditions and lower inflation, real wages and earnings saw faster increases.

Chart 3 Labour market conditions



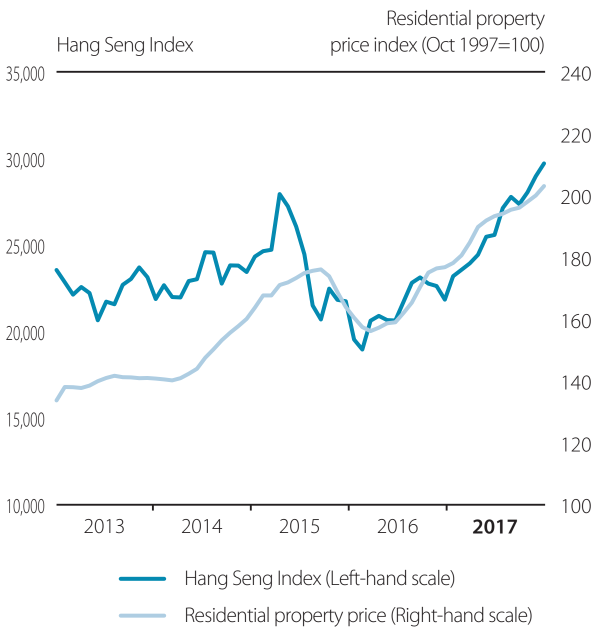
Source: Census and Statistics Department.

Economic and Financial Environment

Stock market

The Hong Kong stock market had an almost uninterrupted rally in 2017. The Hang Seng Index rose by 36%, the largest annual gain since 2010 (Chart 4). The rally reflected optimism about the global economy and corporate earnings, and was in part supported by substantial fund inflows from Mainland investors through the Stock Connects. The Hang Seng Index hit a ten-year high in November and remained at high levels towards the end of 2017. Average daily turnover expanded to HK$88.3 billion from HK$66.9 billion in the previous year, and overall equity funds raised from the local market also increased to HK$581.4 billion, compared with HK$490.1 billion a year earlier.

Chart 4 Asset prices



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

Property market

The residential property market maintained its upward momentum throughout the year (Chart 4). Transaction volume expanded from 54,701 units a year ago to 61,591 units and housing prices increased by 14.8% in 2017. Housing affordability stretched further, with a price-to-income ratio of 16.4, higher than the previous peak in 1997, and an income-gearing ratio of 74.1, far above its long-term average.[1] In view of rising property prices and the intensifying competition for mortgage business among banks, the HKMA introduced the eighth round of prudential measures in May to strengthen banks' risk management and safeguard banking stability. Housing price growth moderated temporarily following these measures before accelerating in the fourth quarter. As for the commercial and industrial property markets, trading activities increased significantly during the year, with both transaction value and volume registering double-digit growth. With the pick-up in non-residential property prices, corresponding rental yields fell slightly compared to the previous year.

[1] The price-to-income ratio measures the average price of a typical 50 square-metre flat relative to the median annual income of households living in private housing, from a potential home buyer's perspective. The income-gearing ratio compares the amount of mortgage payment for a typical flat of 50 square metres (under a 20-year mortgage scheme with a 70% loan-to-value ratio) to the median income of households living in private housing, from a potential home buyer's perspective. The income-gearing ratio is not the same as a borrower's actual debt-servicing ratio, which is subject to a maximum cap by the HKMA prudential measures.

OUTLOOK FOR THE ECONOMY

Economic environment

Economic growth for 2018 is expected to remain solid. The Government forecasts growth in the range of 3–4%, while private-sector analysts project the economy to expand at an average rate of 3.2%. Externally, Hong Kong's export performance will continue to benefit from the improving global growth outlook and the gradual recovery in inbound tourism. Domestically, private consumption growth is expected to hold up mainly as a result of favourable labour market conditions. As for fixed capital formation, building and construction activity should progress steadily on the back of rising housing supply and continuing infrastructure projects. While improved economic conditions will support business capital spending, headwinds may come from potential rises in interest rates.

Inflation and the labour market

With still-moderate global inflation and steady increase in local costs, inflationary pressures in Hong Kong are anticipated to remain moderate in 2018, but the inflation rate is likely to pick up gradually from the low in 2017. For example, the rental component of inflation may gather momentum in the latter part of 2018 because of feed-through from increases in fresh-letting private residential rentals. Market consensus predicts the headline inflation rate to be a still-moderate 2.2% for 2018, and the Government projects the underlying inflation rate to be 2.5%. On the other hand, sustained economic growth, expanding building and construction activity and the gradual recovery in inbound tourism are expected to keep the labour market tight in the near future. Private-sector analysts forecast the unemployment rate to stay at about 3.0% in 2018.

Uncertainties and risks

The economic outlook for 2018 is subject to a number of uncertainties and risks including those relating to major central banks' monetary policy normalisation and global financial market stability, as well as heightened protectionist sentiment and deteriorating geopolitical tensions. In particular, if such risks materialise to trigger reversal of fund flows in Hong Kong, local monetary conditions could tighten faster than expected, putting downward pressures on the real economy and asset prices.

The outlook for the residential property market remains uncertain. In the near term, the current favourable domestic economic conditions, perceived housing shortage, low mortgage rates and alternative sources of home financing (including mortgage loans provided by property developers and financial support from parents), will continue to support the demand for properties. However, the recent sell-off in global financial markets may dampen sentiments. Over the longer term, the property market will continue to face a number of headwinds. In particular, as the US monetary policy normalisation continues, domestic mortgage rates will rise eventually. In addition, on the back of the Government's effort to increase the supply of land and residential properties, the housing demand-supply gap is expected to narrow gradually, which would ease the upward pressure on property prices in the longer term.

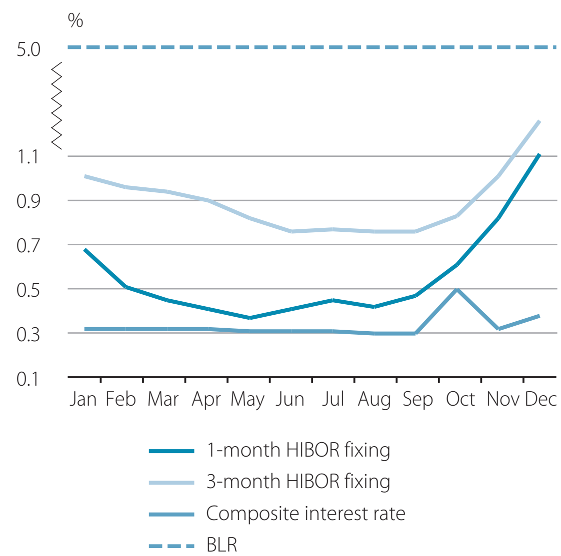
PERFORMANCE OF THE BANKING SECTOR

The Hong Kong banking sector continued to be safe and sound in 2017 notwithstanding uncertainties surrounding the global economy. The capital and liquidity positions of authorized institutions (AIs) remained strong, asset quality stayed at healthy levels, and profitability improved notably thanks to increased interest margins and robust credit growth.

Interest rate trends

As the US interest rate normalisation continued, the one-month and three-month Hong Kong Interbank Offered Rate (HIBOR) fixings increased by 49 basis points and 39 basis points respectively in 2017. More notable rises were observed in the fourth quarter. Nevertheless, the Hong Kong dollar funding cost of retail banks, as measured by the composite interest rate, remained broadly stable over the year (Chart 5).

Chart 5 HIBOR fixings, composite interest rate and best lending rate (BLR)

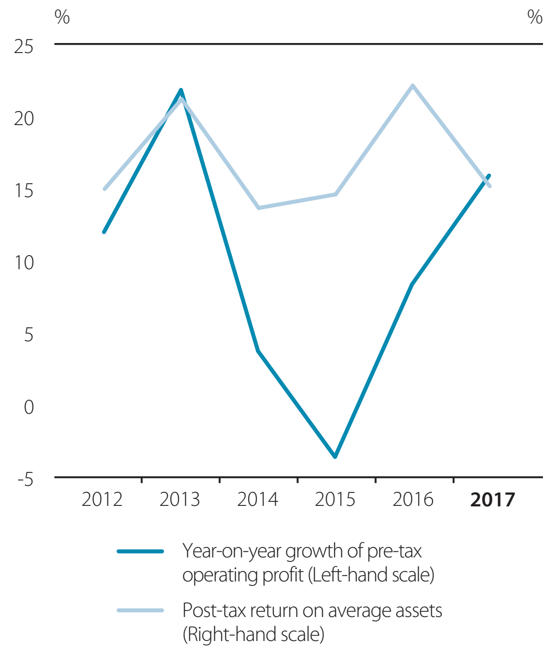


Notes:
1. HIBOR fixings (monthly averages) refer to the Hong Kong Interbank Offered Rates released by the Hong Kong Association of Banks.
2. BLR (monthly averages) refers to the best lending rate quoted by the Hongkong and Shanghai Banking Corporation Limited.

Profitability trends

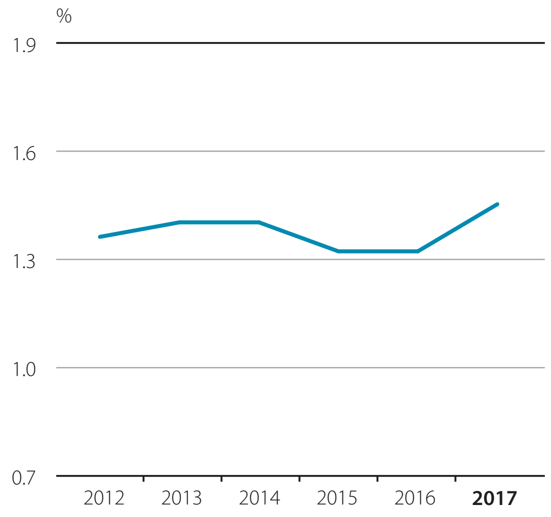
The aggregate pre-tax operating profits of retail banks' Hong Kong offices grew by 15.8% in 2017. The improved performance was mainly due to increases in net interest income (+20.3%) and fee and commission income (+9.4%). However, these increases were partially offset by a decline in income from foreign exchange and derivatives operations (-29.9%) and a growth in operating expenses (+8.4%). The aggregate post-tax profit of retail banks dropped by 18.1% because of certain non-recurring items recorded in 2016. The post-tax return on average assets of retail banks dropped to 1.07% from 1.44% in 2016 (Chart 6).

Chart 6 Retail banks' performance



Retail banks' net interest margin widened to 1.45% in 2017 from 1.32% in 2016 (Chart 7) mainly due to rising market interest rates.

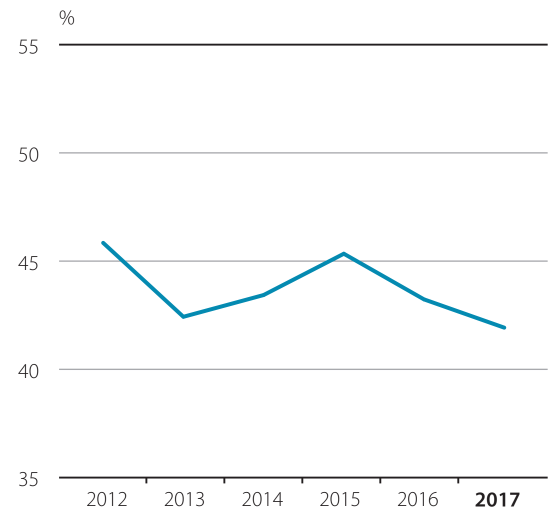
Chart 7 Retail banks' net interest margin



The proportion of retail banks' non-interest income to total operating income decreased to 40% from 44.3% in 2016. While fee and commission income increased by 9.4%, income originated from foreign exchange and derivatives operations dropped by 29.9%.

Retail banks' cost-to-income ratio declined to 41.9% in 2017 from 43.2% in 2016, as operating costs (+8.4%) increased at a slower pace than operating income (+11.8%) (Chart 8). Retail banks' loan impairment charges decreased to HK$7.3 billion from HK$8 billion in 2016.

Chart 8 Retail banks' cost-to-income ratio

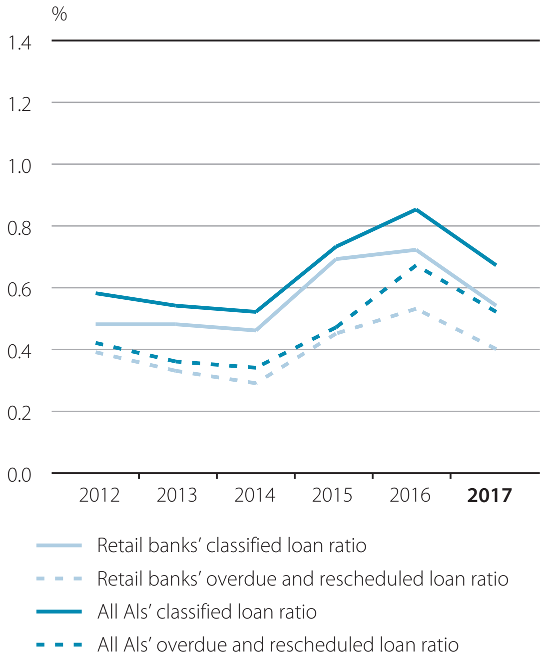


Economic and Financial Environment

Asset quality

Loan quality of retail banks improved during the year, with the classified loan ratio decreasing to 0.54% from 0.72% a year earlier. The overdue and rescheduled loan ratio also decreased to 0.4% from 0.53% in 2016 (Chart 9). Similarly, the classified loan ratio and the overdue and rescheduled loan ratio of the whole banking sector decreased to 0.67% and 0.52%, from 0.85% and 0.67% respectively.

Chart 9 Asset quality of the banking sector

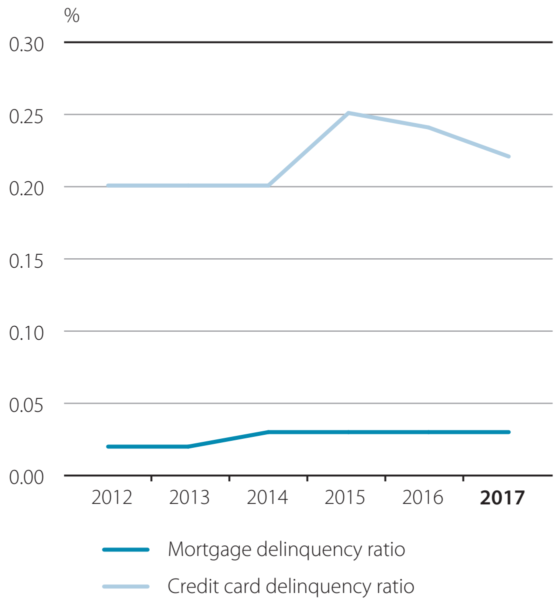


Note: Figures prior to December 2015 covered Hong Kong offices and overseas branches. Starting from December 2015, the coverage was expanded to include major overseas subsidiaries.

The quality of banks' residential mortgage lending portfolios remained good, with the delinquency ratio staying at a low level of 0.03% at the end of 2017 (Chart 10). The rescheduled loan ratio was close to 0%. There was no residential mortgage loan in negative equity at the end of the year, as compared with four cases a year ago.

The delinquency ratio of credit card lending stayed low at 0.22% at the end of 2017, compared with 0.24% a year ago (Chart 10). The combined delinquent and rescheduled loan ratio edged down to 0.31% from 0.33% during the period. The charge-off ratio also fell slightly to 1.75% from 1.92% in 2016.

Chart 10 Delinquency ratios of residential mortgages and credit card lending of banks

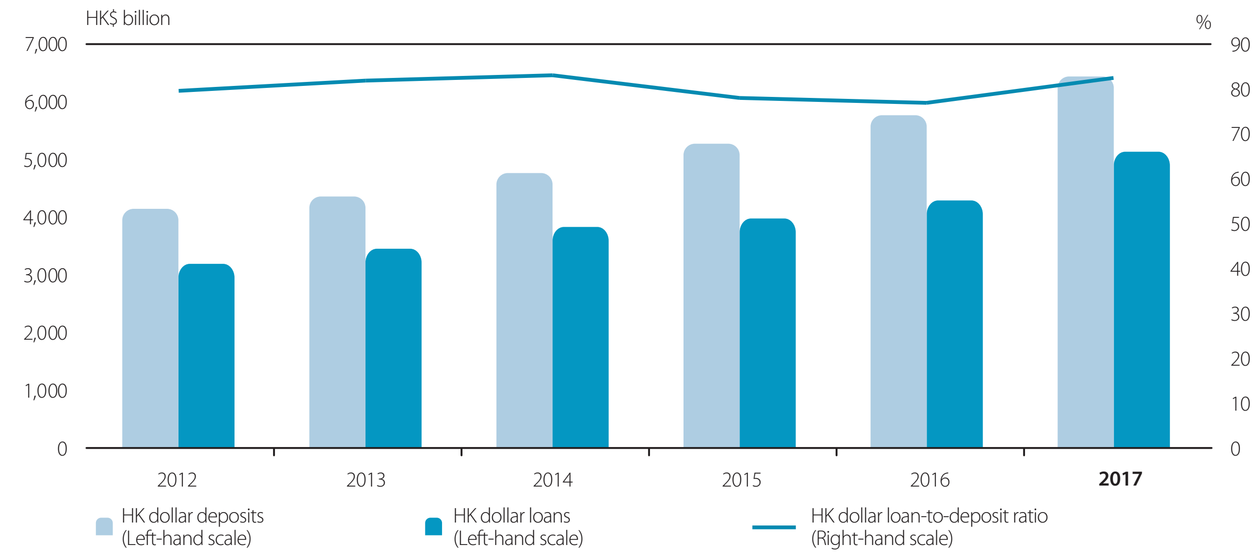


Balance sheet trends

Total loans of the banking sector grew by 16.1% in 2017, compared with 6.5% in 2016. Demand for credit increased, driven by optimism about the global economic outlook. As total deposits increased at a slower pace than total loans, the overall loan-to-deposit ratio rose to 73% at the end of 2017 from 68.4% a year earlier. The Hong Kong-dollar loan-to-deposit ratio also increased to 82.7% from 77.1% during the same period (Chart 11).

Mainland-related lending (including loans booked in Mainland subsidiaries of locally incorporated banks) increased by 17.5% in 2017, compared with a growth of 7% recorded in 2016.

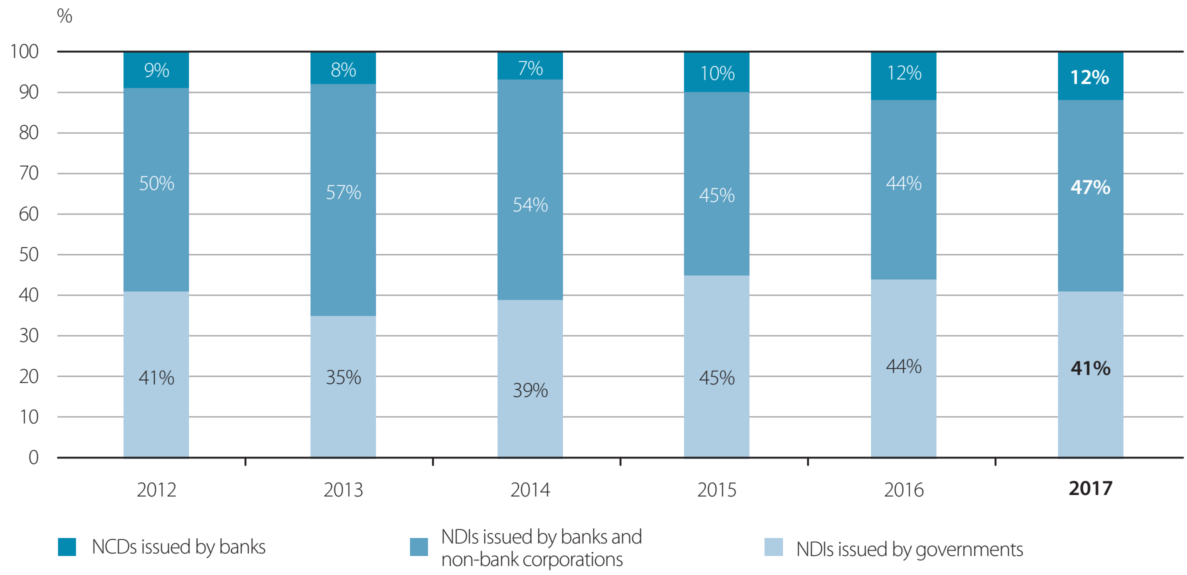
Chart 11 Hong Kong-dollar loans and deposits of the banking sector



Holdings of negotiable debt securities

Holdings of negotiable debt instruments (NDIs) and negotiable certificates of deposit (NCDs) of the banking sector increased by 7.3% in 2017, accounting for 22% of the total assets at the end of the year (22% at end-2016). 41% of the holdings were NDIs issued by governments (44% at end-2016), 47% were NDIs issued by banks and non-bank corporations (44% at end-2016), and 12% were NCDs issued by banks (12% at end-2016) (Chart 12).

Chart 12 Holdings of NDIs and NCDs of the banking sector

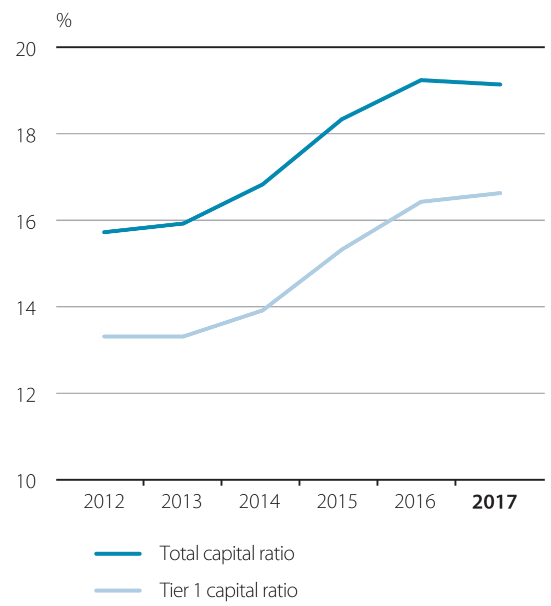


Note: Figures may not add up to 100% due to rounding.

Capital adequacy and liquidity

Locally incorporated AIs continued to be well capitalised. Their consolidated total capital ratio edged down to 19.1% at the end of 2017 from 19.2% at the end of 2016 (Chart 13). The Tier 1 capital ratio of locally incorporated AIs rose slightly to 16.6% from 16.4% during the period.

Chart 13 Consolidated capital adequacy ratios of locally incorporated AIs



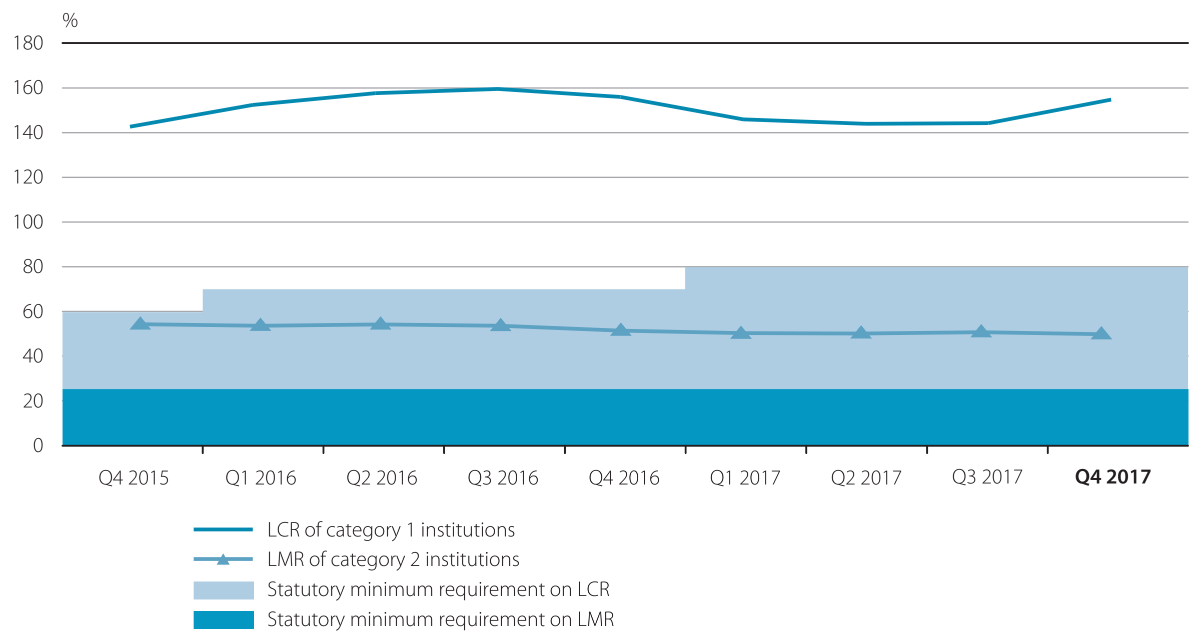
The liquidity position of AIs remained sound. The average Liquidity Coverage Ratio (LCR) of category 1 institutions was 155.1% in the fourth quarter of 2017, well above the statutory minimum requirement of 80% applicable for the year. The average Liquidity Maintenance Ratio (LMR) of category 2 institutions was 49.4%, also well above the statutory minimum requirement of 25% (Chart 14).

Capital Adequacy Ratio
19.1%

Liquidity Coverage Ratio
155.1%

Liquidity Maintenance Ratio
49.4%

Chart 14 Liquidity ratios (quarterly averages)



Monetary Stability

Despite weakening pressure on the Hong Kong dollar exchange rate, the Hong Kong dollar exchange and money markets continued to operate in an orderly manner with ample liquidity. The Linked Exchange Rate System has served as a strong anchor for Hong Kong's monetary and financial stability and proved to be highly resilient against various shocks.

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 notes and coins in circulation
- the Aggregate Balance, which is the sum of the clearing account balances of banks 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 2017	31 December 2016
Certificates of Indebtedness[1]	**455,715**	407,795
Government-issued currency notes and coins in circulation[1]	**12,186**	12,000
Balance of the banking system	**179,790**	259,593
EFBNs issued[2]	**1,047,244**	962,579
Total	**1,694,935**	1,641,967

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 balance sheet date. This arrangement is in accordance with the accounting principles generally accepted in Hong Kong.
2. 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 on the balance sheet. 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 HKMA's firm commitment to honour the Convertibility Undertakings (CUs). When the demand for Hong Kong dollars is greater than the supply and the market exchange rate strengthens to the strong-side CU of HK$7.75 to one US dollar, the HKMA stands ready to sell Hong Kong dollars to banks for US dollars. The Aggregate Balance will then expand to push down Hong Kong dollar interest rates, creating monetary conditions that move the Hong Kong dollar away from the strong-side limit to within the Convertibility Zone of 7.75 to 7.85. Conversely, if the supply of Hong Kong dollars is greater than the demand and the market exchange rate weakens to the weak-side CU of HK$7.85 to one US dollar, the HKMA will buy Hong Kong dollars from banks. The Aggregate Balance will then contract to drive Hong Kong dollar interest rates up, pushing the Hong Kong dollar away from the weak-side limit to stay within the Convertibility Zone.

Monetary Stability

REVIEW OF 2017

Exchange rate stability

The Hong Kong dollar exchange rate generally saw weakening pressure in 2017 (Chart 1). Driven mainly by interest carry trade activities amid widened negative spreads between the Hong Kong dollar and US dollar interest rates, the Hong Kong dollar eased gradually against the US dollar, from 7.7566 on 3 January to the year-low of 7.8265 on 22 August. The Hong Kong dollar exchange rate gained some strength between late September and early November, underpinned by a tightening of Hong Kong dollar liquidity due to initial public offering (IPO)-related funding demand, and traded steadily within a narrow range of 7.80–7.81. Weakening pressures on the Hong Kong dollar were seen again towards the end of the year, partly reflecting slightly improved Hong Kong dollar liquidity conditions as well as increased year-end commercial demand for the US dollar. Overall, the Hong Kong dollar exchange market functioned normally throughout 2017.

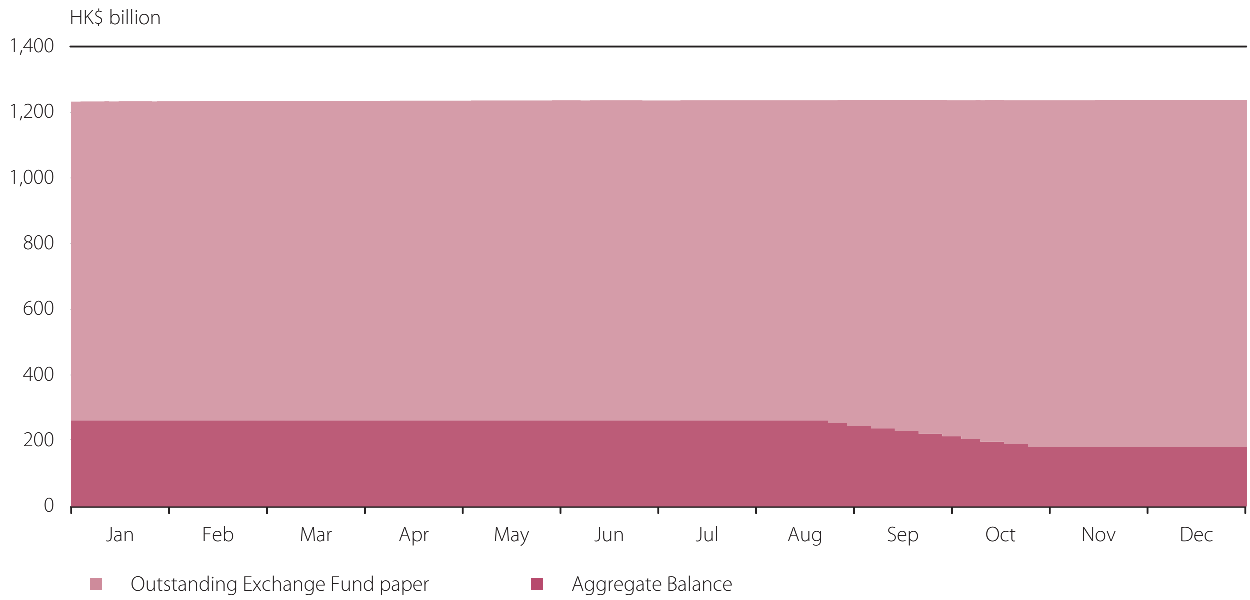
Chart 1 Market exchange rate in 2017

Monetary Stability

As the CUs were not triggered, the total of the Aggregate Balance and outstanding EFBNs remained virtually unchanged at around HK$1,225.3 billion in 2017 (Chart 2). During the year, the HKMA issued a total of HK$80 billion additional Exchange Fund Bills to meet banks' increased demand for liquidity management. This led to a contraction of the Aggregate Balance to HK$179.8 billion at the end of 2017. The issuance of additional Exchange Fund Bills was consistent with Currency Board principles, as it only represented a change in the composition of the Monetary Base, with a shift from the Aggregate Balance to the outstanding EFBNs. The Monetary Base remained fully backed by foreign exchange reserves.

Total Aggregate Balance and outstanding Exchange Fund Bills and Notes at around **HK$1,225.3 billion**.

Chart 2 Aggregate Balance and outstanding Exchange Fund paper in 2017



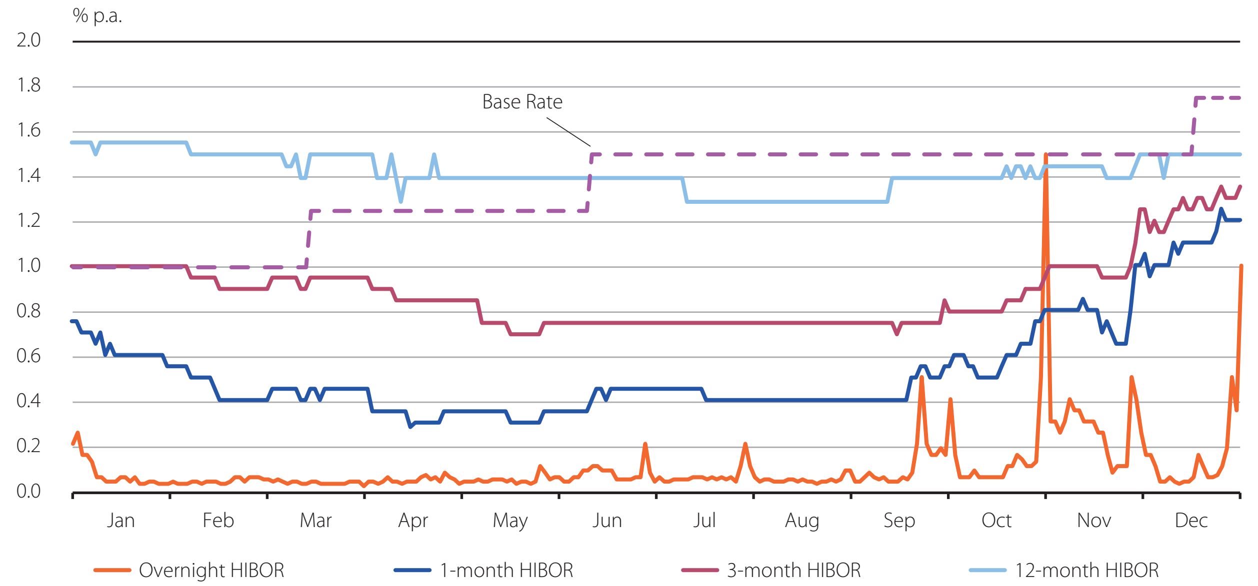
Monetary Stability

Money market

The Hong Kong dollar interbank interest rates stayed soft in the first eight months of 2017 before facing more upward pressure towards the end of the year (Chart 3). Despite concerns about the US Federal Reserve's interest rate hikes and balance sheet normalisation, the Hong Kong dollar interbank rates generally remained soft for the first eight months. As such, the negative spreads between the Hong Kong dollar and US dollar interest rates widened between January and August. From September onward, the short-dated Hong Kong dollar interbank rates witnessed large pick-ups, driven mainly by IPO-related and year-end funding demand. Correspondingly, the negative spreads between the Hong Kong dollar and US dollar interest rates narrowed in the short-dated segment. Overall, the short-dated interbank rates traded mostly below the Base Rate in 2017.

The Base Rate was adjusted upwards on 16 March, 15 June and 14 December, by a total of 75 basis points from 1.00% to 1.75%, as the target range for the US federal funds rate moved upward three times by a total of 75 basis points from 0.50–0.75% to 1.25–1.50% during the year. The adjustment of the Base Rate was in accordance with the revised formula announced on 26 March 2009, in which the Base Rate is set 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 Hong Kong Interbank Offered Rates (HIBORs), whichever is the higher.

Chart 3 Hong Kong dollar interbank interest rates in 2017

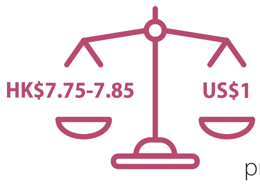


Roughly tracking the movements of the Hong Kong dollar-US dollar interest rate spreads, the discounts of the Hong Kong dollar forward points widened gradually during the first three quarters, with the 12-month Hong Kong dollar forward points reaching about -615 pips in mid-September (Chart 4). In the fourth quarter, the discounts of the Hong Kong dollar forward points narrowed slightly along with the narrowing of the negative spreads between the Hong Kong dollar and US dollar interest rates. Overall, Hong Kong's money market continued to operate in an orderly manner and interbank liquidity remained ample. Discount Window borrowing increased from HK$5.3 billion in 2016 to HK$10.3 billion in 2017.

Chart 4 Hong Kong dollar forward points in 2017

Monetary Stability

The Linked Exchange Rate System



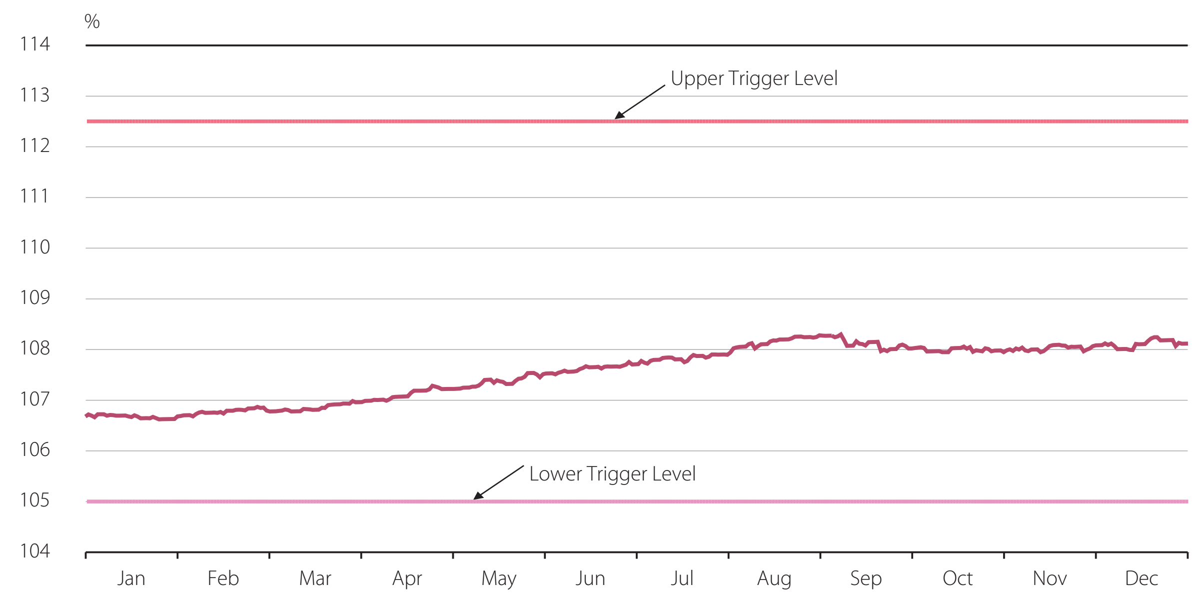
Since its establishment in 1983, the Linked Exchange Rate System (LERS) has served as a strong anchor for Hong Kong's monetary and financial stability, and proved to be highly resilient in a series of regional and global financial crises. The Government has reasserted its full commitment to the LERS and the credibility of its commitment was further reinforced by the stability in the foreign exchange and money markets. There is also continued strong public confidence in the Hong Kong dollar as a means of payment and a storage of value. In its 2017 Article IV consultation with Hong Kong, the International Monetary Fund reaffirmed its support for the LERS, commenting that the LERS remained the best exchange rate arrangement for Hong Kong. Combined with robust financial supervision and regulation, prudent fiscal management, and flexible markets, the LERS has worked well to help Hong Kong navigate successfully through both external and domestic challenges.

International Monetary Fund:
"The Linked Exchange Rate System remains the best arrangement for Hong Kong."

A sound banking system is crucial to the normal functioning of the LERS. During 2017, the HKMA continued to monitor closely banks' management of credit, liquidity and interest rate risks and stress-test results, and stepped up its supervisory efforts on corporate, property-related and mainland-related lending to bolster the resilience of the banking sector. As the US Federal Reserve continues to normalise its monetary policy, the Hong Kong dollar interest rates will gradually normalise as well. The HKMA reiterated that, under the design of the LERS, the outflow of capital, the weakening of the Hong Kong dollar exchange rate, the triggering of the weak-side CU and the reduction of the Monetary Base are part of the necessary process of the normalisation of Hong Kong dollar interest rates. The HKMA also reminded the public to manage their risks prudently and be well prepared for potential financial turbulence.

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 106.7–108.2% during 2017, without touching the Upper or Lower Trigger Level. The ratio closed at 108.1% on 31 December (Chart 5). 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. In the event of abrupt shocks, the sizeable amount of financial resources of the Exchange Fund will provide a powerful backstop in protecting Hong Kong's monetary and financial stability.

Chart 5 Daily movement of the Backing Ratio in 2017



Other activities

The Currency Board Sub-Committee (CBC) of the Exchange Fund Advisory Committee monitors and reviews issues relevant to the monetary and financial stability of Hong Kong. In 2017, the CBC considered various issues, including the drivers of short-run dynamics in Hong Kong's housing prices, the determinants of HIBOR-London Interbank Offered Rate (LIBOR) spreads, the effect of property valuation changes on corporate borrowing in Mainland China, and the effect of mortgage debt service burden on private consumption in Hong Kong. Records of the CBC's discussions on these issues and the reports on Currency Board operations submitted to the CBC are published on the HKMA website.

The Hong Kong Institute for Monetary Research (HKIMR) continued to sponsor research in the fields of monetary policy, banking and finance. Over the past three years, the HKIMR has been re-orienting its activities towards higher policy relevance. This is reflected, in particular, in its conference activities and visiting fellowship programmes. The HKIMR has been collaborating with major central banks and policy institutions to jointly organise more policy-focused conferences. Meanwhile, a thematic research fellowship programme introduced in 2016 has been supporting more research projects related to policy issues that are of importance to the HKMA.

In 2017, the HKIMR hosted 18 research fellows and published 29 working papers. It also organised four international conferences and workshops during the year:

- The Eighth Annual International Conference on the Chinese Economy, titled "China's Economic Rebalancing: Where is it Heading?", was held in January in Hong Kong. The conference provided a forum for academics, policy makers and business economists to discuss important analytical and policy issues related to the Mainland economy. 11 high-quality research papers were presented, covering a wide variety of issues including Mainland's economic rebalancing, structural reform and international spillovers, issues on the renminbi exchange rate, and Mainland's monetary policy framework and transmission.

- The 15th HKIMR Summer Workshop was held in July. The workshop was intended to provide an opportunity for staff members of the HKIMR and the HKMA to present their research papers, and to enhance interaction between research staff and visiting fellows.

- A joint conference organised by the HKMA and the Bank for International Settlements, titled "The Price, Real and Financial Effects of Exchange Rates", was held in August. The conference provided a platform for in-depth and insightful discussion. A wide range of important topics were covered, including the exchange rate system, the pricing system of international trade, risk taking in the accumulation of foreign currency reserves, and foreign exchange market behaviour.

- A conference jointly sponsored by the HKMA, the US Federal Reserve Board and the Federal Reserve Bank of Atlanta on "Unconventional Monetary Policy: Lessons Learned" was held in October. The conference reviewed lessons learned from the unconventional monetary policies (UMP) of major central banks over the past ten years. The topics included monetary policy in a low interest rate environment, UMP and its spillovers to emerging economies, UMP and bank lending, and UMP and its effects on the real economy and financial stability.

In addition, the HKIMR held 35 public seminars during the year covering a broad range of economic, monetary and financial issues.

Monetary Stability

Notes and coins

At the end of 2017, the total value of banknotes (notes issued by note-issuing banks) in circulation was HK$455.7 billion, an increase of 11.7% from a year earlier (Charts 6, 7 and 8). The total value of government-issued notes and coins in circulation amounted to HK$12.0 billion, up 1.6% (Charts 9 and 10). Among the government-issued notes and coins, the value of HK$10 notes in circulation amounted to HK$4.3 billion, 85% of which were polymer notes.

Chart 6 Banknotes in circulation by note-issuing banks at the end of 2017

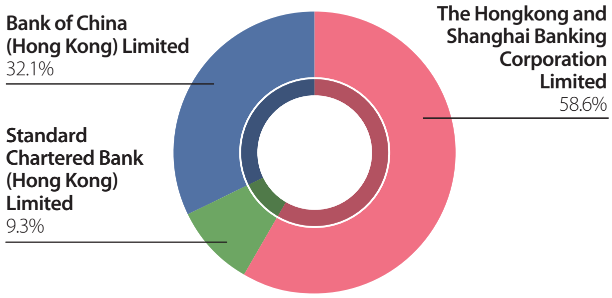
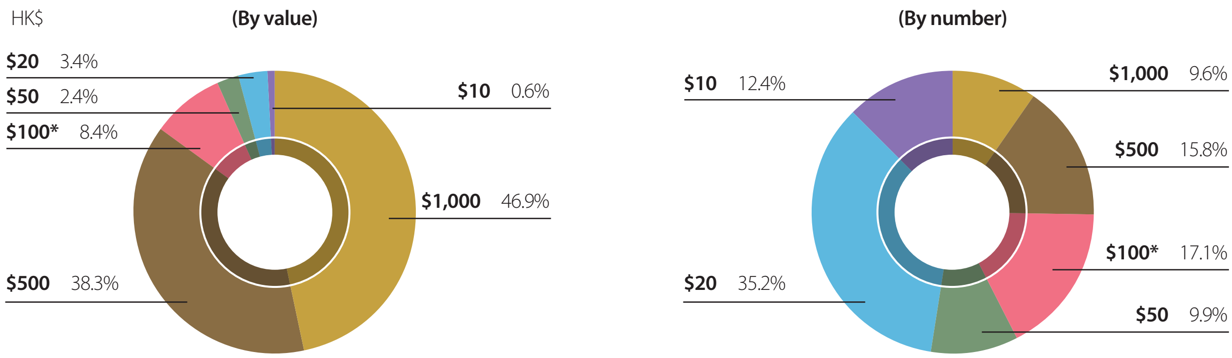


Chart 7 Distribution of banknotes in circulation at the end of 2017



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

Chart 8 Banknotes in circulation at the end of 2017

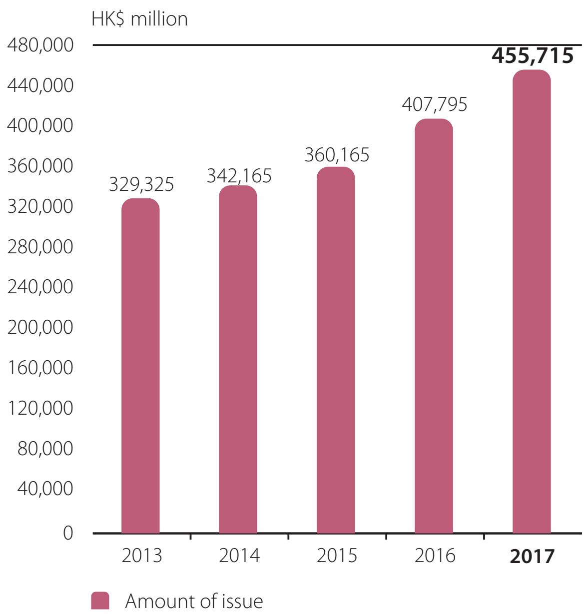


Chart 9 Government-issued notes and coins in circulation at the end of 2017

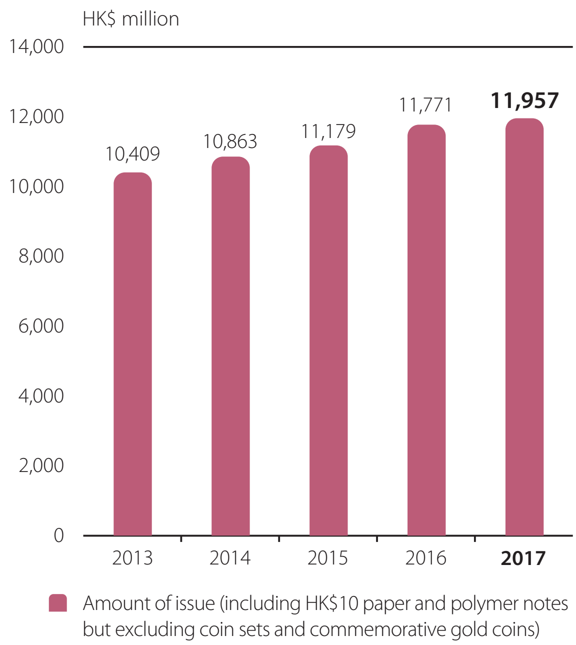
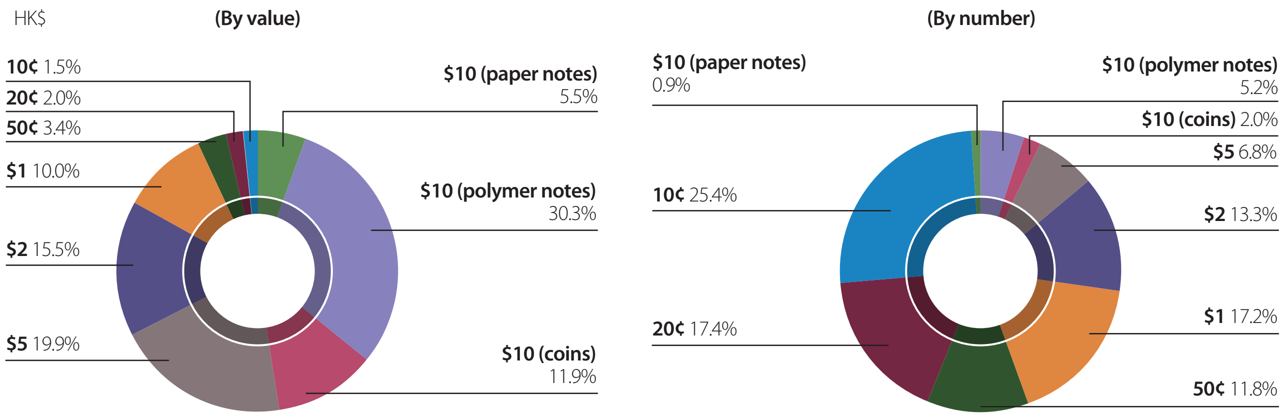


Chart 10 Government-issued notes and coins in circulation at the end of 2017



Hong Kong banknotes

The HKMA and the three note-issuing banks are preparing for the launch of a new series of banknotes with completely new designs and advanced security features.

Meanwhile, the HKMA continued its public education programme to promote awareness of the designs and security features of Hong Kong's current banknotes. During the year, 26 seminars were conducted for over 4,200 participants, including bank tellers, retailers and students, to enhance their knowledge and skills in authenticating banknotes.

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.

Up to end-2017, the two Coin Carts have served about 380,000 people and collected 320 million pieces of coins with a total face value of HK$421 million since inception. 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).

The Coin Carts have collected **320 million** pieces of coins with a total face value of **HK$421 million** since inception.

Monetary Stability

Exchange Fund Bills and Notes

To satisfy the strong demand from banks for short-dated Exchange Fund Bills, for example, for liquidity management purposes, the HKMA issued a total of HK$80 billion worth of additional Exchange Fund Bills in the second half of 2017. The additional issuance resulted in a corresponding reduction of the Aggregate Balance. At the end of 2017, the nominal amount of outstanding Exchange Fund paper stood at HK$1,048.5 billion (Table 2).

Table 2 Outstanding issues of EFBNs

HK$ million	2017	2016
Exchange Fund Bills (by original maturity)		
28 days	**2,200**	2,200
91 days	**605,779**	524,998
182 days	**351,000**	338,000
364 days	**51,700**	49,700
Sub-total	**1,010,679**	914,898
Exchange Fund Notes (by remaining tenor)		
1 year or below	**10,400**	15,200
Over 1 year and up to 3 years	**12,000**	16,000
Over 3 years and up to 5 years	**3,800**	3,200
Over 5 years and up to 10 years	**9,200**	10,200
Over 10 years	**2,400**	3,600
Sub-total	**37,800**	48,200
Total	**1,048,479**	963,098

PLANS FOR 2018 AND BEYOND

While the world's major economies have been growing in sync, the outlook for the global financial environment remains uncertain in 2018. In particular, the uncertain timing and pace of monetary policy normalisation across major advanced economies, coupled with the possibilities of escalating geopolitical tensions and rising trade protectionism, may weigh on global financial conditions. In Hong Kong, fund flows may become more volatile and the risk of fund flow reversals may increase.

The HKMA will continue to monitor closely the 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. More research will be conducted on 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

In 2017, the HKMA continued to place its supervisory focus on the effectiveness of authorized institutions' risk governance framework, including credit and liquidity risk management systems. During the year, another round of countercyclical macro-prudential measures was introduced to strengthen the resilience of the banking sector to cope with any downturn in the property market. With cyber threats on the rise, the HKMA stepped up the supervision of authorized institutions' technology risk management. At the same time, the HKMA launched seven initiatives that prepare Hong Kong to move into a New Era of Smart Banking. The effectiveness of authorized institutions' anti-money laundering and counter-terrorist financing controls remained a key supervisory focus of the HKMA as part of its efforts to combat financial crimes. On conduct supervision, the HKMA took further steps to promote a customer-centric corporate culture, foster financial inclusion, and address difficulties encountered by small and medium-sized enterprises and start-up companies in opening and maintaining bank accounts in Hong Kong. Efforts were also made to enhance the supervision of authorized institutions' sales practices for investment and insurance products to further strengthen customer protection.

Substantial progress was made on the local implementation of international supervisory and accounting standards, including capital adequacy standards, disclosure standards, the Net Stable Funding Ratio, large exposure limits, recovery planning and International Financial Reporting Standard 9. In support of the need for capacity building amid an ever-changing banking environment and evolving risk landscape, the HKMA co-ordinated with the industry to develop director empowerment programmes and the Enhanced Competency Framework for banking practitioners.

The Financial Institutions (Resolution) Ordinance came into operation on 7 July 2017, making Hong Kong one of the few Financial Stability Board member jurisdictions with a fully cross-sectoral resolution regime for financial institutions. The Ordinance, establishing a new line of defence for financial stability, confers necessary powers on the Monetary Authority to manage, in an orderly manner, failure of a financial institution in circumstances where such failure could have adverse systemic consequences.

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 business 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 are able to recover their positions in response to crises, which ultimately helps prevent failures. The Monetary Authority is responsible for the prudential supervision of banking business, which includes the business of taking deposits, 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's failure, resolution may be conducted in an orderly manner such that continuity in critical financial services provided by AIs to their customers can be maintained. To this end, a resolution regime for financial institutions in Hong Kong is established, under which the Monetary Authority is the resolution authority for AIs, amongst other financial institutions.

REVIEW OF 2017

Overview of supervisory activities

In 2017, 192 off-site reviews were conducted covering a broad range of issues, including CAMEL ratings[1], corporate governance, business operations and risk management of AIs. As part of the HKMA's continued efforts to promote stronger risk governance at AIs, 30 meetings were held with the boards of directors or board-level committees of AIs, with the discussions focused on important risk management issues. The HKMA also conducted a survey to monitor the adoption of its recent guidance on corporate governance. 27 tripartite meetings among the HKMA, AIs and their external auditors were also held.

Conducted **192 off-site reviews**

Conducted **401 on-site examinations** and **thematic reviews**

Apart from off-site activities, the HKMA continued to conduct regular on-site examinations supplemented with thematic reviews on areas assessed to be of higher risk. This approach has allowed the HKMA to prioritise its supervisory resources to focus on emerging and more significant risks faced by AIs. The HKMA conducted 401 on-site examinations and thematic reviews during the year. Credit risk management and controls remained the key focus of these examinations and reviews. Another major focus was technology risk and operational risk management. The HKMA also increased the number of overseas examinations and the number of on-site examinations and thematic reviews targeted at liquidity and market risk management as well as anti-money laundering and counter-terrorist financing (AML/CFT) controls. On-site examinations of AIs' activities in securities, investment products, insurance and Mandatory Provident Fund (MPF)-related businesses were also conducted by specialist teams.

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 2017.

Table 1 Summary of supervisory activities

		2017	2016
1	Off-site reviews and prudential interviews	192	188
2	Meetings with boards of directors or board-level committees of AIs	30	30
3	Tripartite meetings	27	27
4	On-site examinations	121	164
	Credit risk management and controls	8	71
	Technology risk and operational risk management	21	20
	AML/CFT controls	20	17
	Liquidity risk management	12	8
	Implementation of Basel capital adequacy framework	5	6
	Capital Planning	3	–
	Market risk, counterparty credit risk and treasury activities	8	4
	Securities, investment products, insurance and MPF-related businesses	18	20
	Deposit Protection Scheme-related representation	12	12
	Overseas examinations	14	6
5	Thematic reviews	280	213
	Credit risk management and controls	84	62
	Technology risk and operational risk management	61	64
	AML/CFT controls	55	30
	Implementation of Basel capital adequacy framework	5	4
	Sale of investment products	3	3
	Consumer protection	60	50
	Liquidity risk	8	–
	Market risk	4	–
	Total number of off-site reviews and prudential interviews, meetings, on-site examinations and thematic reviews	**650**	622

Supervision of credit risk

Credit growth and asset quality

Total bank lending grew by 16.1%, compared with a growth of 6.5% in 2016. As shown in Table 2, the loan growth was broad-based.

Table 2 Growth in loans and advances

% change	2017	2016
Total loans and advances	**16.1**	6.5
Of which:		
– for use in Hong Kong	16.1	8.0
– trade finance	8.7	0.2
– for use outside Hong Kong	17.5	4.5

Specifically, Mainland-related lending grew by 17.5% to HK$4,188 billion at the end of 2017 (Table 3). This included HK$644 billion of loans booked with Mainland subsidiaries of banks incorporated in Hong Kong.

Table 3 Growth in Mainland-related lending

% change	2017	2016
Total Mainland-related lending	**17.5**	7.0
Of which:		
– Mainland-related lending (excluding trade finance)	17.8	7.7
– trade finance	13.6	–1.2

The asset quality of AIs remained healthy in 2017. Retail banks' classified loan ratio edged down from 0.72% at the end of 2016 to 0.54% at the end of 2017, well below the long-run historical average of 2.2% since 2000. For the banking industry as a whole, the classified loan ratio decreased from 0.85% to 0.67%. As regards Mainland-related lending, retail banks' classified loan ratio of such lending edged down to 0.75% in 2017 from 0.82%. For the banking industry as a whole, the ratio decreased to 0.67% from 0.80% a year ago.

Retail banks' classified loan ratio

All loans: **0.54%**

Mainland-related lending: **0.75%**

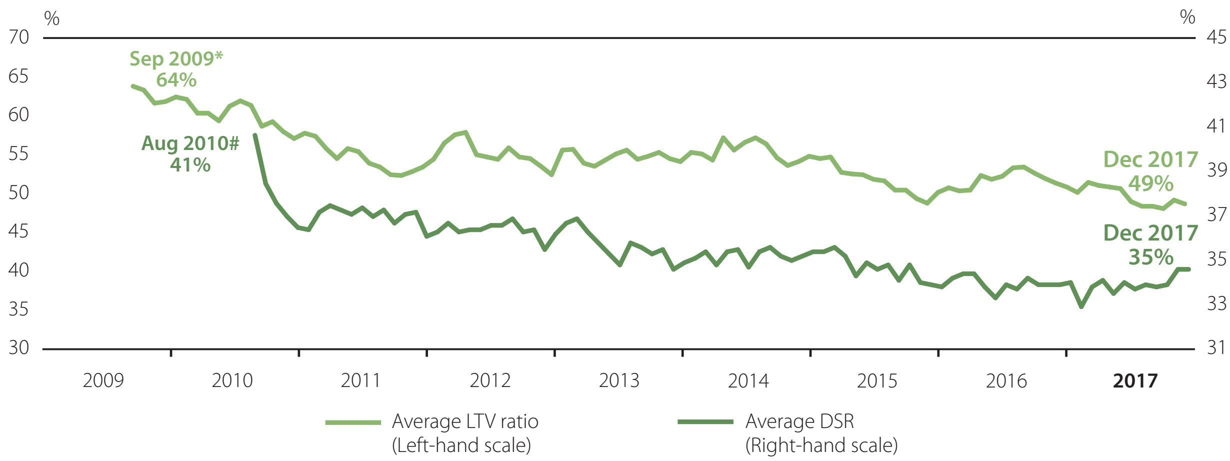
During the year, the HKMA stepped up its supervisory efforts to ensure that AIs continued to adopt prudent credit risk management standards. In particular, the surveillance of AIs' exposures to major corporates was enhanced. Targeted thematic examinations were conducted, focusing on key credit risk management controls such as loan underwriting standards, the loan classification and provisioning system, credit risk governance framework and risk management for lending to property developers, asset-backed financing and insurance premium financing.

Property mortgage lending

Property prices continued to rise in 2017. There were more loans extended by AIs involving borrowers with multiple mortgages or with income derived from outside of Hong Kong. In view of these developments, the HKMA introduced another round of countercyclical macro-prudential measures on 19 May. The eighth round of measures included raising the risk-weight floor for the calculation of capital charges for new residential mortgage loans granted by AIs, lowering the applicable loan-to-value (LTV) ratio cap for property mortgage loans extended to borrowers with pre-existing mortgages, and lowering the applicable debt servicing ratio (DSR) limit for property mortgage loans extended to borrowers whose income is derived mainly from outside of Hong Kong.

The HKMA's macro-prudential measures on property mortgage loans, introduced since 2009, have enhanced banks' resilience to risks associated with the property market. The average LTV ratio of new residential mortgage loans fell to 49% in December 2017 from 64% in September 2009, before the countercyclical measures were first introduced. The average DSR also decreased to 35% in December 2017 from 41% in August 2010, when a cap on DSR was first applied (Chart 1).

Chart 1 Average LTV ratio and DSR of new residential mortgage loans



* Before the introduction of the first round of the HKMA's countercyclical measures on property lending
\# Introduction of a cap on DSR

The HKMA observed that some developers financed their property development projects with high gearing and some of them provided mortgages with high LTV ratios to buyers of properties. To address the risks associated with these developments, the HKMA introduced new risk management measures for lending to property developers on 12 May. These included requiring AIs to lower the financing caps for construction financing; requiring AIs to set aside more capital for their lending to property developers with a higher proportion of mortgage loans relative to equity; and performing a round of thematic examinations to ensure that banks continue to follow prudent underwriting standards in their lending to property developers.

Separately, the HKMA worked with the Land Registry in launching an e-Alert service in February. The e-Alert service provides a notification to the AI concerned whenever a further mortgage in respect of the mortgaged property is lodged with the Land Registry for registration, so that the mortgagee bank can take appropriate risk mitigating actions as appropriate.

Banking Stability

Supervision of operational and technology risks

Cybersecurity threats continued to increase over the year. The HKMA stepped up its supervisory efforts in a bid to enhance the cyber resilience of the banking sector. As part of the Cybersecurity Fortification Initiative (CFI) rolled out by the HKMA in 2016, 30 AIs completed an assessment of the maturity of their cyber defences. Separately, the HKMA and the Securities and Futures Commission (SFC), after extensive consultation with the banking and securities industry, jointly decided to introduce a mandatory two-factor authentication for online share trading. A round of on-site examinations focused on banks' cybersecurity controls and operational resilience was also conducted. The HKMA further completed a round of discussions with the senior management of major banks to assess how the banks were managing strategic risks posed by potential new market entrants powered by technological advancement.

Smart Banking

In September, the HKMA announced a package of measures to assist Hong Kong's banking sector in migrating to a new era of Smart Banking. On the supervisory front, the HKMA enhanced the Fintech Supervisory Sandbox to version 2.0, with new features including a Chatroom facility accessible by both banks and technology firms and the establishment of linkages among the sandboxes of the HKMA, the SFC and the Insurance Authority (IA), so as to provide a single point of entry for conducting trials of cross-sector fintech products.

The HKMA also launched a Banking Made Easy initiative to identify and minimise regulatory frictions with the aim of further improving customers' experience in using fintech and digital banking services. A taskforce has been set up with the current focus on remote onboarding and account maintenance, online finance and online wealth management.

A review of the existing Guideline on Authorization of Virtual Banks has commenced to facilitate the introduction of virtual banking in Hong Kong.

Supervision of treasury activities and liquidity risk

As the US continued to normalise its monetary policy, global fund flows might become increasingly volatile. In consideration of this, the HKMA placed increased focus on the supervision of liquidity risk during the year. The HKMA enhanced its supervisory liquidity stress testing with additional scenarios, including a more stressful but plausible scenario of fund outflows and a short-term, confidence-driven bank run scenario. The HKMA also stepped up the monitoring and analysis of individual AIs' liquidity profiles and required selected AIs to strengthen their liquidity risk management capability.

Separately, the HKMA conducted more on-site examinations of AIs' market risk management in respect of their debt securities portfolios. A round of thematic reviews were carried out to evaluate potential risks arising from AIs' increased investment activities in foreign currency bonds and to assess the effectiveness of the corresponding risk management, including hedging practices.

Prevention of money laundering and terrorist financing (ML/TF)

The Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) (Amendment) Bill 2017 was gazetted on 23 June and will come into operation in 2018. The amendment is intended to update Hong Kong's regulatory regime for AML/CFT in line with the latest international requirements as promulgated by the Financial Action Task Force (FATF). These changes, together with updates to the statutory guideline on AML/CFT, will help clarify and implement the risk-based approach in customer due diligence (CDD) processes for account opening and the maintenance of bona fide customers, and encourage innovation where such processes are carried out remotely.

In 2017, the HKMA's risk-based AML/CFT supervisory programme included 22 on-site examinations and 55 off-site reviews to assess the effectiveness of AIs' controls over ML, TF and/or financial sanctions risks. This included thematic reviews on the role of internal audit in AML/CFT work as well as the engagement of an external consultant specialising in the assessment of AIs' automated screening systems. The HKMA also encouraged the greater use of new technology, including a Know-Your-Customer Utility (KYCU), and promoted closer collaboration with the industry to share useful practices that some AIs had used to increase the effectiveness of AML/CFT measures.

Reflecting the global nature of ML, effective domestic and international co-operation in addressing the risks is important. Domestically, the Fraud and Money Laundering Intelligence Taskforce, a public-private partnership among the Hong Kong Police Force, AIs, the Hong Kong Association of Banks (HKAB) and the HKMA, was established on 26 May to enhance the detection, prevention and disruption of serious financial crimes and ML threats. Internationally, the HKMA continues to participate actively in the AML/CFT Expert Group of the Basel Committee on Banking Supervision (Basel Committee) and the FATF, contributing experienced assessors and reviewers to the evaluations of other members' AML/CFT regimes.

Supervision of wealth management and MPF-related businesses

The HKMA co-operated closely with other financial regulators in Hong Kong to provide guidance and supervise AIs' sales practices of securities, investment products, insurance products and MPF schemes. The HKMA also maintained regular dialogue with regulators through bilateral and multilateral meetings, as well as under the auspices of the Council of Financial Regulators, to ensure co-ordinated and effective supervisory actions. In 2017, the HKMA and the SFC conducted a joint review of a financial group's controls and management over possible conflicts of interest arising from the sale of in-house investment products. Based on the findings from the joint review, the HKMA and the SFC issued a joint circular in November to share with the industry some key observations and good practices.

During the year, the HKMA conducted 18 on-site examinations, 3 thematic reviews and 13 industry analyses of AIs, covering the sale of investment products, settlement of securities transactions and safe custody of client securities, and the sale of non-investment-linked long-term insurance (NLTI) products and MPF products, which involved retail, private and corporate banking customers. In February, a circular was issued to all AIs to provide practical guidance in respect of the sale of investment products and handling of client securities, drawing reference to the HKMA's supervisory observations and discussions with the industry on the interpretation and implementation issues of certain regulatory requirements and standards.

To further promote a customer-centric culture, the HKMA worked with the Private Wealth Management Association (PWMA) in developing a Treat Customers Fairly Charter for the private wealth management industry. A circular was issued in June to elucidate the HKMA's expectations for private banks in following the principles of the Charter. The HKMA and the PWMA have also made collective efforts to implement several initiatives, such as the enhancement to the PWMA Code of Ethics and Conduct, to support the Charter.

In July, the HKMA introduced a half-yearly survey on AIs' sale of insurance products, with the first reporting period starting from 1 July 2018. This survey will provide further information on the insurance intermediary activities of AIs and facilitate the HKMA's supervision in this regard. Meanwhile, the HKMA started to co-operate with the newly established IA to prepare for the implementation of a new statutory regime under the Insurance Ordinance to regulate insurance intermediaries, including a collaboration framework for the inspection and investigation of AIs' insurance intermediary activities.

The HKMA consulted banking industry associations on proposed disclosure requirements to enhance point-of-sale transparency and to better address potential conflicts of interest in the sale of structured investment products that are not regulated by the Securities and Futures Ordinance (SFO). A circular was subsequently issued in January 2018 to provide guidance and remind AIs to continue to demonstrate consistently high standards.

During the year, the HKMA processed two applications to become Registered Institutions (RIs) and four applications from RIs to engage in additional regulated activities. It granted consent to 172 executive officers responsible for supervising the securities activities of RIs, and conducted background checks on 9,142 individuals whose information was submitted by RIs for inclusion in the register maintained by the HKMA.

Other supervisory activities

The Banking Supervision Review Committee considered six cases in 2017. Five of these cases concerned the authorization of an AI and the approval of money brokers. The remaining one was about the transfer of authorization of a licensed bank to another bank (see Table 4 for details).

Banking Stability

During the year, the HKMA commissioned nine reports under section 59(2) of the Banking Ordinance (BO). The AIs were required to appoint external auditors to report on the effectiveness of their controls over a specified area of operation. Three of the reports covered AML/CFT controls, another three covered the distribution of financial products, and the remaining reports were related to areas including mortgage financing and financial risk management.

In 2017, no AIs breached the requirements of the BO relating to capital adequacy or liquidity ratio. There were, however, 23 breaches under various sections of the BO, but none affected the interests of depositors and these breaches were rectified promptly by the AIs concerned.

As in the past years, the CAMEL ratings of AIs were reviewed and determined by the CAMEL Approval Committee. The AIs were notified of the ratings and given the opportunity to request a review. There was no request for a further review of approved CAMEL ratings from AIs during the year.

Table 4 Summary of other supervisory activities

		2017	2016
1	Cases considered by the Banking Supervision Review Committee	**6**	6
2	Reports commissioned under section 59(2) of the BO	**9**	2
3	Approval of applications to become controllers, directors, chief executives or alternate chief executives of AIs	**203**	193

International co-operation

Co-operation with overseas supervisors

The HKMA participated in 32 college-of-supervisors meetings organised by the home supervisors of 26 banking groups with significant operations in Hong Kong. A broad range of issues were discussed at these meetings, covering areas such as financial soundness, corporate governance, recovery and resolution planning, and risk management controls. During the year, the HKMA assisted the home supervisors of two global systemically important banks (G-SIBs) in organising supervisory college meetings in Hong Kong.

Bilateral meetings were held during the year with banking supervisors from Australia, Brazil, Brunei, the European Union, India, Japan, Liechtenstein, Macao, Mainland China, Malaysia, Singapore, Switzerland, Taiwan, Thailand, the United Arab Emirates, the UK and the US. There were also regular exchanges with overseas authorities on institution-specific issues and developments in financial markets.

Participation in international and regional forums

The HKMA continued to participate in a range of international and regional forums for banking supervisors. It is a member of the Basel Committee and its governing body, the Group of Governors and Heads of Supervision, and is represented on various Basel Committee working groups, including the Policy Development Group (PDG), the Macroprudential Supervision Group, the Supervision and Implementation Group (SIG) and the AML/CFT Expert Group. The HKMA is also a member of several sub-groups under (i) the PDG, including the Working Group on Capital, the Market Risk Group, the Working Group on Liquidity, the Working Group on Disclosure, the Credit Risk Group and the Large Exposures Working Group; and (ii) the SIG, including the Working Group on Supervisory Colleges, the Task Force on Impact and Accountability, the Working Group on Stress Testing and the Workstream on Future Regulatory Consistency Assessment Programme. In addition, the HKMA chairs the Risk Data Network under the SIG to monitor the implementation progress of the *Principles for effective risk data aggregation and risk reporting* by G-SIBs. The HKMA also participates in the Joint Working Group on Margining Requirements formed by the Basel Committee and the International Organization of Securities Commissions (IOSCO).

As regards participation in the Financial Stability Board (FSB), the Chief Executive of the HKMA chairs the Standing Committee on Supervisory and Regulatory Co-operation. In addition to serving as a member of the Plenary Meeting and Standing Committee on Assessment of Vulnerabilities, the HKMA also participates in several FSB working groups, including the Over-the-counter (OTC) Derivatives Working Group, the Compensation Monitoring Contact Group, the Working Group on Governance Frameworks, and the Workstream on Other Shadow Banking Entities. In the area of resolution, and in addressing the problem of "Too Big To Fail", the HKMA is a member of the FSB Resolution Steering Group and Cross-Border Crisis Management (CBCM) Working Group for banks.

At the regional level, the HKMA is a member of the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)[2]; 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, 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.

Financial Stability Board Peer Review

The FSB conducts a regular programme of country and thematic peer reviews of its member jurisdictions, including Hong Kong. In 2017, the FSB conducted a peer review that focused on steps taken by the relevant authorities in Hong Kong to implement reforms in the OTC derivatives market and to strengthen the framework for the resolution of financial institutions. In its Peer Review Report published in February 2018, the FSB testified to the good progress Hong Kong made in both areas, reflecting Hong Kong's strong commitment to implementing international standards, driven by its status as an international financial centre.

During the year, the HKMA also participated as a member of an international expert team in the FSB Peer Review that focused on assessing the macro-prudential policy framework in Singapore.

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

Implementation of Basel standards in Hong Kong

Capital standards

On 27 January 2017, the HKMA announced a jurisdictional Countercyclical Capital Buffer (CCyB) for Hong Kong at a rate of 1.875% (reflecting the Basel III phase-in provisions), effective from 1 January 2018. On 10 January 2018, the HKMA increased the CCyB rate for Hong Kong to 2.5% with effect from 1 January 2019. 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 2018, together with their corresponding higher loss absorbency capital requirements, to take effect from 1 January 2019.

Countercyclical Capital Buffer

1.875% effective from 1 January 2018

2.5% effective from 1 January 2019

The Banking (Capital) (Amendment) Rules 2017 were introduced to implement three capital standards of the Basel Committee scheduled to take effect on 1 January 2018. These cover a revised securitisation framework, the Basel III leverage ratio, as well as an interim treatment of expected loss provisions by banks under the International Financial Reporting Standard 9 (IFRS 9), which was implemented on 1 January 2018 locally as the Hong Kong Financial Reporting Standard 9.

To align with the implementation progress of other major markets, the HKMA considered it appropriate to defer the local implementation of three other capital standards of the Basel Committee, tentatively to not earlier than 1 January 2019, as opposed to the original target date of 1 January 2017. These include the standardised approach for measuring counterparty credit risk exposures, the capital requirements for bank exposures to central counterparties and the capital requirements for banks' equity investments in funds. The HKMA will continue to engage the industry with the preparatory work for implementing these standards.

Interest rate risk in the banking book

In April 2016, the Basel Committee issued new standards on interest rate risk in the banking book, fundamentally updating its earlier 2004 principles on this important risk category. The new standards continue to follow an "outlier-based" Pillar 2 approach, but include a more sophisticated and comprehensive set of measures to identify banks with significant exposures to interest rate risk in their banking books. The HKMA consulted the industry on its planned approach for local implementation of the standards in June 2017, and decided to revise the original implementation date of 1 January 2018 in order to allow banks more time to update their systems. The local implementation of the standards is expected to be finalised in 2018.

Disclosure standards

Further to the implementation of the first phase of the Basel Committee's revised Pillar 3 disclosure requirements earlier in 2017, the HKMA took steps to prepare for the implementation of the second phase of the revised requirements, as set out in the *Pillar 3 disclosure requirements – consolidated and enhanced framework* issued by the Basel Committee in March. These revised disclosure requirements seek to promote market discipline through enhanced disclosure of banks in terms of user-relevance, consistency and comparability of disclosed information. The HKMA consulted the industry on its policy proposals for implementing the second phase of the revised requirements and undertook preparatory work for the amendment of the Banking (Disclosure) Rules (BDR) to incorporate the requirements.

Liquidity standards

The Banking (Liquidity) (Amendment) Rules 2017 were introduced to implement the Net Stable Funding Ratio (NSFR). Effective from 1 January 2018, AIs designated as "category 1 institutions" under the Banking (Liquidity) Rules will be required to observe the NSFR requirements. AIs designated as "category 2A institutions" will be required to observe a local Core Funding Ratio (CFR), which is a modified version of the NSFR.

Exposure limits

The HKMA is working on the local implementation of the Basel Committee's *Supervisory framework for measuring and controlling large exposures* (April 2014), which consists of a comprehensive minimum standard for internationally active banks and is designed as a simple backstop to complement the Basel III risk-based capital standard. In this regard, the Banking (Amendment) Bill 2017 was passed by the Legislative Council (LegCo) in January 2018 to implement the latest international standards on exposure limits. Taking the opportunity, outdated provisions on exposure limits in the BO will also be revised to keep pace with market developments and the contemporary risk management practices of the industry. During the year, the HKMA conducted quantitative impact studies to calibrate the revised limits to be set out in the new rules.

Improving Supervisory Policy Framework

Corporate governance and risk controls

In October, the HKMA issued three revised Supervisory Policy Manual (SPM) modules relating to corporate governance and risk controls, namely "Corporate Governance of Locally Incorporated Authorized Institutions", "Risk Management Framework" and "Internal Audit Function", to reflect the latest international standards.

Regulation of OTC derivatives transactions

On 1 March, a new SPM module, "Non-centrally Cleared OTC Derivatives Transactions – Margin and Other Risk Mitigation Standards", took effect to introduce global margin and risk mitigation standards for AIs involved in non-centrally cleared OTC derivatives (NCCD) transactions. These global standards, developed by the Basel Committee and IOSCO, are designed to reduce counterparty credit risk and limit contagion by ensuring collateral is available to offset losses following the default of a derivatives counterparty, promote legal certainty over the terms of derivatives contracts, and facilitate the timely resolution of disputes.

Following a six-month transitional period, the margin requirements under the new SPM module were fully implemented on 1 September. Based on a subsequent survey conducted by the HKMA, the results showed that a vast majority of the AIs experienced a smooth transition to the new regime and did not face any notable difficulties to comply with the required margin exchange.

One key element of the regime is "substituted compliance". This allows AIs to follow foreign margin standards instead of those set out in the HKMA's SPM module, thereby ensuring that cross-border transactions are not subject to duplicative or inconsistent requirements. As a general principle, substituted compliance is available if the HKMA has issued a comparability determination in relation to a foreign jurisdiction's margin and/or risk mitigation standards. However, all other member jurisdictions of the Basel Committee-IOSCO Working Group on Margin Requirements are deemed comparable from the day the respective standards entered into force in their jurisdictions, because of their implementation of, or general intention to implement, the Basel Committee-IOSCO margin framework.

Other jurisdictions have also introduced substituted compliance in their regimes, some of which required the issuance of formal comparability determinations for overseas rules. In 2017, the Australian Prudential Regulation Authority and the Japanese Financial Services Agency announced the comparability of the HKMA's margin framework, allowing Australian and Japanese covered entities to avail themselves of substituted compliance in respect of the HKMA's margin requirements.

Counterparty credit risk management

In September, the HKMA consulted the industry on revisions to the SPM module on "Counterparty Credit Risk Management". The primary objective of the revisions is to bring the guidance in line with the latest capital treatment and risk management practices of counterparty credit risk arising from derivatives contracts and securities financing transactions.

Recovery planning

The Monetary Authority used to rely on information-gathering powers under the BO to require AIs to prepare recovery plans. To provide for greater transparency and certainty in respect of the recovery planning requirements, and to better align with international standards set by the FSB in its "*Key Attributes of Effective Resolution Regimes for Financial Institutions*", the Banking (Amendment) Bill 2017, which was passed by LegCo in January 2018, added a new Part XIIA to codify the recovery planning requirements.

During the year, the HKMA also published further guidance on the application of the HKMA's recovery planning requirements for overseas incorporated AIs with branch operations in Hong Kong and smaller locally incorporated AIs.

Updating other supervisory policies and risk management guidelines

The HKMA updated the SPM module on "Competence and Ethical Behaviour" in December to reflect the latest developments in enhancing training programmes for banking practitioners in Hong Kong as well as to update the guidance on promoting good ethical behaviour. Furthermore, the HKMA consulted the industry on a technical update of the SPM module on the validation of risk-rating systems under the internal ratings-based (IRB) approach for credit risk.

Compliance with regulatory regime for OTC derivatives market

The HKMA monitors AIs' and approved money brokers' (AMBs) compliance with the mandatory reporting and related record keeping requirements on OTC derivatives transactions stipulated in the SFO. The Phase 2 mandatory reporting requirements commenced on 1 July, expanding the reporting scope to cover transactions in product types under five asset classes, namely interest rate, foreign exchange, equities, credit and commodities; as well as post-trade events and daily valuations of all reported transactions. AIs also commenced mandatory clearing of specified OTC derivatives transactions on the same day. The HKMA had been closely monitoring AIs' and AMBs' compliance with the relevant regulatory requirements and will follow up with AIs and AMBs on matters of compliance concern.

Balanced and responsive supervision

In response to challenges faced by the industry due to fast-evolving market circumstances and new international standards, the HKMA launched a Balanced and Responsive Supervision Programme in order to further enhance the supervisory interface with the banking sector. The aim is to drive a more effective supervisory outcome as well as establish a more conducive environment for banking development as underpinned by a proportionate and risk-based supervisory approach.

Under this Programme, the HKMA conducted a review to optimise the supervisory processes and to build more effective communication with banks on supervisory and compliance practices. A plan was also drawn up to collect feedback from the banking industry regularly to identify possible enhancements to supervisory policies and requirements as well as emerging risks and market trends warranting supervisory attention.

Accounting standards

In response to the implementation of IFRS 9 *Financial Instruments* in 2018, the Basel Committee issued standards on the interim approach and transitional arrangements for the regulatory treatment of accounting provisions in March 2017. The Basel Committee will continue to work on the longer-term approach, taking into account further analysis based on quantitative impact assessments. Domestically, the HKMA finalised the interim regulatory capital treatment of IFRS 9 provisions after consulting the industry in March 2017. The interim approach covers the categorisation of expected credit losses made by AIs under IFRS 9 as general or specific provisions for the purposes of the regulatory capital framework, as well as the interaction between the regulatory reserve requirement and the expected credit losses under IFRS 9.

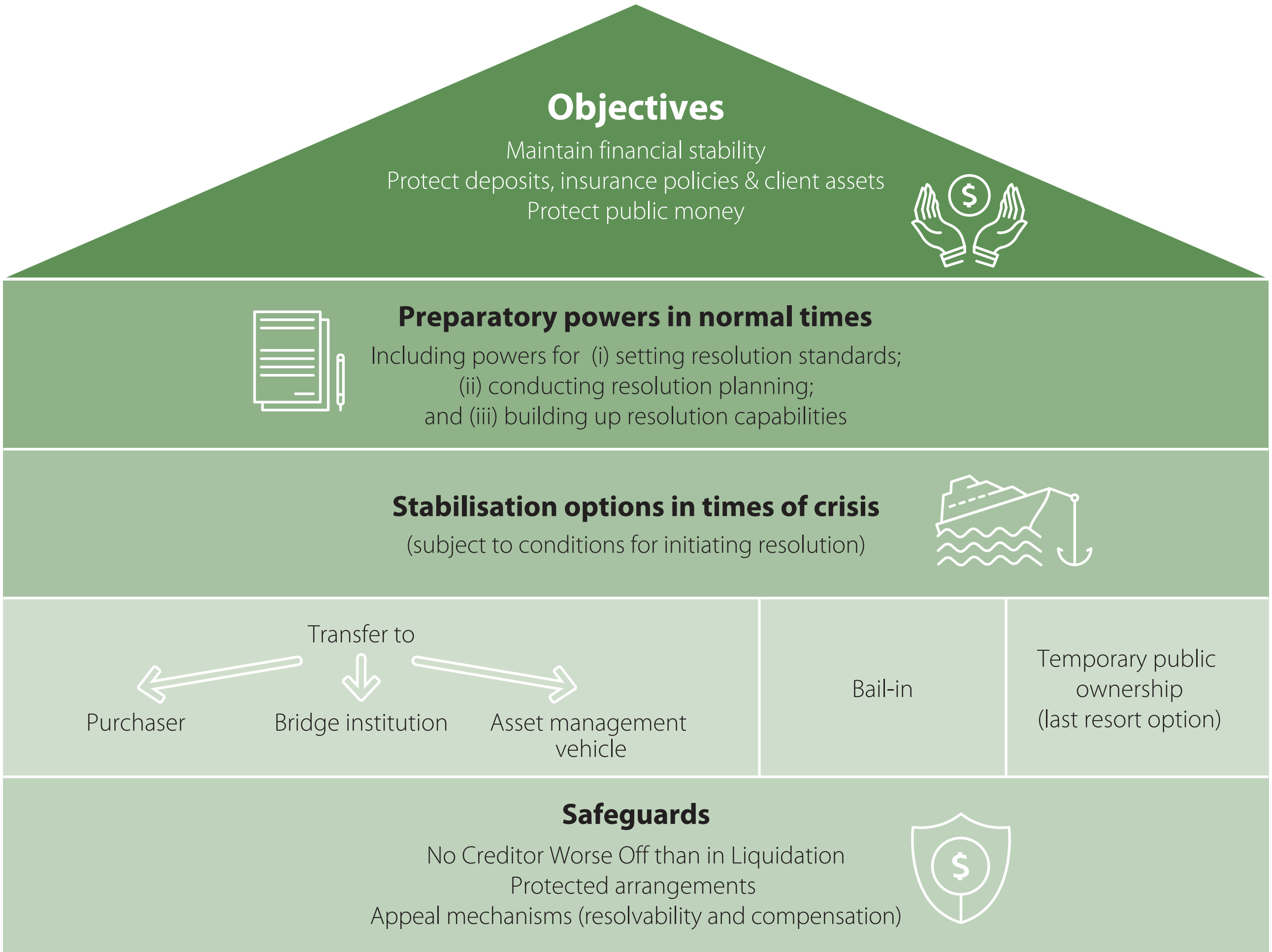
Further to a survey on IFRS 9 implementation conducted with selected AIs in June 2016, the HKMA carried out additional rounds of surveys during 2017 to assess AIs' progress in adopting the new IFRS 9 requirements and the potential impact of IFRS 9 on AIs' key financial figures and regulatory capital ratios. Several rounds of discussions were also held with auditors on AIs' preparation for the implementation of IFRS 9.

During the year, the HKMA continued its regular dialogue with the Banking Regulatory Advisory Panel of the Hong Kong Institute of Certified Public Accountants on topics of common interest. These included international and domestic developments in relation to new or revised accounting, auditing and financial reporting standards and their implications for banks, as well as major international and domestic banking regulatory developments.

Resolution

The Financial Institutions (Resolution) Ordinance (FIRO) came into force on 7 July[3]. It is designed to meet international standards set by the FSB in its *"Key Attributes of Effective Resolution Regimes for Financial Institutions" (Key Attributes)*. The FIRO establishes a cross-sectoral resolution regime in Hong Kong[4], under which the Monetary Authority is the resolution authority for banking sector entities, including all AIs[5]. The FIRO confers statutory powers and responsibilities on the Monetary Authority to manage the failure of a financial institution in an orderly manner in circumstance where such failure could have adverse systemic consequences (Chart 2).

Chart 2 Overview of powers and safeguards under the FIRO



The resolution regime establishes a new line of defence for financial stability, guarding against risks posed to the stability and effective working of the financial system of Hong Kong in the event of the failure of an AI. It also implements an important part of the G20 financial reform package agreed after the global financial crisis and represents a significant addition to Hong Kong's financial safety net and crisis management tools (Chart 3).

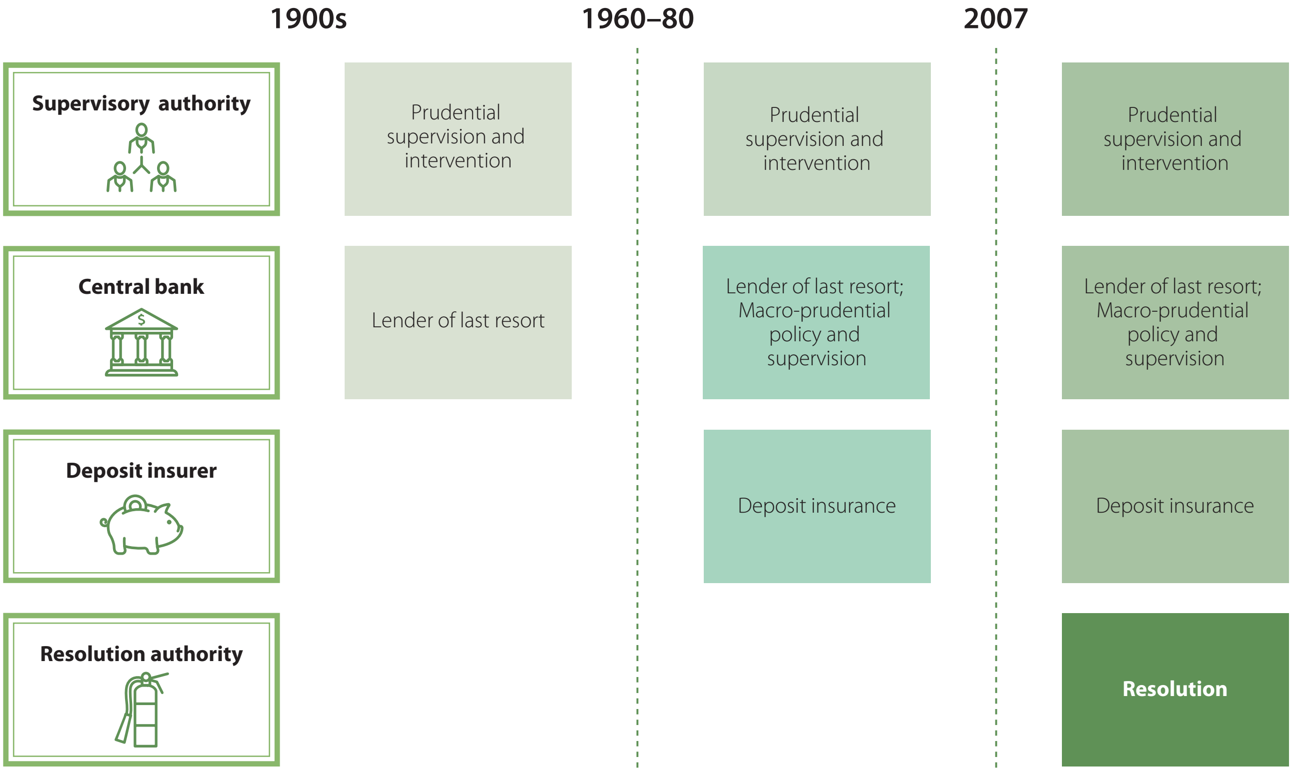
[3] All provisions of the FIRO, except for certain provisions in relation to the clawback of remuneration, the winding-up petition process and consequential amendments to the Insurance Companies Ordinance, came into operation on 7 July. The consequential amendments to the Insurance Companies Ordinance did not come into operation as they were rendered inapplicable owing to the commencement sequence of certain provisions of the Insurance Companies (Amendment) Ordinance 2015 and the FIRO.

[4] Under the FIRO, the Monetary Authority, the SFC and the IA are the resolution authorities for within scope financial institutions under their respective purview.

[5] In addition, the Monetary Authority is the resolution authority for a small number of FMIs which are designated by the Monetary Authority as designated clearing and settlement systems under section 4(1) of the Payment Systems and Stored Value Facilities Ordinance (PSSVFO), other than those which are wholly owned or operated by the Government.

Banking Stability

Chart 3 International evolution of safety net and crisis management tools



This progress has been recognised by the FSB as part of its 2017 peer review of Hong Kong's framework for the resolution of financial institutions. The FSB Peer Review Report[6] confirmed that Hong Kong has legal powers and safeguards related to resolution that are consistent with the requirements of the *Key Attributes* and noted that Hong Kong is *"one of the few FSB jurisdictions with a fully cross-sectoral resolution regime"*.

The Monetary Authority's function as a resolution authority

Under the FIRO, the Monetary Authority is the resolution authority for all AIs. In addition, the Monetary Authority is designated by the Financial Secretary as the lead resolution authority for each of the existing cross-sectoral groups[7] in Hong Kong that include banking sector entities within the scope of the FIRO. Accordingly, the Monetary Authority has lead responsibility for resolution planning and, if needed, resolution execution of these groups in Hong Kong.

The resolution authority function of the Monetary Authority is supported by an operationally independent Resolution Office which was established within the HKMA on 1 April 2017.

Resolution Office

was established within the HKMA on 1 April 2017.

[6] The report of the FSB Peer Review of Hong Kong was published on 28 February 2018.

[7] There is presently a list of 25 cross-sectoral groups of which the Monetary Authority is designated as the lead resolution authority. See the HKMA website.

Since its establishment, the Resolution Office has been working to operationalise the resolution regime in Hong Kong through developing resolution policies, undertaking resolution planning for AIs, building up its resolution capability and communicating actively with the market. The following four sections elaborate on this work to date in more detail.

Resolution policy, standards and guidance

In order for resolution to be both feasible and credible, each financial institution needs to be organised and managed during normal times in a way that facilitates effective use of the stabilisation options in the event of its failure. Pursuant to the FIRO, the Monetary Authority may publish guidance about any matter relating to the functions given to it as a resolution authority by the FIRO, including the communication of resolution standards which AIs are expected to meet.

To this end, on the same day that the FIRO came into operation, three Code of Practice (CoP) chapters under the FIRO were published, namely 1) Core Information Requirements for Resolution Planning, 2) The HKMA's Approach to Resolution Planning, and 3) Operational Independence of the Monetary Authority as Resolution Authority. See *"Development of resolution standards and guidance in Hong Kong"* below for more details.

Development of resolution standards and guidance in Hong Kong

Core information requirements for resolution planning

Following two rounds of industry consultations, the HKMA issued a CoP chapter under the FIRO entitled *Core Information Requirements for Resolution Planning (CI-1)*, which specifies the core information for resolution planning that AIs will be expected to provide. The HKMA has since requested core information from AIs in phases, starting with those AIs which are considered to have more significant potential impact on financial stability in Hong Kong should they fail.

Operational independence of the Monetary Authority as resolution authority

The *Key Attributes* set out a number of attributes that a resolution authority should have, one of which is "operational independence" consistent with its statutory responsibilities, transparent processes, sound governance and adequate resources. The CoP chapter entitled *Operational Independence of the Monetary Authority as Resolution Authority (RA-1)* describes the measures that have been taken to ensure the Monetary Authority is operationally independent as a resolution authority under the FIRO.

The HKMA's approach to resolution planning

The development of a feasible and credible resolution strategy is needed to facilitate effective use of resolution powers in the event of an AI's failure. To this end, resolution planning is carried out to determine a preferred resolution strategy for an AI, which will then be developed into an operational plan for the AI. The CoP chapter entitled *The HKMA's Approach to Resolution Planning (RA-2)* provides guidance to the industry on the HKMA's approach in this respect in relation to AIs.

Banking Stability

In developing future resolution standards for AIs to address barriers to resolvability, the Monetary Authority will have regard to the resolution guidance and standards published by the FSB and international standard-setting bodies (Chart 4).

Chart 4 Common barriers to resolvability of systemic banks – international policy development

Barrier to resolvability	International policy development
1. Insufficient external and internal loss-absorbing capacity	◉ FSB Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution & TLAC Term Sheet ◉ FSB Guiding Principles on the Internal TLAC of G-SIBs
2. Inability to maintain operational continuity in resolution	◉ FSB Guidance on Arrangements to Support Operational Continuity in Resolution
3. Inability to avoid early termination of financial contracts	◉ ISDA Universal Resolution Stay Protocol ◉ ISDA Jurisdictional Modular Protocol
4. Inability of valuation systems to meet resolution valuation requirements	◉ FSB Principles on Bail-in Execution Consultation
5. Inability to meet funding need in resolution	◉ FSB Guiding Principles on the Temporary Funding Needed to Support the Orderly Resolution of a G-SIB ◉ FSB Funding Strategy Elements of an Implementable Resolution Plan Consultation
6. Inability to maintain access to payment, clearing and settlement services from FMIs & banks	◉ FSB Guidance on Continuity of Access to FMIs for a Firm in Resolution
7. Bail-in execution preparedness	◉ FSB Principles on Bail-in Execution Consultation

The HKMA has been actively involved in the formulation of many of these international resolution standards through its membership of the FSB – see "*HKMA's contribution to international resolution policy development*" below for more details on the HKMA's participation in FSB-related policy work during 2017.

HKMA's contribution to international resolution policy development

The significant presence of global and regional banking groups in Hong Kong and the continued expansion of some locally incorporated AIs in the region mean that effective resolution relies heavily on internationally harmonised resolution policies and standards.

As a result, through its membership of the FSB, the HKMA continued its active involvement in the formulation of international resolution standards focused on solving the "Too Big To Fail" problem. The HKMA is a member of the FSB Resolution Steering Group and the FSB CBCM Group for banks, which are responsible for overseeing and developing resolution standards and monitoring their implementation by systemically important financial institutions.

The HKMA chaired the FSB Legal Experts Group and co-chaired the FSB CBCM Internal Total Loss-Absorbing Capacity (TLAC) Workstream, both of which completed their agreed mandates and objectives in 2017. The HKMA also participated in expert working groups under the CBCM Group on bail-in execution, funding and public disclosure, and contributed to the work of CBCM workstreams on the continuity of access to FMIs and solvent wind-down.

The HKMA attended ten international meetings of the aforesaid FSB groups in 2017, a number of which were organised by the HKMA and took place in Hong Kong. A range of guidance and consultation papers were published by the FSB in the year, including on internal TLAC, bail-in execution, funding strategy, continuity of access to FMIs and central counterparty resolution and resolution planning. These continued to facilitate consistent implementation of measures by authorities to address the "Too Big To Fail" problem and informed the development of resolution standards and guidance in Hong Kong.

The HKMA's policy priorities were informed by the FSB's resolution standards. Following the HKMA's finalisation of core information requirements for resolution planning, the HKMA prioritised work on addressing two barriers to resolution in 2017: insufficient loss-absorbing capacity (LAC) and disorderly exercise of early termination rights.

On the first barrier, the HKMA has been working to develop policy proposals in relation to LAC requirement rules for AIs under the FIRO. Ahead of launching a public consultation in January 2018, the HKMA published a *Quarterly Bulletin* article in 2017 to explain the importance of making LAC requirements and set out some of the key policy design questions. A quantitative impact study and bilateral discussions with relevant stakeholders were conducted as part of the LAC policy development process.

On the second barrier, the HKMA has been developing its policy thinking on regulating stays on early termination rights and working with the International Swaps and Derivatives Association, Inc. (ISDA) on addressing this barrier locally. To this end, an important step towards removing this barrier locally was achieved with ISDA's publication of the *Hong Kong Country Annex* to the *ISDA 2015 Universal Resolution Stay Protocol (ISDA Protocol)* in December 2017. The *Hong Kong Country Annex* extends the coverage of the *ISDA Protocol* to the Hong Kong resolution regime and represents an important step towards meeting an international commitment to reducing the risks associated with the disorderly early termination of certain financial contracts of G-SIBs in resolution.

The *ISDA Protocol* (and the *Country Annex*) will not, however, eliminate entirely the risk to orderly resolution of a disorderly exercise of early termination rights in financial contracts. To this end, the HKMA expects to develop rules pursuant to the relevant rule-making power under the FIRO to require broader adoption of contractual recognition of stays, and intends to consult on the relevant policy proposals in 2018.

Resolution planning for authorized institutions

In 2017, the HKMA continued to advance its structured bilateral resolution planning programmes with certain D-SIBs that could pose the greatest systemic risk in Hong Kong should they fail. This work is carried out in close co-ordination with the relevant home and host authorities. Considerable progress was made by these AIs to implement structural changes to their legal, financial and operational arrangements in order to enhance the feasibility and credibility of the authorities' preferred resolution strategies. Examples include changing legal holding structure, issuing debt instruments, setting up dedicated service companies and incorporating resolution-proof clauses into internal and external service agreements.

Further to the publication of the aforesaid CoP chapter on *CI-1*, the HKMA began rolling out the requirements to AIs by phases, starting with the D-SIBs at the time the requests were made in 2017.

On cross-authority co-ordination, the HKMA led regional resolution planning for a G-SIB which has its Asia Pacific headquarters in Hong Kong, including through the organisation of an annual Asian crisis management group (CMG) meeting for the relevant home and host authorities in the region.

In addition, the HKMA continued to participate in cross-border resolution planning of 12 G-SIBs through its membership of CMGs, critically assessing the progress made by these G-SIBs in addressing impediments to resolvability and ensuring local specificities were taken into account.

Operational capacity

Substantial progress was made in 2017 to build up the HKMA's operational capacity as a resolution authority. For instance, a cross-departmental organisational governance structure and framework has been developed to co-ordinate the management of systemic crises involving failure of an AI. A framework to provide early warning signals to trigger contingency planning for at-risk AIs was established between banking supervision and resolution functions. In addition, an operational framework for assessing the conditions for the initiation of resolution of AIs was developed. Finally, the HKMA will continue to use drills and simulation exercises to further strengthen its operational readiness for managing failure of an AI in an orderly manner.

Banking Stability

Resolution Office's engagement with the industry and regional authorities

The HKMA maintained close communication with the banking industry in relaying and explaining resolution standards and its approach to resolution planning, through meetings with the management of AIs and joint workshops with industry associations. The HKMA is also committed to promoting the understanding of AIs' counterparties of the implications of the entry into resolution of an AI should it fail and the impact of resolution standards and resolution planning on AIs during normal times. Similar engagement with investors would also facilitate their understanding of risks underlying their financial investments and the safeguards available under the resolution regime.

The HKMA has also employed various communication channels to raise awareness of the resolution regime in Hong Kong more widely. In August, further to the commencement of the FIRO, a workshop was held with the press on the resolution regime in Hong Kong. In addition, the Chief Executive of the HKMA published an *inSight* article in the same month which explained the importance of the resolution regime to banking stability.

The HKMA took part in and spoke at various industry events, such as conferences of RiskMinds, ISDA and the Financial Stability Institute. In addition, the HKMA has continued its focused bilateral engagements with relevant market stakeholders, including rating agencies, law firms, industry bodies and LegCo members, in relation to the resolution regime in Hong Kong.

Roundtable discussion with the press about resolution.

Regulator's Dialogue with the industry on resolution.

To facilitate the development of harmonised resolution regimes in the Asia Pacific region, the HKMA also continued to strengthen its relationship with authorities in the region on resolution policies and firm-specific resolution planning matters. In 2017, these included bilateral dialogue, knowledge sharing and co-operation with authorities from a number of jurisdictions, including Indonesia, Mainland China, Malaysia, Singapore, South Korea and Thailand. On a multilateral level, the HKMA participated in regional forums, such as the EMEAP, and shared its experiences in establishing a *Key Attributes*–compliant resolution framework.

Bank consumer protection

Code of Banking Practice

The industry's overall compliance with the Code of Banking Practice (the Code) remains satisfactory. The industry has completed a self-assessment exercise covering the period from 6 February to 31 December 2016, which was the first self-assessment conducted by AIs since the revised edition of the Code became effective on 6 February 2015. AIs' subsidiaries and affiliated companies controlled by them, which are not AIs and are not licensed, regulated or supervised by any financial regulators in Hong Kong, should also observe the revised Code when providing banking services in Hong Kong, where applicable. According to the self-assessment results, almost all AIs as well as their subsidiaries and affiliated companies reported full or nearly full compliance[8], while a few AIs have taken prompt remedial action, mainly to improve their policies and procedures.

8 With five or fewer instances of non-compliance.

In February, the HKMA issued a circular to all AIs amending the relevant sections of the Code on legal expenses in preparing mortgages and fire insurance for mortgaged properties and clarifying the supervisory expectations in relation to these provisions, as enquiries and complaints indicated that some AIs may not fully appreciate the policy intention, which is to enhance transparency of the legal expenses and maintain flexibility in providing options of the insured amount.

In December, AIs on the Code of Banking Practice Committee, with the support of HKAB and the Hong Kong Association of Restricted Licence Banks and Deposit-taking Companies, submitted an application to the Competition Commission for a decision to exclude compliance with the Code from the ambit of the First Conduct Rule of the Competition Ordinance, so as to seek clarity and legal certainty that the customer protection objective of the Code provisions is consistent with that of competition requirements. Meanwhile, the HKMA reminded all AIs that they were still required to fully comply with the Code, which was important for customer protection.

Financial inclusion

The HKMA has been encouraging the banking industry to put the spirit of financial inclusion into practice when developing their banking networks. The industry responded positively with a plan to establish a total of ten branches and three mobile branches in remote areas and public housing estates. Six of the branches and all three mobile branches were set up by the end of the year. The industry has also worked out an arrangement with EPS Company and a convenience store chain to launch in early March 2018 a pilot initiative that allows the elderly to withdraw cash via EPS at any of the 34 convenience stores of the chain in remote areas, without the need to make purchases. Subject to the effectiveness of the pilot scheme, the target is to expand the service to most of the outlets of the convenience store chain by the end of 2018.

6 physical branches and **3 mobile branches** launched in remote areas and public housing estates.

HKMA Chief Executive, Mr Norman Chan, tries out a video teller machine.

HKMA Chief Executive, Mr Norman Chan, presents a bank counter specially designed at a lower height to facilitate access by people with disabilities.

As part of its efforts to promote financial inclusion, the HKMA has been encouraging retail banks, in providing basic banking services to the public, to pay special attention to customers in need. During the year, the HKMA worked with the banking industry to further enhance accessibility of basic banking services to customers with disabilities, and hosted a sharing session in October for representatives of disabled groups and retail banks to exchange views on barrier-free banking services. In addition, the HKMA worked together with HKAB and the Equal Opportunities Commission to enhance the transparency of information to help ethnic minority customers better understand their rights and responsibilities when using banking services, as well as to jointly publish information on banking services in seven languages commonly used by the ethnic minority community in December.

Opening and maintaining bank accounts

The progressive tightening of international standards to combat ML and TF has led to a strengthening of banks' AML/CFT systems and controls over the past few years. It is important that banks' AML/CFT controls operate effectively and efficiently, and do not pose an unreasonable barrier to bona fide businesses and the public when seeking access to banking services. To achieve this objective, the HKMA continued to work closely with the banking industry and the business community on the issue of account opening and maintenance, providing guidance and clarity around the expectation that banks should manage both their risks and their customer relationships effectively and that CDD requirements should be proportionate with respect to a customer's background, circumstances and likely ML/TF risk, rather than apply a "one-size-fits-all" approach.

In order to provide more comprehensive information relating to bank account opening and maintenance, and to collect views as well as to answer related enquiries from the public, business communities as well as other stakeholders, the HKMA set up a dedicated webpage on its website in March and launched a dedicated email account (accountopening@hkma.gov.hk) to facilitate bank customers' submission of enquiries and feedback to the HKMA. The HKMA webpage contains information about account opening and maintenance procedures, documentation and information requirements, and the contact details of banks. It also features a "What's New" section that provides information on the latest initiatives of banks, what banks should not do, in addition to other useful tips. Since the launch of the HKMA's dedicated webpage and email account, useful feedback and comments have been received and followed up by a dedicated team at the HKMA.

Dedicated email account

accountopening@hkma.gov.hk

To enhance communication with the business community and other stakeholders, the HKMA jointly organised with InvestHK and the Trade and Industry Department two rounds of briefing and networking sessions in April and June respectively. The sessions provided useful platforms for sharing with chambers of commerce, local small and medium-sized enterprise (SME) associations and professional organisations on the changing international landscape and various improvement measures introduced by banks, and for gathering customer feedback. HKAB also reached out to the business community, for example, by taking part in a seminar on SME banking services in April to promote banking services available for SMEs. A number of banks reached out to the chambers of commerce to share their policies and practices on account opening and maintenance.

Positive feedback has been received from chambers of commerce and the local business community about the efforts in addressing the account opening and maintenance issue. In addition to the improvement measures introduced last year, banks have taken further steps to enhance the account opening process and customer experience. For example, all retail banks provide a "pre-vetting" service, in which banks accept applicants' submissions of account opening documents via email, fax or mail for initial pre-screening or pre-assessment by the banks before arranging face-to-face meetings with the applicants, with a view to providing greater convenience to applicants. Some banks have also set up dedicated hotlines and dedicated branches resourced with properly trained front-line staff members to handle account opening related matters, so as to improve customer experience. As front-line staff members are the first point of contact with customers, the HKMA requires banks to properly train their front-line employees to equip them with sufficient technical knowledge and experience in dealing with the account opening process and in communicating with potential customers in a user-friendly manner. Some banks have made changes to how they interpret AML/CFT requirements to better reflect the risk-based approach.

Opening and maintaining bank accounts (continued)

On average about **10,000** new business accounts were opened per month, of which some **60%** to **70%** relating to SMEs and start-up companies.

The retail banking sector opens on average about 10,000 new business accounts per month, of which some 60% to 70% relating to SMEs and start-up companies. Of the successful cases, on average some 50% to 60% were able to open accounts within two weeks, and that some accounts could even be opened as quickly as within a few days. The actual timeframe would naturally depend on the complexity of individual cases and the availability of the necessary information required of the applicants. In fact, the average unsuccessful rate of account opening applications excluding an outlier, is below 5%, representing a substantive improvement in customer experience.

While there are indications that customer experience has improved, the HKMA sees the need to sustain its work in this area. It has commenced a mystery shopping programme relating to the account opening processes of banks in Hong Kong, to assess the effectiveness of measures adopted by AIs in improving customer experience. The HKMA is also conducting a round of thematic reviews on the application of AML/CFT requirements during the customer on-boarding process of SME segment with a view to identifying issues and good practices for sharing with the industry. Meanwhile, the HKMA continues to encourage the banking industry to utilise new technology, such as remote onboarding and KYCU, which may introduce greater efficiency to CDD processes, reduce unnecessary compliance burden and, as a result, improve the customer experience.

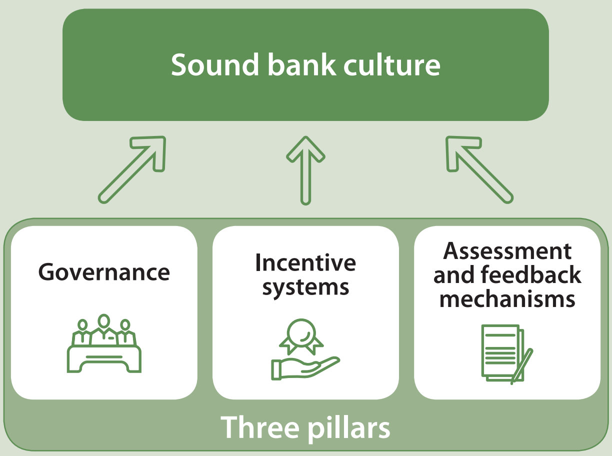
The HKMA will continue to work with the banking industry, business community and relevant stakeholders to deal with this global and complex issue. The HKMA's aim is to maintain a robust AML/CFT regime in Hong Kong that does not undermine access by legitimate businesses and ordinary citizens to basic banking services.

Banking Stability

Bank culture

In recent years, while considerable efforts have been made globally by banking supervisors and senior management of banks in enhancing standards and practices in respect of governance and the risk management framework, it is increasingly recognised that much more needs to be done to promote a sound culture at all levels of banks. In particular, although banks have generally adopted practices to promote a proper culture, cases involving undesirable behaviour of staff, which very often affects the interests not only of the institutions concerned but also of customers, continue to happen in various places round the world. This signifies the need for banks to further improve the effectiveness of culture enhancement initiatives so that banks put their safety and soundness as well as the interests of depositors and customers at the centre stage in the pursuit of commercial interests.

The HKMA initiated a bank culture reform in March to develop and promote a sound corporate culture that supports prudent risk management and contributes towards incentivising proper staff behaviour that will lead to positive customer outcomes and high ethical standards in the banking industry. While there is no "one-size-fits-all" approach, the HKMA expects AIs to adopt a holistic and effective framework to foster a sound culture within the institution. Particular attention should be given to the three pillars for promoting a sound bank culture, namely governance, incentive systems as well as assessment and feedback mechanisms.



On governance, the HKMA expects board and senior management to set an appropriate "tone from the top" and lead by example to ensure that the AI's desired culture is understood and shared by all levels of staff. An AI and its staff must internalise good culture and values in such a way that they behave properly not because they are afraid of being caught and punished, but because they believe it is unethical to do otherwise. In practice, AIs should have a dedicated board-level committee chaired by an independent non-executive director (INED) to focus on culture-related matters.

A good incentive system, covering staff recruitment, performance management, remuneration and promotion, should not only reward good business performance but also take into account adherence and non-adherence to the institution's cultural and behavioural standards, with a view to avoiding incentivising short-term business performance at the expense of the interests of customers and the safety and soundness of the institution. It should also promote the alignment of the interests of owners, managers, customers and public stakeholders.

At the same time, the "tone from the top" should go hand in hand with an "echo from the bottom". The HKMA expects AIs to put in place an interactive feedback loop and different metrics, such as customer surveys and mystery shopping programmes, to assess the actual behaviour of management and staff on the ground. There should be an effective escalation policy within the institution, including a whistle-blowing mechanism, to allow timely reporting of any illegal, unethical or questionable practices observed by staff and stakeholders in a confidential setting without the risk of reprisal. Results from such assessment and feedback mechanisms provide useful feedback which should be reported to senior management and the board-level committee to help them consider whether further enhancements are necessary.

AIs are required to review their governance arrangements as well as policies and procedures in relation to corporate culture and implement the necessary enhancement measures.

Engagement of intermediaries by authorized institutions

Various measures were introduced to help further protect the interests of bank customers and reduce the potential risks to the reputation of the banking industry arising from possible malpractices by fraudulent lending intermediaries. In particular, following the HKMA's reminders to 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 about 1,400 to 2,200 enquiries received each month. Retail banks have also implemented the improvement measure of showing the educational message of responsible borrowing – "To borrow or not to borrow? Borrow only if you can repay!" – on all advertisements in relation to their lending business to retail customers and SMEs.

Enhancing customer communication regarding Automatic Exchange of Financial Account Information in Tax Matters (AEoI)

In the light of the implementation of the AEoI regime in Hong Kong, which also requires the co-operation of bank customers, particularly in terms of information collection and updating, the HKMA has worked with and closely guided the banking industry in developing an AEoI fact sheet which aims at addressing likely questions that bank customers may raise. The AEoI fact sheet can be found on the respective websites of HKAB, the PWMA and the HKMA.

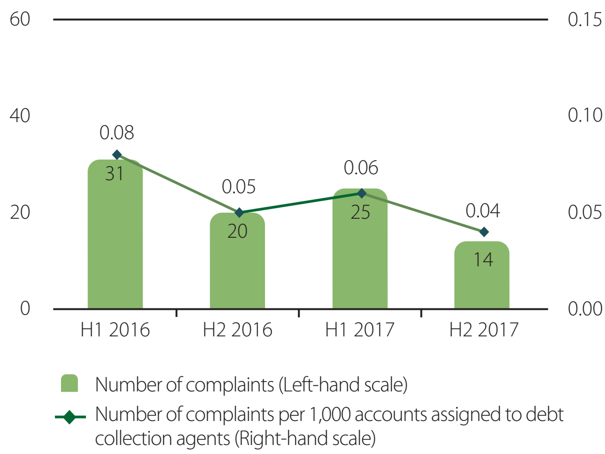
Credit data sharing

At the end of 2017, 112 AIs and AI subsidiaries shared commercial credit data through the Commercial Credit Reference Agency. The scheme contains the credit data of more than 118,100 business enterprises, about 14% of which were sole proprietorships and partnerships. In the light of market development and practical experience, the commercial credit database was expanded in December to cover more non-listed limited companies with an annual turnover of up to HK$100 million, from the previous threshold of HK$50 million. The expanded coverage of the database would further enhance its comprehensiveness and relevance, which helps strengthen the credit risk management capacity of AIs.

Customer complaints relating to debt collection agents employed by authorized institutions

The number of complaints received by AIs about their debt collection agents decreased to 39 from 51 in 2016 (Chart 5). The HKMA will continue to monitor AIs' engagement with debt collection agents.

Chart 5 Complaints received by AIs about their debt collection agents



Deposit protection

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

A full-scope payout rehearsal was conducted in the fourth quarter of 2017 to test the capability of the Hong Kong Deposit Protection Board and its network of service providers in meeting the new target payout timeframe under a gross payout approach. The results illustrated that the target of making compensation payments to the majority of eligible depositors within seven days could be met. The Board has also commenced a two-year payout system modernisation project to further improve the resilience and performance of the payout system and expects to complete the project by the end of 2018.

To reinforce public awareness and understanding of DPS protection, a multi-media publicity campaign with a new thematic TV commercial, *Everyone Can Save with Confidence*, was launched. An integrated communication campaign with advertisements on various media and channels was conducted to reach audiences from different walks of life.

Banking Stability

Licensing

At the end of 2017, Hong Kong had 155 licensed banks, 19 restricted licence banks, 17 deposit-taking companies and 16 AMBs. During the year, the HKMA granted a banking licence to one foreign bank. Two licensed banks and three restricted licence banks had their authorizations revoked.

155 licensed banks

19 restricted licence banks

17 deposit-taking companies

16 approved money brokers

Enforcement

Banking complaints

The HKMA received 1,786 complaints about AIs and their staff members in 2017 and completed the handling of 1,885 cases, a 9% year-on-year increase. At the end of the year, the total number of outstanding cases was 456 (Table 5).

Table 5 Banking complaints received by the HKMA

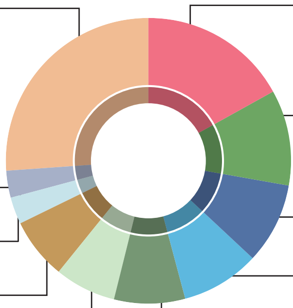
	2017			2016
	Conduct-related issues	General banking services	**Total**	Total
In progress on 1 January	243	312	**555**	539
Received during the year	237	1,549	**1,786**	1,745
Completed during the year	(380)	(1,505)	**(1,885)**	(1,729)
In progress on 31 December	100	356	**456**	555

Complaints concerning the provision of banking services increased by 29% over the year to 299 cases in 2017. The majority of complaints in this category concerned the freezing and closure of accounts. In a number of these cases, banks decided to close the accounts because suspicions were aroused during ongoing monitoring processes, or because the customers were not able to provide adequate information for account maintenance purposes. There were also cases in which the accounts were subsequently maintained after relevant information was provided by customers to address banks' concerns. Information suggests that the situation is not an industry-wide phenomenon and that most complaint cases are related to individual international banking groups. The HKMA has required the banking groups concerned to review their policies and procedures as well as undertake measures to improve the execution and customer communication issues revealed by the cases.

Complaints concerning remittance services also rose by 93%, from 68 cases in 2016 to 131 cases in 2017. The major allegations in these complaints included delays due to the more comprehensive CDD measures taken by originating or beneficiary banks, processing errors and issues related to counterparty banks.

Complaints related to the mis-selling of investment and insurance products decreased by 11% to 146 cases, mainly due to a drop in complaints about the mis-selling of investment products, including foreign exchange accumulators (Chart 6).

Chart 6 Types of services or products concerned in banking complaints received by the HKMA



Enforcement actions

Enforcement of the Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) Ordinance (AMLO) continued to be a priority, with a number of cases under investigation during the year. In April, the HKMA issued a public reprimand and imposed a pecuniary penalty of HK$7 million on a bank for contraventions of the AMLO. The investigation found deficiencies in the bank's AML/CFT systems and controls for managing business relationships with politically exposed persons (PEPs)[9].

Enforcement work has also reflected and reinforced the HKMA's efforts in promoting bank culture reform and high ethical standards in the banking industry. In September, the HKMA suspended the registration of a relevant individual (Rel) following an investigation which found the Rel had completed six sets of Individual Financial Statements for two personal guarantors of a corporate client without their consent and without verifying the accuracy of all the information therein, and had forged the signatures of the two personal guarantors on the relevant Individual Financial Statements. The matter was also reported to the relevant law enforcement agency for appropriate follow-up. Separately, following investigation and referrals by the HKMA, the SFC imposed disciplinary sanctions during the year on seven former Rels, ranging from suspension to a life ban, for cases including forgery of customers' signatures and concealment of trading error.

After the HKMA's investigation into the systemic failures of a bank and its referral of the findings to the SFC in relation to the sale of Lehman Brothers-related Notes and Leveraged Forward Accumulators, the bank was fined HK$400 million by the SFC. In addition, the bank's registration for Type 4 regulated activity (advising on securities) was suspended for a period of one year, whilst its registration for Type 1 regulated activity (dealing in securities) was also suspended partially for a period of one year. This followed the decision of the Securities and Futures Appeals Tribunal in November to uphold the SFC's disciplinary actions against the bank.

The HKMA has continued to investigate or otherwise follow up on issues arising from banking complaints or examinations during the year that raised possible concerns regarding compliance with laws and regulatory requirements and fitness and properness. This has resulted in the referral of 39 cases to the relevant financial regulators for appropriate action, the issuance of 101 compliance advice letters to AIs and their staff members who were found not to have acted in full compliance with the relevant regulatory requirements, and other supervisory outcomes. In 2017, the HKMA also collaborated with the SFC in relation to investigation work and continued its close co-operation and dialogue with other local financial regulators on issues of mutual interest.

9 PEPs are individuals whose prominent positions in public life may make them vulnerable to corruption and they therefore pose a higher risk of ML.

Banking Stability

The Ombudsman's Grand Award

The HKMA received the Grand Award of The Ombudsman's Awards 2017, after receiving a runner-up prize in the Ombudsman's Awards 2012. The Award is a recognition of the HKMA's positive and pragmatic approach in formulating an effective complaint handling mechanism which has improved complaint management. The Ombudsman also recognised the HKMA's good efforts in rendering assistance to the Ombudsman in its investigations, including the provision of timely and comprehensive information despite the volume of documents and the complexity of issues involved. The HKMA will continue to use its best endeavours to handle customer complaints against banks, with a view to enhancing investor protection and ensuring that customers are treated fairly by banks.

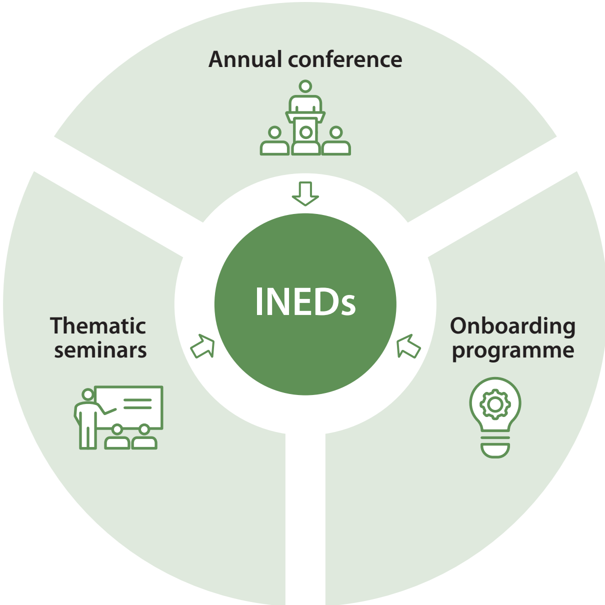
HKMA Chief Executive, Mr Norman Chan (right), receives the Grand Award on behalf of the HKMA from the Ombudsman, Ms Connie Lau.

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 2017, drawing AIs' attention to trends in banking complaints and emerging topical issues. The topics included: determination of the insured amount for fire insurance on mortgaged property; proper and efficient handling of customer complaints by banks; provision of annualised percentage rate of unsecured personal loans by banks; and collection of information in CDD processes.

Capacity building in the banking sector

Director empowerment programme



In March, the HKMA hosted an inaugural conference themed *Cultivating Culture in the Banking Industry in Hong Kong* for INEDs. It was well received by over 100 INEDs from 34 locally incorporated AIs. Distinguished supervisors and market experts joined the conference to share insights on bank culture development.

During 2017, thematic seminars were organised regularly to keep INEDs updated on topical issues in the banking sector and to provide a channel for INEDs to exchange views with industry experts and the HKMA. Examples of topics of mutual interest covered in the seminars included bank culture reform, board practices, banking risks and trade-based AML.

In October, the HKMA launched a new Onboarding Programme for INEDs. The programme provided newly appointed directors with essential practical knowledge about the financial services industry, with a special focus on the evolving landscape and regulatory environment of the banking industry.

The HKMA worked with Hong Kong's Independent Commission Against Corruption (ICAC) to organise a case sharing seminar in November with a special focus on the latest modus operandi and effective detection of corruption cases. Through sharing by senior ICAC officials, bank directors were better equipped to take up a more active role in combating potential corruption and, more importantly, in maintaining a sound value system in the banks they serve.

The HKMA also organised meetings with Hong Kong Interbank Clearing Limited and the Mandatory Provident Fund Schemes Authority to share its views and experiences in empowering INEDs. These authorities were invited to sit in on the seminars for INEDs, to better understand the HKMA's work in director empowerment.

HKMA Deputy Chief Executive, Mr Arthur Yuen (right), discusses with Chief Executive of Financial Conduct Authority, Mr Andrew Bailey, in the First Annual Conference for INEDs.

Talent development for banking practitioners

During the year, the HKMA continued to work closely with the banking industry and relevant professional bodies to develop various modules under the Enhanced Competency Framework (ECF) for capacity building and talent development purposes. Two ECF modules on treasury management and retail wealth management were launched in 2017 after the completion of industry consultations. With support from the working group, comprising seasoned banking practitioners, the development of competency standards for the professional level module of the ECF on AML/CFT was also making good progress.

Since the launch of the core level of the ECF on AML/CFT and the ECF on cybersecurity at the end of 2016, a total of 3,000 banking practitioners had obtained recognised certifications to meet ECF benchmarks under these two workstreams by end-December 2017. This could help enhance the core competency and ongoing professional development of banking practitioners to meet the needs of a continuously changing business environment.

The HKMA organised a Senior Bankers' Seminar jointly with the China Banking Regulatory Commission in Beijing and Langfang in September, with the participation of over 70 senior banking executives. The seminar provided banking executives insights over the developments of Mainland China in areas such as the economy, financial regulations, fintech and international relations.

As a regular training programme, the HKMA has been keeping banking practitioners at all levels updated on the regulatory requirements and the policy intention through Regulator's Dialogue sessions and sharing seminars. In 2017, six seminars were organised on topics such as AML, bank culture reform, banking risks, international standards and resolution regime.

The HKMA is also mindful of developing future talent for the banking sector. During the year, the HKMA and the PWMA launched an apprenticeship programme for private wealth management and organised two rounds of recruitment in April and November. The programme is the first initiative offering full-time students of tertiary institutions funded by the University Grants Committee a multi-year experience dedicated to training in private wealth management, potentially leading to a job offer from the same firm after graduation. Some 80 apprentices were recruited to work in a range of functions such as client services, product design, risk management and compliance.

Enhanced Competency Framework

2016	☑ Anti-money laundering and counter-financing of terrorism ☑ Cybersecurity
2017	☑ Treasury management ☑ Retail wealth management
Upcoming	☐ Credit risk management ☐ Risk management and compliance

Banking Stability

Consumer education

In 2017, the HKMA continued its Consumer Education Programme focusing on how to be smart and responsible financial consumers. The infotainment programme *Financial Wisdom Fighters* on TV was a prelude, highlighting smart tips on using various banking and financial services through artistes competing in a simulated digital battle game.

A poster featuring the infotainment programme "Financial Wisdom Fighters".

As it is common for consumers to use credit cards to make prepayment for services, a thematic campaign was conducted to enhance public awareness and understanding of the credit card chargeback protection, and to remind the public to think carefully before making prepayment. Cross-media promotion via TV, radio, print, internet (including the HKMA website and the HKMA Smart Tips Channel on YouTube), as well as mobile and out-of-home platforms were arranged to disseminate the messages to the public.

A thematic campaign to raise awareness of credit card chargeback protection.

Under the theme of digital financial services, videos regarding online and mobile payment and peer-to-peer fund transfer via smartphones were produced to convey the relevant tips on using these services in a humorous manner. Online and offline promotion were rolled out to reach the public through popular websites and smartphone apps, public transport, cinemas, outdoor TV walls, as well as print media and radio stations.

A video on digital financial services.

During the year, seasonal promotions were conducted to provide timely tips on using different banking and financial services, for example, the smart use of credit cards and ATM cards during festive holidays, and reminders on assessing individual borrowing needs and product suitability before committing to a loan in the tax season. Other initiatives to reinforce public security awareness in using internet banking services and advocate responsible borrowing were also carried out.

An online game to bring out educational messages interactively.

On youth programmes, the HKMA co-organised the "Hong Kong Liberal Studies Financial Literacy Championship" with various stakeholders, to enhance the financial knowledge of secondary school students through an online quiz, a financial experiential game and a live competition. In addition, talks were organised to promote responsible spending and the smart use of banking and related services among senior secondary school and university students.

The HKMA also continued to support the Investor Education Centre in promoting financial literacy in Hong Kong.

Students' financial knowledge is tested via an online quiz and a live competition.

Banking Stability

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 aim is to make the 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 PSSVFO empowers the Monetary Authority to designate and oversee clearing and settlement systems that are material to the monetary or financial stability of Hong Kong, or 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 (CMU), the Hong Kong dollar Clearing House Automated Transfer System (CHATS), the US dollar CHATS, the Euro CHATS, the Renminbi CHATS and the Continuous Linked Settlement (CLS) System.

One of the functions of the Monetary Authority is to maintain the stability and integrity of the monetary and financial systems of Hong Kong, including the maintenance and development of Hong Kong's financial infrastructure. In this connection, the HKMA is responsible for overseeing the OTC Derivatives Trade Repository (HKTR). While the HKTR is not a clearing or settlement system and thus not designated as such under the PSSVFO, the Monetary Authority shall ensure that the HKTR is operated in a safe and efficient manner. It is the policy intention of the HKMA to oversee the HKTR in the same way, and applying, where relevant, the same standards as the other designated clearing and settlement systems under its purview. All the designated clearing and settlement systems and the HKTR are treated as FMIs in Hong Kong.

The HKMA adopts international standards in its oversight framework for FMIs. 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) in 2012. 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 HKMA and the SFC jointly issued a policy statement in March 2013 on the adoption of the PFMI for systematically important FMIs in Hong Kong. The requirements under the PFMI are incorporated in the relevant guidelines on designated clearing and settlement systems and trade repository issued by the HKMA.

The HKMA oversees local FMIs under its purview through off-site reviews, continuous monitoring, on-site examinations and meetings with management. All the FMIs continued to comply with the relevant requirements.

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.

In addition to participating in the monitoring and assessment of other jurisdictions, the HKMA is also one of the parties being assessed. During the year, the HKMA continued to work with FMIs under its purview to ensure observance of the PFMI. The HKMA has completed the PFMI assessments on FMIs under its oversight. All the FMIs have also 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. The level 2 assessment report published by the CPMI-IOSCO in 2017 confirmed that the HKMA had duly implemented the PFMI in its oversight framework, and obtained the highest rating in all relevant principles for the FMIs under its purview.

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 use and rely on SWIFT's services and may be exposed to risks in the event of any disruption to SWIFT's operations. During the year, the HKMA attended forum 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 co-operative 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 for 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 (PvP) basis. During the year, the HKMA attended various meetings of the CLS Oversight Committee to discuss operational, development and oversight matters.

The HKMA has established co-operative oversight arrangements with the relevant authorities both at 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. On the domestic front, the HKMA has signed a Memorandum of Understanding with the SFC. Internationally, the HKMA held discussions with the relevant overseas authorities to further strengthen the co-operative oversight of links between the FMIs in Hong Kong and those overseas. In particular, the HKMA has established co-operative oversight arrangements with overseas regulators for the PvP links between the US dollar CHATS and the Malaysian ringgit, Indonesian rupiah and Thai baht Real Time Gross Settlement systems; and for the various cross-border links between the CMU and its overseas counterparts.

Independent tribunal and committee

An independent Payment Systems and Stored Value Facilities Appeals Tribunal has been established to hear 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 met twice in 2017 and reviewed four regular reports and 36 accompanying oversight activities management reports. 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 2018 AND BEYOND

Supervisory focus

Supervision of operational and technology risks

The HKMA will continue to step up its supervision of technology risk in response to growing cyber threats and the continued adoption of new technology by banks. In 2018, the HKMA will monitor AIs' implementation of the CFI and update its supervisory guidance on business continuity planning and e-banking, so as to keep pace with market development. The HKMA will also step up its supervision of AIs' outsourcing arrangements in response to an increasing use of external service providers.

Smart Banking

In 2018, the HKMA will complete a review of the existing Guideline on Authorization of Virtual Banks to facilitate the introduction of virtual banking in Hong Kong, and improve digital customer journeys as part of its Banking Made Easy initiative. The HKMA will also continue to clarify legal and regulatory expectations as needed to facilitate AIs' launch of remote onboarding for customers. In addition, it will work closely with the industry in its efforts to use technology to streamline account opening and maintenance without compromising customer protection and the prudent business practices of AIs, including preventive measures against ML and TF. The HKMA will continue to work with relevant financial regulators and the banking industry to facilitate the use of technology in online finance and online wealth management through the formulation of risk-based regulatory standards.

Supervision of credit risk

In respect of credit risk, the HKMA will continue to refine its surveillance system for the banking sector's exposures to major corporates. It will undertake thematic reviews and examinations focused on loan underwriting practices and lending to property developers which grew significantly in 2017. Separately, to prepare for international banks transferring the booking and management of derivatives trading activities to Hong Kong, the HKMA will strengthen its capital model review capability and streamline the approval processes.

Supervision of liquidity risk and market risk

The HKMA will remain vigilant in the supervision of liquidity risk and market risk. Global US dollar liquidity may tighten amid the continued normalisation of US monetary policy. Accordingly, the HKMA will assess AIs' preparedness for a possible tightening of US dollar liquidity.

Following the Basel Committee's implementation timeline, the NSFR requirement will come into effect in 2018. The HKMA will monitor AIs' compliance with this new liquidity requirement. The HKMA will also conduct thematic reviews to assess AIs' internal liquidity stress testing capability, given its importance as a liquidity risk management tool.

As regards market risk, the HKMA plans to evaluate AIs' compliance with new international standards in treasury activities, including the FX Global Code, and the margining and risk mitigation standards on NCCD, with a view to strengthening the industry's market risk management practices.

Prevention of money laundering and terrorist financing

In the coming year, the HKMA will continue its efforts to increase the effectiveness of its AML/CFT work. The HKMA will strengthen the legislative framework for AML/CFT through amendment of AMLO, which will come into effect in 2018, and work with the Government, industry associations and other financial regulators to bring these amendments into effect, including, for example, updating the statutory guideline.

The publication of Hong Kong's first jurisdiction-wide ML/TF risk assessment will help strengthen collective efforts to focus on higher ML/TF risks. The HKMA will also continue to work closely with the Government and other agencies in preparation for the evaluation of Hong Kong's AML/CFT regime by the FATF, which will take place in late 2018. Given its size and importance in Hong Kong's economy, the banking sector is expected to be a major focus in the assessment.

In parallel, the HKMA will continue to encourage the industry to utilise new technology, including KYCU, to enhance effectiveness in AML/CFT work and reduce unnecessary compliance burden.

Supervision of wealth management and MPF-related businesses

The HKMA will:

- continue to communicate closely with other regulators and the banking industry to provide guidance on regulatory standards in relation to the sale of investment and insurance products;
- continue to collaborate with the SFC on the supervision of financial groups consisting of RIs and licensed corporations;
- continue to conduct on-site examinations and off-site surveillance of AIs' conduct in the sale of securities, MPF and other investment and insurance products, including accumulators, debt securities, investment funds and NLTI products, as well as AIs' compliance with new regulatory requirements;
- continue to co-operate with the IA on the preparatory work for the implementation of the new statutory regime for regulating insurance intermediaries; and
- maintain close dialogue with, and provide guidance to, the industry to promote a customer-centric culture and good conduct of the banking sector.

Implementation of Basel standards in Hong Kong

Capital standards

The Basel Committee issued a standard in October 2016 to specify the regulatory capital treatment of banks' holdings of TLAC instruments issued by G-SIBs. Scheduled to come into effect on 1 January 2019, the standard aims to reduce contagion risk within the financial system if a G-SIB, as an issuer of TLAC instruments, were to fail. The HKMA intends to consult the industry on the relevant policy proposals, with a view to implementing the standard in accordance with the Basel Committee timetable through appropriate amendments to the Banking (Capital) Rules (BCR).

At the same time, the HKMA will continue to work on a set of amendments to the BCR for the implementation of a standardised approach for measuring counterparty credit risk exposures, the capital requirements for bank exposures to central counterparties and the capital requirements for banks' equity investments in funds (deferred from the original target date of 1 January 2017 to tentatively no earlier than 1 January 2019 in the light of the implementation progress in other major markets), while assessing the appropriate timing for bringing these standards into effect. The HKMA intends to issue the draft amendments for industry consultation in 2018 to allow more time for AIs to better prepare for the implementation.

In view of the comments received during a consultation on the revised securitisation framework in 2017, the HKMA has reconsidered its initial proposal of not making available the Internal Assessment Approach (IAA) (designed for unrated securitisation exposures to asset-backed commercial paper programmes) in Hong Kong. The HKMA intends to consult the industry in 2018 on policy proposals for implementing the IAA.

In December 2017, the Basel Committee published "*Basel III: Finalising post-crisis reforms*" (Basel 2017 package) in furtherance of the Basel III framework issued in December 2010 and revised in June 2011. Scheduled for implementation from 1 January 2022 with certain transitional arrangements, the Basel 2017 package aims to enhance the robustness and risk sensitivity of the standardised approaches for credit risk and operational risk, to constrain the use of internally modelled approaches, and to complement the risk-weighted capital ratio with a finalised leverage ratio and a revised and robust capital floor. The HKMA will conduct local quantitative impact assessments of the Basel III reforms with all or selected AIs, and develop policy proposals for implementing the Basel 2017 package in consultation with the industry.

With regard to market risk, the Basel Committee issued revised standards on the minimum capital requirements for market risk in January 2016 following the completion of its fundamental review of the trading book. In December 2017, the Basel Committee announced an extension of the original implementation timeline by three years to 1 January 2022. The HKMA decided to align its local implementation of the new market risk standards with the revised Basel Committee's timeline and expects to initiate industry consultation on its implementation proposals in 2019.

Disclosure standards

Implementation of the second phase of the Basel Committee's revised disclosure requirements of March 2017 will require appropriate amendments to the BDR, together with the issuance of standard templates and tables (based on those prescribed by the Basel Committee) and interpretative guidance to facilitate AIs' disclosures under the BDR. The amendments to be introduced in 2018 are intended to be applicable to the first interim disclosure of AIs in respect of their 2018 financial year.

Liquidity standards

The HKMA is updating the SPM module, "Regulatory Framework for Supervision of Liquidity Risk", to provide more guidance on the implementation of the NSFR and the CFR. A new return will be used to facilitate the reporting of the NSFR and the CFR by different categories of AIs.

Exposure limits

Following the passage of the Banking (Amendment) Bill 2017, the HKMA intends to implement new rules to replace the existing section 87 of the BO, about limitation on shareholdings, in 2018.

The HKMA expects to consult the industry on its proposed rules for local implementation later in 2018.

To supplement the planned implementation of the large exposures regime, the HKMA will review and as appropriate update the relevant SPM modules during 2018, including "Large Exposures and Risk Concentrations", "Consolidated Supervision of Concentration Risks under Part XV: §79A", "Exemption of Financial Exposures: §81(6)(b)(i)", "Letters of Comfort: §81(6)(b)(ii)", "Underwriting of Securities: §§81 and 87" and "Major Acquisitions and Investments: §87A".

Development of Supervisory Policies

Counterparty credit risk management

Following an industry consultation in 2017, the HKMA intends to finalise and issue the SPM module on "Counterparty Credit Risk Management" in 2018.

Recovery planning

The new provisions relating to recovery planning under the BO have come into operation since February 2018. The HKMA will update the SPM module on recovery planning accordingly, taking into account developments in international standards and practices on recovery planning.

Other supervisory policies and risk management guidelines

The HKMA also plans to finalise revisions to the SPM module on "Validating Risk Rating Systems under the IRB Approaches", and to update a selection of other modules to incorporate the latest guidance issued by the Basel Committee as well as other local and international standard-setters. These include the SPM module on the "Supervisory Review Process", "Foreign Exchange Risk Management", "Guideline on a Sound Remuneration System" and "Reporting Requirements Relating to Authorized Institutions' External Auditors under the Banking Ordinance". The HKMA also intends to consult the banking industry on the local implementation of new guidelines for the identification and management of step-in risk issued by the Basel Committee in October 2017.

Compliance with regulatory regime for OTC derivatives market

The HKMA will continue to monitor AIs' and AMBs' compliance with the regulatory regime for the OTC derivatives market in accordance with the statutory requirements.

Balanced and responsive supervision

The HKMA will engage the banking sector through roundtable discussions to facilitate the setting of key priorities and themes for the implementation of Balanced and Responsive Supervision Programme. The engagement process will also enable the HKMA to have better insights into the development needs of the industry and achieve a more optimal and sustainable supervisory outcome.

Accounting standards

In respect of IFRS 9, the HKMA will update its prudential framework for AIs as appropriate, taking into account the related standards and guidance issued by the Basel Committee, such as the longer-term standards on the interaction between the regulatory capital framework and expected credit losses under IFRS 9. The HKMA will continue to monitor the implementation of IFRS 9 by AIs in Hong Kong and maintain regular dialogue with their external auditors. The HKMA will also assess the implications of other impending accounting standards, such as IFRS 16 "Leases", on the prudential requirements.

Resolution Office

Whilst the HKMA made substantial progress in 2017 in the establishment of an operational resolution regime in Hong Kong for AIs, as echoed in the FSB Peer Review Report and similar to other key jurisdictions, further work is needed to fully implement the regime and enhance the credibility and feasibility of resolution measures.

The priorities for the Resolution Office in 2018 will include developing further resolution policies, advancing resolution planning and enhancing its resolution capabilities, reflecting the recommendations from the FSB Peer Review and international best practice (Table 6).

Banking Stability

Table 6 HKMA's forward priorities on resolution in 2018

I. Resolution Policy	II. Resolution Planning	III. Resolution Authority Functions
Formulate LAC requirement rules for AIs and related CoP chapter	Roll out *CI-1* to, and develop preferred resolution strategies for, locally incorporated AIs with systemic impact should they fail	Operationalise resolution funding arrangement under the FIRO by establishing the levy framework and planning options for the design of facilities for funding in resolution for AIs
Consult on CoP chapter on operational continuity in resolution	Advance resolution planning with D-SIBs further to implementation of *CI-1*, conduct resolvability assessments and work with D-SIBs on removal of barriers to resolvability	Develop crisis management memorandum of understanding with other local resolution authorities
Consult on policy proposals for imposing contractual requirements regarding stays on early termination rights of financial contracts	Strengthen cross-border coordination	Facilitate cross-border information sharing by conducting secrecy provisions assessment
Review FMI scheme rules in light of the FIRO and make appropriate updates		Strengthen institutional framework and resolution arrangements, e. g. bail-in mechanics
Contribute to international policy development of standards on funding in resolution and bail-in execution as well as engage Asia Pacific regional forums on resolution issues		Conduct resolution drills and simulation exercises
		Establish processes for timely appointment of external professional advisors

Bank consumer protection

The HKMA will continue to promote good banking practices through participating in, and providing advice to, the Code of Banking Practice Committee of HKAB. It will continue to monitor AIs' compliance with the Code through various means, including AIs' self-assessment, mystery shopping programmes and the handling of relevant complaints against AIs.

The HKMA will continue its effort to develop a customer-centric culture among AIs and foster financial inclusion by retail banks, especially in securing reasonable access to basic banking services by the public. The HKMA is working with the banking industry on a practical guideline on barrier-free banking services. The HKMA will monitor the industry's implementation of enhancement measures in fostering a sound bank culture and driving positive customer outcomes. The HKMA will also continue to participate in international efforts to drive better protection for financial consumers through participation in the Organisation for Economic Co-operation and Development Task Force on Financial Consumer Protection.

Opening and maintaining bank accounts

The HKMA will continue to work with the banking industry, business community and relevant stakeholders to further enhance customer experience in account opening and maintenance. The HKMA will take into account the findings from the mystery shopping programme in respect of account opening by AIs in Hong Kong in considering further follow-up actions. The HKMA is also working with the industry association to seek to increase efficiency and effectiveness of CDD processes through innovation and technology, including the use of KYCU in account opening and maintenance processes.

Deposit protection

Continued efforts will be made to ensure and improve the readiness for payout under the DPS. The payout system modernisation project will continue in 2018, with a new application system to be developed to further enhance payout efficiency. The compliance programme for monitoring DPS members' readiness in submitting the data and information in accordance with the Information System Guideline will continue. Annual self-assessments and on-site examinations will continue to be conducted to ensure that DPS members make appropriate representations to depositors in respect of the protection status of deposits. In addition to publicity and community education campaigns, direct engagement with specific segments who might not be easily reached by mass communications will be undertaken to reinforce their understanding of the DPS.

Enforcement

The HKMA is developing electronic complaint forms as an additional channel for lodging complaints against banks. Useful insights from complaint cases and timely feedback will continue to be shared with AIs to help promote robust business practices and a customer-centric culture among AIs.

In addition to focusing on cases involving misconduct and dishonesty that affect the interests of the investing public, the HKMA will continue to deploy resources to enforce compliance with the AMLO and other regulatory regimes, such as the statutory framework for regulating OTC derivatives and the regime for stored value facilities and retail payment systems. With respect to the latter, the HKMA will issue, after consultation with the industry, a fining guideline to set out the manner in which the power to order a pecuniary penalty under the PSSVFO is to be exercised.

Following the enactment of the Insurance Companies (Amendment) Ordinance 2015, the HKMA will continue to work closely with the IA on the arrangements for the delegation of investigation powers to the Monetary Authority in relation to AIs' regulated activities under the Insurance Ordinance and other operational matters for enforcing the new statutory regime.

Capacity building in the banking sector

Director empowerment

Director empowerment is a broad topic and many of the initiatives of the HKMA contribute to it either directly or indirectly. The HKMA aims at co-ordinating these activities in a manner such that INEDs will be better equipped to support the banking sector to develop its business, protect the reputation of the industry and enhance Hong Kong's status as an international financial centre. The HKMA will also continue to organise seminars on various topics for INEDs and publish a knowledge kit to help equip newly appointed INEDs.

Talent development for banking practitioners

The HKMA will review the effectiveness of the ECF in raising professional competence and enlarging the talent pool of banking practitioners through an industry survey. Going forward, the HKMA will continue to collaborate with the banking industry and relevant professional bodies to develop two new ECF modules on risk management and compliance and credit risk management.

Apart from the ECF, the HKMA will also continue its efforts in the ongoing talent development of banking practitioners, such as organising Regulator's Dialogue sessions to keep them abreast of banking sector developments.

Consumer education

Further publicity initiatives, including videos and other educational materials, will be launched under the HKMA's Consumer Education Programme to promote smart and responsible use of banking and other financial services under the HKMA's supervision. In addition, the HKMA will further collaborate with other stakeholders to promote financial literacy and maximise the impact of consumer education.

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, including the Faster Payment System scheduled for launch in 2018.

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. Where appropriate, oversight requirements will be strengthened to reflect international practices or in response to market developments. The HKMA will continue to work with relevant authorities to further strengthen co-operative oversight arrangements where appropriate.

International Financial Centre

To consolidate Hong Kong's status as an international financial centre, the HKMA strives to enhance the competitiveness of Hong Kong's financial platform. On fintech, the seven new initiatives aimed at facilitating the development and use of fintech in the banking and payment industries were well received by stakeholders and the public. Hong Kong's international profile as a financing hub for infrastructure investments was raised further, thanks to a series of efforts on network and capacity building on this front. The launch of Bond Connect reinforced Hong Kong's position as the main gateway to opportunities in Mainland China. The HKMA's efforts on other areas such as corporate treasury centres were also bearing fruits.

OVERVIEW

In view of the rapid technological advancements, the HKMA in September announced the launch of seven initiatives to prepare Hong Kong to move into a new era of Smart Banking. These initiatives included:

- developing the Faster Payment System (FPS) to achieve full connectivity of digital retail payments;
- introducing an Open Application Programming Interface (Open API) framework;
- enhancing fintech research and talent development;
- stepping up cross-border collaboration in fintech;
- upgrading our existing Fintech Supervisory Sandbox (FSS) 1.0 to Version 2.0;
- facilitating the introduction of virtual banking; and
- promoting a new Banking Made Easy initiative to minimise regulatory frictions in customers' digital experience.

The HKMA Fintech Facilitation Office (FFO), together with the banking departments of the HKMA, played a pivotal role in driving the implementation of these initiatives to strengthen Hong Kong's position as a fintech hub in Asia.

Hong Kong's international profile as a financing hub for infrastructure investments was raised further, as the number of partners of the HKMA Infrastructure Financing Facilitation Office (IFFO) grew to 87 as at 31 January 2018 from about 40 at inception. During the year, IFFO organised and participated in more than 10 seminars and workshops to facilitate experience sharing and collaborative networking among key stakeholders. In particular, IFFO steered the development of an infrastructure equity investment reference term sheet in its inaugural Debt Financing and Investors' Roundtables with a view to enhancing infrastructure projects' bankability and investability.

Bond Connect was launched in July, marking another major milestone in mutual access between the Hong Kong and Mainland capital markets, and further solidifying our gateway position for international investors seeking to enter the Mainland market. During the year, Hong Kong's Renminbi Qualified Foreign Institutional Investor (RQFII) quota was increased to RMB500 billion from RMB270 billion. Hong Kong maintained the world's largest offshore renminbi liquidity pool, with vibrant renminbi financial intermediation activities as evidenced by a high turnover of our renminbi Real Time Gross Settlement (RTGS) system and the lion's share of Hong Kong's renminbi payment activities in the world.

Following the introduction of the tax regime for corporate treasury centres (CTCs) in 2016, the HKMA stepped up its outreach efforts with a view to attracting more multinational corporates to set up treasury centres in Hong Kong. By the end of 2017, more than 40 corporates reflected to the HKMA that they were actively planning to set up, or had set up, treasury centre operations in Hong Kong.

The HKMA actively contributed to international discussions on issues of significance to global and regional financial stability. The Chief Executive of the HKMA became the Chair of the Standing Committee on Supervisory and Regulatory Co-operation (SRC) of the Financial Stability Board (FSB)[1] in April to lead discussions on key financial stability issues.

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 and global offshore renminbi business hub. The four interbank RTGS systems and the Central Moneymarkets Unit (CMU) achieved 100% system availability in 2017, as compared to the target of 99.95%. To support Northbound Trading of Bond Connect, CMU has set up accounts with the two Mainland central securities depositories (CSDs) to facilitate the settlement of Bond Connect transactions and holding of Mainland debt securities on behalf of relevant CMU members.

To promote the general safety and efficiency of the local retail payment industry, the HKMA designated four retail payment systems (RPSs) under the Payment Systems and Stored Value Facilities Ordinance (PSSVFO) in August to bring their operations under the HKMA's oversight. The HKMA also conducted supervision of 16 stored value facility (SVF) licensees which actively launched new products and services that sought to offer customers more choices and better user experience. Separately, the coverage of e-Cheque and Electronic Bill Presentment and Payment (EBPP) service was further expanded to include cross-boundary payments between Hong Kong and the entire Guangdong Province.

[1] FSB was established in April 2009 as the successor to the Financial Stability Forum to address vulnerabilities in the global financial systems, and to develop and promote 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.

REVIEW OF 2017

Hong Kong as a fintech hub in Asia

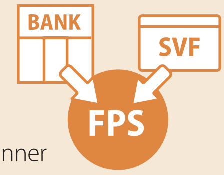
Smart Banking Initiatives

In light of the rapid technological advancements, the HKMA in September announced seven initiatives that would prepare Hong Kong to move into a new era of Smart Banking. The initiatives aimed to help the banking sector to rise to a higher level and embrace the enormous opportunities brought about by the convergence of banking and technology.

"Smart Banking would offer full interconnectivity amongst retail and corporate customers and allow financial services and transactions to be undertaken with great mobility, speed, ease and safety."

The HKMA has been working closely with the banking industry and the fintech community, and made good progress in implementing the seven initiatives.

- *Faster Payment System*

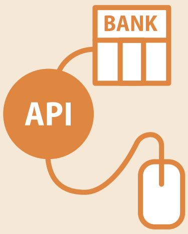


The FPS is a multi-currency platform that would enable the public to make round-the-clock funds transfers in a real-time manner with ease, through using mobile phone numbers or email addresses. It can support payments in Hong Kong dollars and renminbi. Banks and non-bank payment service providers can participate in the FPS, enabling full connectivity among all payment participants. With system development work close to completion, the FPS is scheduled to launch in September 2018.

Furthermore, the HKMA led a working group, comprising major credit card scheme operators, banks, licensed SVF operators and merchant acquirers, to establish a common QR code standard for retail

payments in Hong Kong. A common QR code standard would facilitate merchants in using a single QR code to accept QR code payment solutions from multiple payment service providers, providing greater convenience to customers and merchants. The working group has finalised the relevant technical specification, and would work out the implementation arrangements.

- *Open Application Programming Interface*



Open API allows banks' data to be accessed by third parties to facilitate better and easier integration of services offered by banks and other industries. Users can therefore conveniently stay on one system to enjoy integrated services in a secure environment. To facilitate the development and adoption of Open API by the banking sector, the HKMA has come up with a draft Open API framework, comprising a selection of Open API functions and deployment time frame, technical standards, third-party service provider governance, facilitation measures and maintenance models, for a two-month industry consultation.

- *Research and talent development*

One of the major research projects was on Distributed Ledger Technology (DLT). Following the first DLT whitepaper in 2016, the second whitepaper on DLT was published in October 2017. The second whitepaper further explores the three Proof-of-Concept works, namely trade finance, digital identity management and mortgage application. It also offers advice on the implementation issues relating to governance, legal and compliance, and general control principles on deploying DLT for the banking and payment industries.

HKMA Chief Executive, Mr Norman Chan, announces the release of the second whitepaper on DLT at the HKMA Fintech Day.

Riding on the success of the Proof-of-Concept work on trade finance led by the HKMA, seven banks in Hong Kong decided to commercialise the prototype into a production system named Hong Kong Trade Finance Platform (HKTFP) to digitise and share trade documents and automate processes with a view to improving the overall trade process and reducing risks and fraud in the trade finance business.

In an effort to enlarge the talent pool in the fintech industry, the HKMA launched the Fintech Career Accelerator Scheme in collaboration with the Hong Kong Applied Science and Technology Research Institute in December 2016. Response from students was positive. More than 3,000 applications from 421 applicants were received. Finally, 74 students accepted internship offers from the HKMA and 12 banks to work on fintech-related projects for six months or one year starting from July.

International Financial Centre

Cross-border collaboration

As the first step of strengthening our collaboration within the Guangdong-Hong Kong-Macao Bay Area, we are partnering with Shenzhen to promote fintech and talent developments. Specifically, the HKMA and the Office of Financial Development Service, the People's Government of Shenzhen Municipality (OFDS) entered into an agreement in June to (i) provide reciprocal soft-landing support for fintech firms, (ii) co-organise the Shenzhen-Hong Kong Fintech Award in October to recognise and reward outstanding fintech products and solutions in the two cities; and (iii) arrange summer internships at Shenzhen fintech and techfin firms for Hong Kong students.

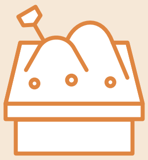
HKMA Chief Executive, Mr Norman Chan (middle), signs and exchanges Memoranda of Understanding on soft-landing arrangements with OFDS Director-General, Mr He Xiaojun (left), and Cyberport Chairman, Dr Lee George Lam, at the HKMA Fintech Day.

E-leaflet for the Shenzhen-Hong Kong Fintech Award.

The HKMA also signed fintech co-operation agreements with the Monetary Authority of Singapore (MAS) and the Dubai Financial Services Authority on innovation projects, referrals of innovative businesses, information sharing and exchange of expertise.

In November, the HKMA further signed a Memorandum of Understanding with MAS to jointly build the Global Trade Connectivity Network (GTCN), which would connect Singapore's National Trade Platform to the HKTFP to form a cross-border DLT infrastructure in order to digitalise cross-border trade and trade finance processes, making them safer, more efficient and cost-effective. It will be an open platform that allows other interested jurisdictions to participate in the future. The GTCN is expected to be launched in the first quarter of 2019.

- *Fintech Supervisory Sandbox*



The FSS launched by the HKMA in September 2016 was upgraded to FSS 2.0 to expedite communication with banks and tech firms to facilitate new ideas and initiatives. Specifically, FSS 2.0 has the following new features:

- A Fintech Supervisory Chatroom is set up to provide feedback to banks and tech firms at an early stage of their fintech projects.
- Tech firms can access the FSS by seeking feedback from the Chatroom without going through a bank.
- The sandboxes of the HKMA, the Securities and Futures Commission (SFC) and the Insurance Authority are linked up so that there is a single point of entry for pilot trials of cross-sector fintech products.

As of end-2017, **28** new technology products have been tested in the FSS. Out of these cases, **14** pilot trials have been completed, and the relevant products have been rolled out to the market subsequently.

- *Banking Made Easy initiative*

A Banking Made Easy initiative was launched to minimise regulatory frictions hindering technological innovations. A taskforce has been set up with current focus on the following areas:

- Remote onboarding and account maintenance
- Online finance
- Online wealth management

- *Virtual Banking*

Virtual banks, which operate without physical branches, are expected to provide additional impetus to the application of fintech in Hong Kong and offer a new kind of customer experience in mobile and digital banking. They may also help promote financial inclusion as they normally target the retail segment, be they individuals or small and medium-sized enterprises (SMEs). The HKMA has commenced the review of the existing Guideline on Authorization of Virtual Banks with a view to facilitating the introduction of virtual banking in Hong Kong.

A New Era of Smart Banking

Supervision and Innovation

The seven initiatives unveiled by the HKMA last year to prepare Hong Kong for a new era of Smart Banking are a large-scale project involving cooperation among various departments within the HKMA. With fintech becoming an unstoppable force, Mr Raymond Chan, Executive Director (Banking Supervision) of the HKMA, indicated that the HKMA, as a regulator, must embrace this new trend by keeping abreast of the latest technological developments and adjusting its supervisory mindset and approach as appropriate, in order to take bank services and customer experience to a new level.

The Banking Supervision Department (BSD) is responsible for overseeing the risk management of banks. With the gradual implementation of three Smart Banking initiatives, namely the FSS 2.0, Banking Made Easy initiative, and introduction of virtual banking, Mr Chan realised that there is a need to recalibrate the mindset in order to apply the risk-based and technology-neutral supervisory principle more precisely and strike an appropriate balance between technological innovation and risk management. He acknowledged, "Whilst having worked on the supervisory front for many years, I have learnt a lot in the process of promoting the adoption of fintech in the banking sector, including looking at things more from the perspectives of banks and customer experience, which is useful for the supervisory work in future."

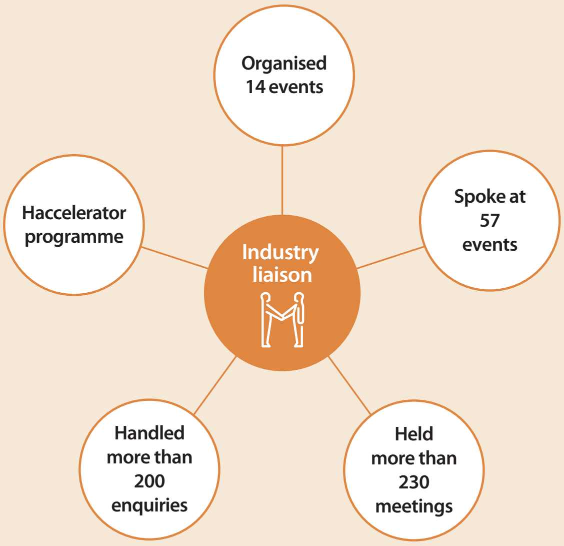
Mr Howard Lee, HKMA Deputy Chief Executive (middle), Mr Raymond Chan, HKMA Executive Director (Banking Supervision) (left) and Mr Nelson Chow, HKMA Chief Fintech Officer brief the media on the latest progress of the seven initiatives on the New Era of Smart Banking which involve inter-departmental cooperation within the HKMA.

FSS 2.0 aims to provide supervisory feedback to banks and tech firms when new initiatives are being contemplated or developed, in order to clarify regulatory issues at an early stage and reduce abortive work. Industry response so far has been much more enthusiastic than what Mr Chan anticipated. What impresses him most is the case of remote onboarding mobile application (app) where bank customers can scan their personal ID cards and selfie portraits as part of their personal particulars for submission to a bank. However, in order for the artificial intelligence to learn to authenticate the submitted documents, both true and fake ID card images were required when developing this app. BSD colleagues therefore assisted in approaching the Police for advice. The response from the Police was positive and they provided the specimens of some seized fake ID cards to the bank for testing. This has further enhanced the app's authentication capabilities and expedited its roll-out to the market. In some other cases, when handling tech firms' enquiries about the regulatory requirements for soft tokens, BSD colleagues also shared their concerns on the relevant security issues with a view to enhancing the safety of their products. These cases clearly demonstrate that supervision and technological innovation can go hand in hand.

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 exchange of ideas among stakeholders. During the year, the FFO organised 14 seminars and workshops, attracting nearly 3,000 participants. In particular, the HKMA Fintech Day held on 25 October attracted more than 1,100 local and overseas participants. It also spoke at 57 fintech-related events and held more than 230 meetings with other regulators, technology firms and industry organisations, and handled more than 200 enquiries.

The HKMA launched the Hacccelerator programme in collaboration with Cyberport in March, offering a platform to run fintech-related competitions, explore innovative solutions and identify talents. In 2017, two banks organised hackathon and accelerator competitions using the platform.



HKMA Deputy Chief Executive, Mr Howard Lee, gives opening remarks at the Open API Workshop organised by the HKMA.

A hackathon competition under the Hacccelerator programme of the HKMA.

International Financial Centre

HKMA Fintech Facilitation Office (FFO)

Fintech Facilitator

The FFO, frequently in contact with entrepreneurial start-ups, is itself a "start-up" within the HKMA. When the FFO was set up in March 2016, due to a tight schedule, it only had a few colleagues redeployed from other departments of the HKMA. At the initial stage, it had no website of its own and only relied on an email address to communicate with external parties.

Since its inception, the FFO has been actively reaching out to stakeholders in the fintech industry. It staged a number of successful events in its first year, including the inaugural HKMA Fintech Day. It also rolled out the Cybersecurity Fortification Initiative for the banking industry, issued the first whitepaper on DLT, and launched the Fintech Career Accelerator Scheme, to name a few. All these enabled the FFO to gain recognition quickly from stakeholders in different sectors.

Looking back at the hectic schedule when the FFO was first set up, Mr Li Shu-pui, Executive Director (Financial Infrastructure) of the HKMA, indicated, "I still find it hard to believe that so much progress has been made within such a short period of time — thanks to the clear vision and strategy, and the dedication and concerted effort of the FFO team." What's more, the valuable feedback obtained through interaction with the industry has enabled the FFO to understand the needs of the industry and launch various initiatives which are well received by the fintech community, the banking industry as well as the academia.

One of the FFO's roles is to promote the industry's research and application of innovative fintech solutions. One representative project is the HKTFP, which is currently being developed. In 2017, the HKMA, in collaboration with several local banks, successfully completed the Proof-of-Concept work on trade finance using DLT, a big step forward in achieving paperless trade finance. The HKMA's involvement could have ended there. However, upon subsequent request by banks, the HKMA has taken a more active role in facilitating the building of the local trade finance platform, which is open for participation by all banks.

Mr Nelson Chow, Chief Fintech Officer of the HKMA, explained, "Should the platform be run by individual banks, other banks may be less willing to join and this will in turn limit the scale of its application. In order to address banks' concerns on potential commercial conflicts of interests, the HKMA has taken the facilitator's role in encouraging more banks to get involved in the platform." Moreover, to maximise the effectiveness of the HKTFP, cross-border use is the key. When the HKMA and MAS learned that both sides were planning to build similar platforms, the two parties immediately embarked on discussions about cooperation to jointly build a cross-border infrastructure that links up the platforms of the two places. This cross-border infrastructure will be open for participation by other jurisdictions to achieve greater economies of scale.

Looking ahead to 2018, the HKMA will implement more fintech initiatives, including launching the FPS, introducing the Open API framework and broadening the scope of talent development programmes.

Mr Li Shu-pui, HKMA Executive Director (Financial Infrastructure) (right), and Mr Bernard Wee, Executive Director, Financial Markets Development Department of MAS, exchange a Memorandum of Understanding on the cross-border trade finance infrastructure.

Hong Kong as a financing hub for infrastructure investments

Network building

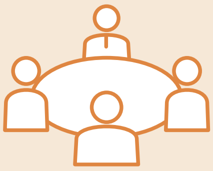
Since its launch in July 2016, IFFO has built an extensive network with key stakeholders from Mainland China, Hong Kong and overseas. The number of IFFO partners grew to **87** as at 31 January 2018 from around 40 at inception (Table 1). IFFO is uniquely positioned to offer "East and West" and public and private sector perspectives in facilitating infrastructure financing.

Table 1 List of IFFO Partners *(in alphabetical order) (as at 31 January 2018)*

Actis	China Export & Credit Insurance Corporation	Jardine Lloyd Thompson Limited
Agricultural Bank of China Limited Hong Kong Branch	China Hua Neng Group Hong Kong Limited	King & Wood Mallesons
AIA Group Limited	China Huadian Hongkong Company Limited	KPMG
AIG Insurance Hong Kong Limited	China Investment Corporation	Legg Mason Global Asset Management
Airport Authority Hong Kong	China National Petroleum Corporation	Macquarie Group
Allen & Overy	China Three Gorges Corporation	Malayan Banking Berhad
Aon Hong Kong Limited	China-Africa Development Fund	Marsh (Hong Kong) Limited
APG Asset Management	China-Britain Business Council	Mayer Brown JSM
Asian Academy of International law	CITIC Capital	Mitsubishi Corporation (Hong Kong) Ltd.
Asian Development Bank	Citigroup	Mitsui & Co. (Hong Kong) Ltd.
Astana International Financial Centre	City of London Corporation	Mizuho Bank, Ltd.
AustralianSuper	Clifford Chance	Morgan Stanley
Bank of China (Hong Kong) Limited	CLP Group	MTR Corporation Limited
Bank of China Limited	CNIC Corporation Limited	Multilateral Investment Guarantee Agency, a member of the World Bank Group
Bank of Communications Co. Ltd.	Crédit Agricole Corporate and Investment Bank	National Pension Service
Bank of Tokyo-Mitsubishi UFJ, Ltd. (The)	Currie & Brown	Ontario Teachers' Pension Plan
Beijing Jingneng Clean Energy Corporation Limited	Deloitte China	Pinsent Masons
BlackRock	Eastspring Investments	PwC
Blackstone Group	Ernst & Young	Silk Road Fund
Brookfield Asset Management	Export-Import Bank of China (The)	Standard Chartered Bank
Canada Pension Plan Investment Board	General Electric	Standard Chartered Bank (Hong Kong) Limited
CGCOC Group (Hong Kong) Co., Limited	Global Infrastructure Hub	State Grid Corporation of China
China Communications Construction Company Limited	Hong Kong Trade Development Council	Sumitomo Mitsui Banking Corporation
China Construction Bank (Asia) Corporation Limited	Hongkong and Shanghai Banking Corporation Limited (The)	Taikang Asset Management Company Limited
China Construction Bank Corporation	HSBC Holdings plc	Teachers Insurance and Annuity Association of America
China Datang Corporation Ltd.	Industrial and Commercial Bank of China (Asia) Limited	TPG Capital
China Development Bank Corporation	Industrial and Commercial Bank of China Limited	Willis Towers Watson
China Energy Conservation and Environmental Protection Group	International Finance Corporation, a member of the World Bank Group	Xinjiang Goldwind Science & Technology Co., Ltd.
China Energy Engineering Corporation Limited	Japan Bank for International Cooperation	Zurich Insurance Company Limited

International Financial Centre

Capacity building



IFFO organised and participated in **14** local and international events on infrastructure financing during the year. These included the Debt Financing and Investors' Roundtables in March, the Belt and Road Forum for International Cooperation in Beijing in May, as well as the Senior Executive Training Program on Public-Private Partnerships and Project Finance in collaboration with International Finance Corporation (IFC) and Harvard Kennedy School in July. During the Debt Financing and Investors' Roundtables, IFFO steered the development of a reference term sheet for infrastructure equity investment which aimed to narrow the gap between the expectations of investors and project owners, thereby enhancing infrastructure projects' bankability and investability.

The participants of the Debt Financing Roundtable on 23 March share experience and opportunities in co-financing initiatives and programmes by the public and private sector institutions, and discuss how infrastructure projects can be made more bankable through different risk mitigation measures.

The Investors' Roundtable on 24 March brings together like-minded investors, including international sovereign wealth funds and pension investors with total assets under management exceeding US$4 trillion. The discussion focuses on various themes ranging from global infrastructure investment outlook to parameters for investing in emerging markets and risk mitigations required to make projects more investable.

HKMA Chief Executive, Mr Norman Chan (second from left), speaks at a thematic session on Financial Connectivity at the Belt and Road Forum for International Cooperation held in Beijing on 14 May to share IFFO's experience in facilitating investment and financing for Belt and Road infrastructure projects.

The IFC-Harvard Senior Executive Training Program from 31 July to 4 August provides participants with a rich and professional learning experience on various emerging issues on Public-Private Partnerships and Project Finance.

Facilitating infrastructure financing and investments

IFFO played a catalytic role in pooling in investors interested in infrastructure investments with a view to promoting Hong Kong as a financing hub for infrastructure investments.

June	IFFO hosted an agreement signing between IFC and Eastspring Investments, both IFFO partners, to raise money for an innovative IFC program, known as Managed Co-lending Portfolio Program (MCPP) Infrastructure, which mobilises funds from institutional investors for infrastructure projects in emerging markets.
September	The HKMA committed US$1 billion to MCPP to support IFC in financing projects, including infrastructure, telecom, manufacturing, agri-business and services, across more than 100 countries, to further create demonstration effect to the market.
December	China Development Bank leveraged on IFFO's platform to issue its first Belt and Road bond in Hong Kong.

HKMA Chief Executive, Mr Norman Chan (right), and IFC Vice-President, New Business, Mr Dimitris Tsitsiragos sign an agreement on 19 September on HKMA committing US$1 billion to IFC's MCPP for investing across sectors in emerging markets. The HKMA's new partnership with IFC provides a useful platform for the HKMA to broaden its investment opportunities in the credit market.

HKMA Infrastructure Financing Facilitation Office (IFFO)

A Rising Profile for Hong Kong as a Financing Hub for Infrastructure Investments

Since its inception in July 2016, IFFO has seen close to 90 heavyweight organisations from around the world joining as partners. These include multilateral agencies, institutional investors, banks and other financial intermediaries, infrastructure project developers and operators, as well as various professional service providers. IFFO has successfully brought together the key stakeholders in global infrastructure financing in one network. Mr Vincent Lee, Executive Director (External) of the HKMA, indicated that, with more and more partners coming on board, IFFO has gradually established its own profile in this sector and helped promote Hong Kong as a platform for infrastructure investment and financing.

One of the major challenges for infrastructure investment and financing is the considerable gap between the expectations of investors/financiers and operators. In view of this, the IFFO platform last year spearheaded the development of a reference term sheet for infrastructure equity investment which sought to devise a set of commonly accepted criteria to better manage the risks associated with infrastructure investment and financing, thereby increasing the chances of success of marrying up funds with projects. It is a pioneering move in the realm of public-private partnerships in infrastructure investment and financing.

IFFO has also made use of various opportunities to promote the role played by Hong Kong in infrastructure investment and financing. For example, IFFO, alongside international multilateral agencies, attended the Belt and Road Forum for International Cooperation held in Beijing last May. During the Forum, IFFO promoted Hong Kong's advantages in capturing infrastructure investment and financing opportunities under the Belt and Road Initiative. "A lot of people have come to Hong Kong looking to meet with IFFO and listen to our latest developments," said Mr Lee. Over the past year, among those visitors were diplomatic envoys, consuls, government officials, etc. Roughly speaking, the IFFO team has promoted Hong Kong's strengths to the outside world on at least 100 different occasions. These unrelenting efforts serve to sow the seeds for fruition in the future.

Mr Vincent Lee, HKMA Executive Director (External) (front row, middle) says that, through the various workshops conducted, IFFO seeks to promote and enhance the industry's capacity building in infrastructure investment and financing, thereby facilitating matching between funds and projects.

Action speaks louder than words. Mr Lee indicated that last year IFFO facilitated the Exchange Fund's participation in the IFC's MCPP, with a commitment of US$1 billion for infrastructure financing. IFFO also played a facilitation role in the China Development Bank's first-ever Belt and Road bond issuance in Hong Kong, underscoring the city's pivotal role in facilitating infrastructure financing.

Looking ahead, challenges still abound. Despite the huge capital demand for infrastructure investment and financing, the funding gap cannot be filled overnight. One of the work priorities of IFFO in the future is to increase the commercial elements of infrastructure projects and create opportunities for long-term and stable returns for them, thereby encouraging more investors — from the public and private sectors alike — to participate in this area more actively and with greater ease. Mr Lee is very pleased with the high level of dedication and enthusiasm of the IFFO team. The team will continue to use its best endeavours to promote and pursue IFFO's missions.

Hong Kong as the global hub for offshore renminbi business

The HKMA and the People's Bank of China (PBoC) jointly launched Bond Connect in July. Northbound Trading came into operation in the first phase, enabling overseas institutional investors to invest in the interbank bond market in Mainland China through cross-border financial infrastructure linkages between the CMU of the HKMA and other institutions of Mainland China and Hong Kong. Operation of Northbound Trading has been smooth, with daily turnover averaging RMB2 billion and more than 240 investors participating in Bond Connect up to the end of 2017.

"Bond Connect provides an additional and more convenient channel for overseas investors to access the Mainland bond markets, using common practices in the international financial markets."

Bond Connect

Over **240** investors, with average **RMB2 billion** daily turnover.

In July, Hong Kong's RQFII quota was increased to **RMB500 billion**, further augmenting its portfolio investment channels with Mainland China.

Offshore renminbi activities showed signs of stabilisation in 2017 on the back of improved economic fundamentals in Mainland China and outlook for renminbi's exchange rate. Hong Kong's offshore renminbi liquidity pool remained the largest in the world. Renminbi customer deposits and outstanding certificates of deposit stabilised at RMB618.4 billion at the end of 2017. Hong Kong's dim sum bond market remained the largest in the world, although the amount of outstanding renminbi bonds eased to RMB212.4 billion at the end of 2017. Turnover of the renminbi RTGS system stayed at a high level, averaging at RMB903.6 billion daily. Hong Kong's share in global renminbi payments stood firm at more than 70% during the year, according to SWIFT statistics. All these demonstrated Hong Kong's leading position in offshore renminbi business, with its financial infrastructure providing pivotal support to global offshore renminbi financial activities.

- **RMB618.4 billion** RMB customer deposits and outstanding certificates of deposit
- **RMB212.4 billion** dim sum bonds outstanding
- **RMB903.6 billion** daily turnover in RMB RTGS system
- **More than 70%** of global RMB payments processed by Hong Kong

During the year, the HKMA continued to expand and deepen its collaboration with other economies in offshore renminbi business development. In September, HKMA established a new financial dialogue with Switzerland to promote co-operation on renminbi business development and other financial market issues of common interests. In April, it facilitated the fourth Hong Kong-Australian RMB Trade and Investment Dialogue in Sydney, Australia, together with the Reserve Bank of Australia. It also hosted a financial collaboration forum with Hesse, Germany, in November, and the seventh private sector-led Hong Kong-London Financial Services Forum in December.

The Economic and Technical Cooperation Agreement and the Investment Agreement were signed in 2017 under the framework of the Mainland and Hong Kong Closer Economic Partnership Arrangement. The agreements reaffirm existing opening measures for Hong Kong banks in Mainland China and enable the two sides to enhance co-operation in cross-border renminbi business and mutual access of financial markets. The agreements also contain provisions to ensure appropriate treatment for investment from either side and measures to facilitate bilateral investment activities.

International Financial Centre

Hong Kong as a hub for corporate treasury centres

Following the introduction of the tax regime for CTCs in 2016, the HKMA stepped up its outreach efforts to promote Hong Kong's strengths as a hub for CTCs. Partnering with local and Mainland government bodies and agencies, industry organisations and media, accounting firms and financial institutions, the HKMA reached out to more than 100 corporations through industry events, seminars, as well as one-on-one and group meetings in 2017. Corporate interest in setting up CTCs in Hong Kong is growing.

By the end of 2017, more than **40** corporates reflected to the HKMA that they were actively planning to set up, or had set up, their CTC operations in Hong Kong.

To further attract corporates to set up their CTCs in Hong Kong, the Government will further amend the Inland Revenue Ordinance to extend the coverage of profits tax concession to specified treasury activities provided by qualifying CTCs to all their onshore associated corporations. The HKMA assisted the Government in explaining the proposed amendments and gathering feedback from the industry through a consultation exercise.

Hong Kong as an asset management centre

According to the SFC's statistics, the number of licensed corporations in asset management increased by nearly 14% year-on-year to 1,477 as at the end of 2017. According to the Asian Venture Capital Journal, the number of private equity firms in Hong Kong (including SFC licensed and non-SFC licensed corporations) also increased by 5.5% to 459 in 2017. There is also a growing community of prominent international asset owners setting up footprints in Hong Kong to explore Asian investment opportunities, in both traditional and alternative asset classes, through Hong Kong's premier financial platform.

To date, about **70** out of the **top 100** global asset managers and **most** of Mainland's **top 20** mutual fund companies have a presence or associated companies in Hong Kong.

The HKMA worked closely with the Government and industry to provide a more favourable tax and regulatory environment for fund domiciliation. In particular, an inter-departmental taskforce was formed to review the onshore platform for private equity (PE) funds, including legal and taxation issues, with a view to making it commercially viable for PE fund domiciliation and attracting more of such business to Hong Kong.

Hong Kong's bond market development

Green finance

Following the announcement by the Chief Executive of the Hong Kong Special Administrative Region in her 2017 Policy Address that the Government will take the lead in arranging the issuance of a green bond in the 2018–19 financial year, the HKMA has been working with the Government to study the issuance of a benchmark government green bond.

Government Bond Programme

During the year, the HKMA arranged eight tenders of institutional government bonds amounting to HK$16.6 billion. By the end of 2017, the total amount of outstanding institutional bonds was HK$78.9 billion.

Following the announcement of the Government's 2017–18 Budget, the HKMA arranged in June the second issuance of a HK$3 billion three-year Silver Bond to Hong Kong senior residents aged 65 or above. It attracted more than 44,000 applications with investment monies close to HK$4.2 billion. The amount of retail bonds outstanding at the end of the year was HK$25.9 billion.

Islamic finance

The HKMA assisted the Government in launching the third sukuk in February, with an issuance size of US$1 billion and a tenor of 10 years. The third sukuk extended the yield curve, setting an important benchmark for potential issuers in Hong Kong and globally. Despite the uncertain global environment and the longer tenor, the sukuk attracted strong demand, with a US$1.7 billion order book. The 10-year sukuk also attracted new investors. More than half of the investors had not participated in the previous two sukuk issuances.

Ministry of Finance's offshore renminbi sovereign bonds

The Ministry of Finance issued two batches of offshore renminbi sovereign bonds to institutional investors on 22 June and 30 November, worth RMB7 billion and RMB6.5 billion respectively, through the HKMA CMU's bond tendering platform. The Ministry of Finance also used the CMU central bank placement co-ordinating window to offer its offshore renminbi sovereign bonds to overseas central banks and monetary authorities.

International and regional co-operation

IMF's Article IV Consultation

The HKMA continued to provide full support to the International Monetary Fund (IMF) Mission's work in the annual Article IV Consultation exercise, which was concluded in November. The IMF commended that Hong Kong is well placed to navigate through challenges given its strong buffers and robust policy frameworks, including ample fiscal reserves, strong financial regulatory and supervisory frameworks, and the Linked Exchange Rate System, which serves as an anchor of stability. In particular, it supported Hong Kong's continued efforts to tap new opportunities as a global financial centre, noting that Hong Kong is well positioned to contribute to, and benefit from, the Belt and Road Initiative and the Guangdong-Hong Kong-Macao Bay Area development. The Mission also welcomed the establishment of IFFO and FFO, which will help enhance Hong Kong's role as a key global financial centre.

Participation in international financial community

As a reflection of our contribution to global financial stability, the Chief Executive of the HKMA was appointed as the Chair of the FSB SRC for a two-year term from 1 April 2017. The SRC is charged with developing supervisory and regulatory policies to address financial stability issues; facilitating co-ordination among supervisors and regulators on issues that have cross-sector implications; and promoting consistent adherence of international regulatory standards. The HKMA hosted the SRC meeting on 26 September in Hong Kong. Key issues discussed included fintech, cybersecurity, liquidity risk in asset management activities, global systemically important financial institutions and governance framework of financial institutions.

The HKMA is highly committed to implementing international standards. During the year, a peer review of Hong Kong was conducted by the FSB focusing on the implementation of over-the-counter (OTC) derivatives market reforms and resolution framework. The review team complimented Hong Kong on a well-defined framework for implementing OTC derivatives market reforms and a fully cross-sectoral resolution regime that is consistent with the FSB Key Attributes of Effective Resolution Regimes for Financial Institutions. The peer-review report on Hong Kong was published in February 2018.

Regional co-operation

The HKMA maintained its commitment to regional co-operative initiatives to promote financial stability in Asia and to harness the region's collective voice in international financial affairs. For instance, the HKMA co-chaired the 12th meeting of the FSB Regional Consultative Group for Asia (RCG(A)) in June in Bangkok. Senior representatives from finance ministries, central banks and financial regulators of 16 Asian jurisdictions attended the RCG(A) meeting to discuss risks facing the region, cybersecurity regulatory approaches and information sharing, the use of governance framework in addressing misconduct risks, as well as resolution regimes.

The HKMA worked closely with the ASEAN+3[2] authorities to strengthen the operations of the ASEAN+3 Macroeconomic Research Office, to monitor and analyse regional economies and support decision-making of the Chiang Mai Initiative Multilateralisation (CMIM)[3].

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

3 Effective March 2010, the CMIM has become a regional mechanism that provides short-term US dollar support to participants facing liquidity shortages. In May 2012, the facility was enhanced by doubling the access fund to US$240 billion and introducing a crisis prevention facility.

International Financial Centre

Co-ordinating the macro-surveillance work of the Monetary and Financial Stability Committee established under the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)[4], the HKMA continued to prepare the committee's half-yearly Macro-Monitoring Report to assess the region's risks and vulnerabilities and the policy implications. Under the EMEAP Working Group on Payment and Settlement Systems, the HKMA led the sub-group on cross-border co-operation and development, and participated in the sub-groups on risk management and oversight respectively.

The HKMA worked closely with the Government to engage the Asian Infrastructure Investment Bank (AIIB) in exploring ways for AIIB to leverage on Hong Kong's well-developed financial markets and business platforms. With Hong Kong becoming an AIIB member in June, the HKMA hosted a sharing session with AIIB President Jin Liqun and senior executives from Hong Kong's capital markets in July to discuss how Hong Kong could support the financing needs of AIIB.

HKMA Chief Executive, Mr Norman Chan (second from right), speaks at a sharing session with AIIB.

As a member of the Asian Development Bank (ADB), Hong Kong contributed to the 11th replenishment of the Asian Development Fund, which serves as a grant-only facility of ADB for the region's poorest economies. The HKMA worked with the Financial Services and the Treasury Bureau to obtain funding approval from the Legislative Council for Hong Kong's contribution in the context of the Appropriation Bill 2017.

Training

The HKMA continued to provide training for staff from Mainland authorities including the PBoC, the State Administration of Foreign Exchange and the China Banking Regulatory Commission to foster knowledge and experience sharing. During the year, the HKMA also conducted training seminars for senior representatives from member banks of the China Banking Association. Topics covered in these training sessions included central banking, risks analysis and management, management of special assets and onsite examination practices, as well as emerging financial developments such as fintech ecosystem, SVFs and RPSs, and financial inclusion. The HKMA also worked with international organisations to provide training, which included a training course on Liquidity Risk Management jointly with the ADB under the Asia-Pacific Economic Cooperation Financial Regulators Training Initiative in March.

Hong Kong's credit ratings

The HKMA continued to maintain a close dialogue with international credit rating agencies and discuss their concerns over the rating outlook to facilitate a balanced and objective assessment of Hong Kong's credit strength. During the year, Fitch affirmed Hong Kong's rating at AA+. S&P lowered the long-term credit rating of Hong Kong by one notch to AA+ from its highest AAA and Moody's also lowered Hong Kong's rating by one notch to Aa2, following similar actions in respect of Mainland's ratings.

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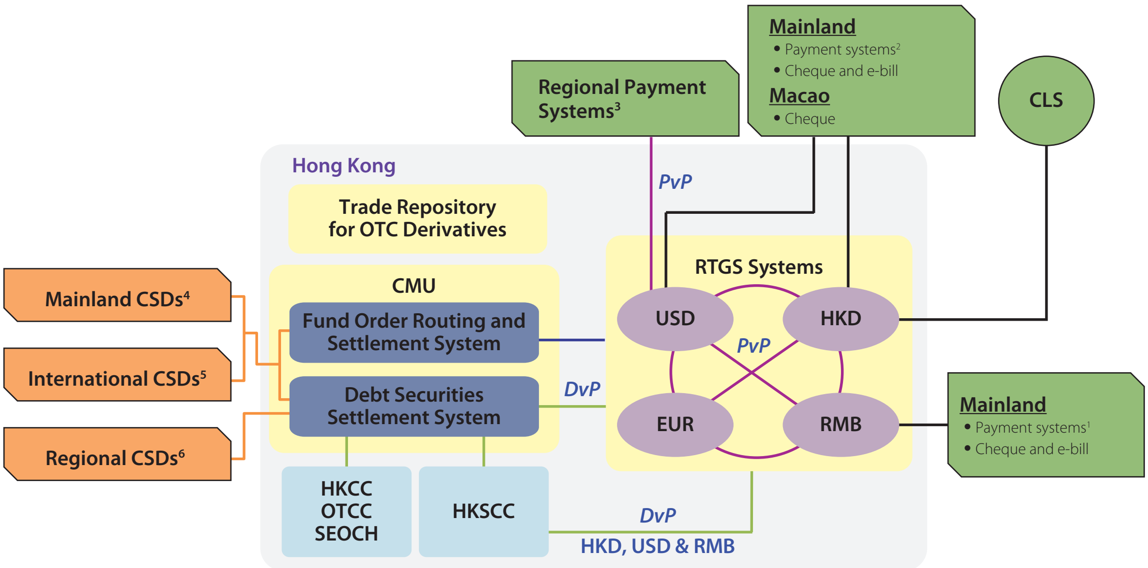
4 EMEAP is a co-operative forum of 11 central banks and monetary authorities in the East Asia and Pacific region, comprising the Reserve Bank of Australia, the People's Bank of China, the Hong Kong Monetary Authority, Bank Indonesia, the Bank of Japan, the Bank of Korea, Bank Negara Malaysia, the Reserve Bank of New Zealand, Bangko Sentral ng Pilipinas, the Monetary Authority of Singapore and the Bank of Thailand. The Monetary and Financial Stability Committee reviews economic and financial developments in the Asia-Pacific region, discusses issues of common interest and reflects common views.

International Financial Centre

Hong Kong's financial infrastructure

The HKMA continued to enhance its multi-currency, multi-dimensional financial infrastructure, with extensive domestic and overseas system linkages, to maintain Hong Kong as a regional hub for payment and settlement of funds and securities (Chart 1).

Chart 1 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-border 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 Inter-Bank Payments 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)
HKCC – HKFE Clearing Corp Ltd (central counterparty providing clearing and settlement for futures)
HKSCC – HK Securities Clearing Co Ltd (operator of the clearing and settlement system for shares)
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

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 2017, with a daily average transaction value of HK$731.7 billion (31,868 items), compared with HK$598.4 billion (28,615 items) in 2016.

In addition to settling large-value payments, CHATS also handles daily bulk clearings of money settlement of stock market transactions, Mandatory Provident Fund schemes' switching transactions, credit card transactions, cheques, small-value bulk electronic payment items (EPS, auto-credit and auto-debit transactions) and automatic teller machine transfers (Chart 2).

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-border renminbi payments through Hong Kong's infrastructure. The average daily value of Mainland-Hong Kong cross-border renminbi payments amounted to around RMB140 billion in 2017, accounting for 15% of the total turnover.

The average daily turnover and other details of the foreign currency RTGS systems are set out in Charts 3–5 and Table 2.

International Financial Centre

Chart 2 Hong Kong dollar RTGS system average daily turnover

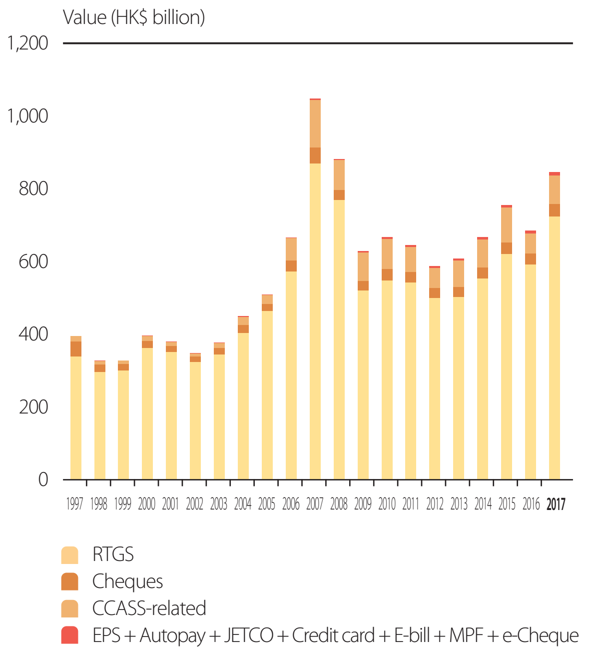


Chart 4 Euro RTGS system average daily turnover

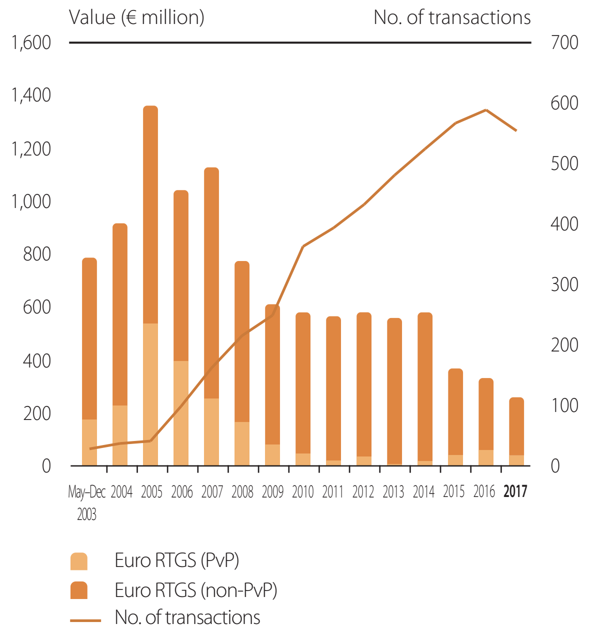


Chart 3 US dollar RTGS system average daily turnover

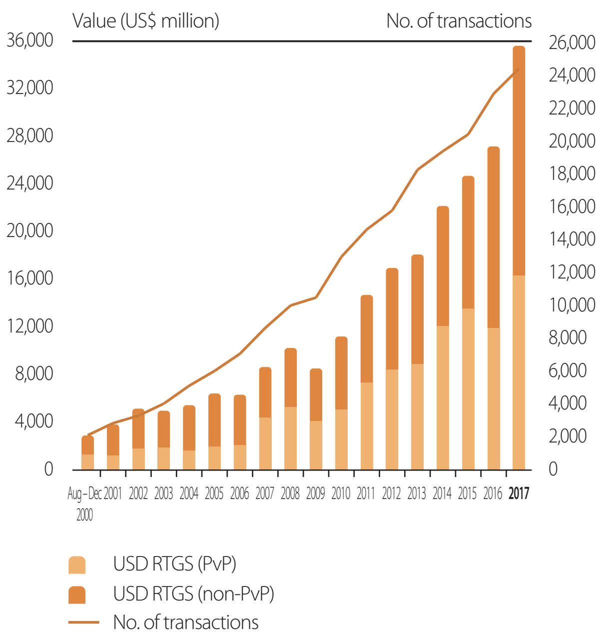


Chart 5 Renminbi RTGS system average daily turnover

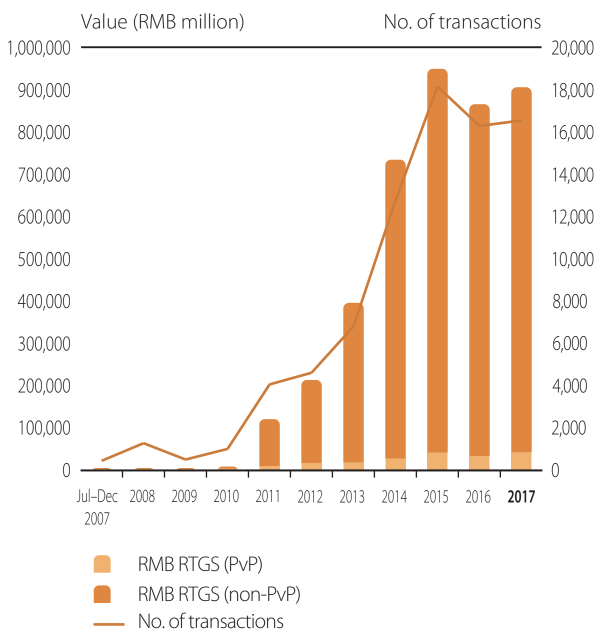


Table 2 Foreign currency RTGS systems

RTGS systems	Launch date	Settlement institution or Clearing Bank	Number of participants at the end of 2017	Average daily turnover in 2017	Average daily transactions in 2017
US dollar RTGS system	August 2000	The Hongkong and Shanghai Banking Corporation Limited	Direct: 103 Indirect: 107	US$35.6 billion	24,360
Euro RTGS system	April 2003	Standard Chartered Bank (Hong Kong) Limited	Direct: 36 Indirect: 17	€261 million	559
Renminbi RTGS system	June 2007	Bank of China (Hong Kong) Limited	Direct: 205	RMB903.6 billion	16,492

Payment-versus-payment

PvP is a mechanism for settling a foreign exchange transaction to ensure 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 (2006), Indonesia's rupiah RTGS system (2010) and Thailand's baht RTGS system (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 2017, the transaction value of Hong Kong dollar, US dollar, euro and renminbi-related PvP transactions amounted to approximately HK$9,890 billion, US$3,874 billion, €9 billion and RMB10,034 billion respectively.

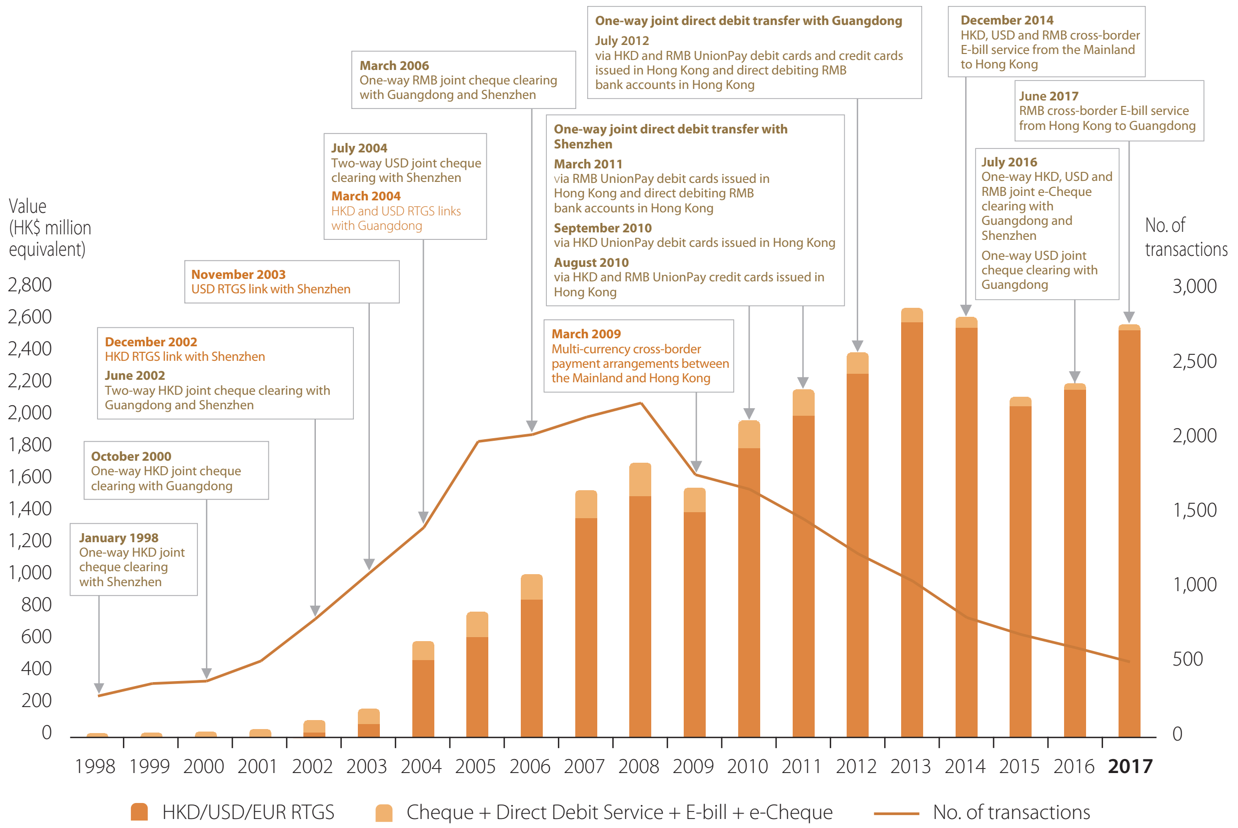
Payment links with Mainland China

The HKMA continued to work closely with Mainland authorities to provide efficient cross-border payment links (Chart 6) to meet growing demand. In 2017, the average daily turnover of various system links, including RTGS cross-border links with Mainland's Domestic Foreign Currency Payment Systems exceeded a total value equivalent to HK$2 billion. The Hong Kong dollar and US dollar RTGS system links with Shenzhen and Guangdong handled more than 13,000 transactions during the year, with a total value equivalent to HK$592.1 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 2017, such facilities processed about 98,000 Hong Kong dollar, US dollar and renminbi cheques, with a value equivalent to around HK$9 billion.

International Financial Centre

Chart 6 Average daily turnover in cross-border arrangements with Mainland China



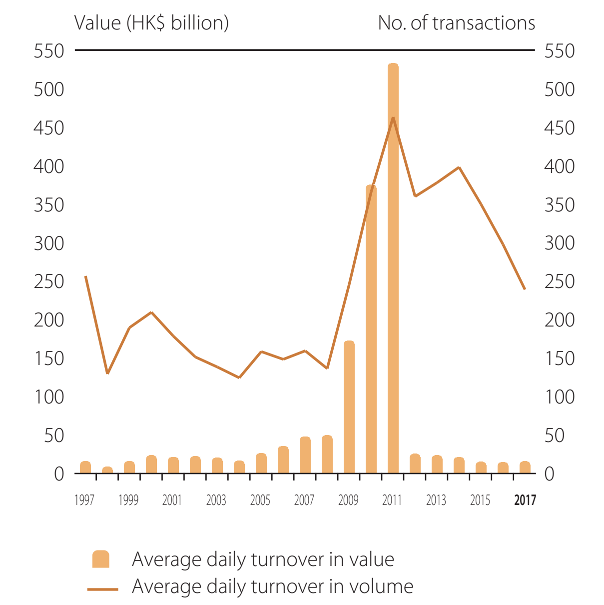
Payment links with Macao

The one-way joint clearing facility for Hong Kong dollar and US dollar cheques between Hong Kong and Macao was launched in 2007 and 2008 respectively. In 2017, Hong Kong dollar cheques with a total value of about HK$17 billion and US dollar cheques with a total value of about US$66 million were cleared.

Debt settlement systems

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 linkages between the CMU and international/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 2017, the CMU processed an average daily value of HK$16.3 billion (238 transactions) in secondary market transactions (Chart 7). 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$1,048.5 billion and the total amount of other debt securities was equivalent to HK$957.4 billion, of which renminbi debt securities amounted to RMB196.1 billion.

Chart 7 CMU secondary market turnover



Introduction of CMU Optimiser runs

In line with IMF's recommendations in the Financial Sector Assessment Programme, the CMU system was enhanced and CMU Optimiser runs were introduced in July as planned. It has raised the proportion of real-time DvP settlement for securities transactions significantly.

Trade repository for OTC derivatives

The Hong Kong Trade Repository (HKTR) introduced new launches in the reporting system to support the second phase of mandatory reporting, which started in July covering reporting of all five asset classes of derivative transactions, and reporting of valuation information of transactions. The new phase sought to meet the requirements of local and international regulatory authorities on sharing and aggregation of trade repository data.

Hong Kong's retail payment industry

Stored value facilities

The HKMA continued to promote the safety and efficiency of the retail payment industry through the implementation of 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.

Since the commencement of the licensing regime, there was a total of 16 SVF licensees in Hong Kong by the end of 2017 (Table 3). The licensees provided services ranging from mobile and internet payments to prepaid card payments to the public. They actively rolled out new services and expanded business networks over the past year to enhance user experience. Meanwhile, the HKMA continued to consider SVF licence applications in the pipeline.

The use of SVF in daily life.

International Financial Centre

In implementing supervision on SVF licensees, the HKMA adopted a principle-and-risk-based supervisory approach focusing on areas of significant risk to the SVF industry and individual SVF operators with a view to enabling the HKMA to pre-empt any serious threat to the safety and efficiency of the industry and licensees. The supervision has been conducted through on-going supervisory surveillance and on-site examinations.

Since March 2017, the HKMA has published statistics on the overall situation of the SVF industry in Hong Kong. During the year, the SVF industry recorded continued growth in terms of number of users, as well as transaction number and value.

As at the end of 2017, the total number of SVF accounts stood at 46.73 million, and the transaction number and value for the fourth quarter of 2017 were 1,493 million and HK$38,655 million respectively (Chart 8).

Chart 8 Growth trend of the SVF industry in 2017

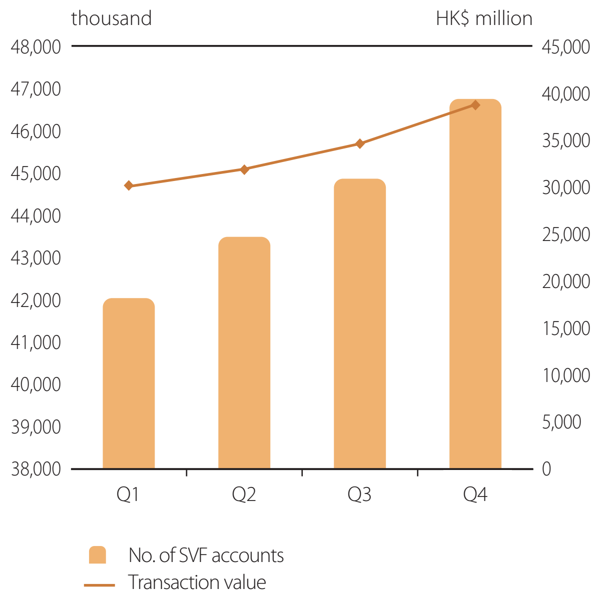


Table 3 Register of SVF Licensees
(in alphabetical order) (as at 31 December 2017)

SVF Licensees
33 Financial Services Limited
Alipay Financial Services (HK) Limited
Autotoll Limited
ePaylinks Technology Co., 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
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.

During the year, the HKMA also continued to promote public awareness of the SVF regulatory regime and issues associated with the use of SVFs through a series of public education programmes.

Retail payment systems

In August, the Monetary Authority designated the RPSs operated by Visa, Mastercard, UnionPay International and American Express for the processing of payment transactions involving participants in Hong Kong under the PSSVFO, on the grounds that proper functioning of the systems were of significant public interest. The HKMA adopted 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.

Implementation of e-Cheque

The acceptance and coverage of e-Cheque has continued to increase steadily since its launch in December 2015. Following the pilot launch of joint e-Cheque clearing between Hong Kong and Guangdong Province in July 2016, the service was expanded from the Guangdong Free Trade Zone to the entire Guangdong Province in March 2017. Shenzhen Municipal Office of the State Administration of Taxation and Shenzhen Local Taxation Bureau started accepting e-Cheques for tax payment from June. To help the public better understand the service, the HKMA and the Hong Kong Association of Banks organised a series of exhibitions at major shopping malls to educate the public how to use e-Cheques. Exhibition booths were also set up at trade fairs held at the Hong Kong Convention and Exhibition Centre to introduce the service to SMEs.

Electronic Bill Presentment and Payment

Subsequent to the launch of EBPP service in December 2013, the HKMA, in collaboration with the Guangzhou Branch of the PBoC, jointly launched the cross-boundary EBPP between Hong Kong and Guangdong Province in June. The service aims to provide an efficient channel for customers in Hong Kong to make bill payments in renminbi to merchants in Guangdong Province through the internet or mobile banking platforms.

Hong Kong's treasury markets

The HKMA organised its annual landmark event, the Treasury Markets Summit, jointly with the Treasury Markets Association in September. The discussions focused on the latest trends of global economic developments and regulatory changes, the opportunities arising from the opening-up of the Mainland financial markets, and the changes brought about by fintech to treasury operations.

To enhance the professionalism of Hong Kong treasury market participants, the HKMA contributed to the global initiative in establishing a set of principles and good practices for the wholesale foreign exchange market, i.e. the Foreign Exchange Global Code which was published in May. Efforts were also made to promote adherence to the Code among banks and other market participants.

Hong Kong's OTC derivatives market

The HKMA worked closely with the SFC to develop detailed rules for implementing the regulatory regime for the OTC derivatives market in Hong Kong, which aimed to reduce systemic risk and enhance transparency in the OTC derivatives market. Following the passage of the relevant rules by the Legislative Council in February 2016, the first phase of mandatory clearing and the second phase of mandatory reporting took effect in September 2016 and July 2017 respectively.

In addition, the HKMA participated in several international forums, including the OTC Derivatives Working Group established under the FSB, and the OTC Derivatives Regulators' Forum, contributing to the relevant international initiatives and monitoring closely the international regulatory developments.

International Financial Centre

PLANS FOR 2018 AND BEYOND

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

Hong Kong as a fintech hub in Asia

The HKMA will continue to implement the Smart Banking initiatives to promote the development and use of fintech in the banking and payment industries. In particular, we will closely monitor the progress on the development of the FPS to ensure a smooth roll-out of the system in September 2018. At the same time, we will maintain close collaboration with our strategic partners and key stakeholders to explore the application of new technologies to financial services and facilitate financial innovation.

Hong Kong as a financing hub for infrastructure investments

Dedicated efforts will be made to promote a more conducive infrastructure financing environment in Hong Kong. In particular, IFFO will work closely with key stakeholders to facilitate the participation of private sector capital in infrastructure investment and financing to create demonstration effect.

Hong Kong as the global hub for offshore renminbi business

To capitalise on the growing demand for allocating renminbi assets, the HKMA will work closely with Mainland authorities to facilitate cross-border portfolio investment flows, including improving the implementation of Bond Connect and exploring suitable enhancements to it. The HKMA will also study with Mainland authorities financial measures to support the development of the Guangdong-Hong Kong-Macao Bay Area.

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

The HKMA will explore ways to further enhance the competitiveness of Hong Kong's financial sector, particularly in the development of Hong Kong as an international asset management hub and regional destination for CTCs and fund investment activities. We will also promote the development of the green finance market in Hong Kong, including issuing a benchmark Government green bond and organising events and seminars to raise market awareness of and Hong Kong's profile in green finance.

International and regional co-operation

Cross-border capital flows could become volatile as the US tightens its monetary policy. Despite relatively strong fundamentals in Asia, its resilience may be tested in situations of disorderly capital outflows or sharp repricing of assets. Against this backdrop, the HKMA will continue to actively participate in international and regional forums to strengthen cross-border co-operation in market surveillance and enhance the resilience of financial systems. In particular, through the HKMA Chief Executive's FSB SRC chairmanship, the HKMA will play a central role in facilitating cross-border collaboration on fintech, cybersecurity, governance and corporate culture.

Hong Kong's financial infrastructure

The HKMA will continuously enhance the financial infrastructure, including the HKTR for OTC derivatives, to meet the international standards.

Hong Kong's retail payment industry

While maintaining ongoing supervision of SVF licensees and designated RPSs in accordance with the PSSVFO, the HKMA will work with the industry to promote the use of e-payment in a prudent and regulated manner with a view to better addressing the day-to-day payment needs of the public.

Hong Kong's treasury markets

Continued support will be provided to enhance the professionalism and competitiveness of the Hong Kong's treasury markets, particularly in relation to financial benchmarks and the promotion of the Foreign Exchange Global Code.

Hong Kong's OTC derivatives market

The HKMA will work closely with the SFC to develop detailed rules for implementing other aspects of the regulatory regime for the OTC derivatives market.

Reserves Management

The global economy and financial markets performed better than expected in 2017. Global equity markets went up on the back of synchronised economic growth in major developed and emerging market economies, strong corporate earnings, and market expectation of slow and gradual tightening of monetary policies by major central banks. While the US Federal Reserve raised interest rates three times as expected, and began to reduce its balance sheet in October, the 10-Year US Treasury yield remained stable and the US dollar weakened (rather than strengthened) against other major currencies. Under such a favourable environment, the Exchange Fund's investment income reached a record high of HK$264 billion in 2017, representing an investment return of 7.4%.

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 Exchange Fund is under the control of the Financial Secretary and may be invested in securities or other assets he considers appropriate, after consulting the Exchange Fund Advisory Committee (EFAC).

MANAGEMENT OF THE EXCHANGE FUND

Investment objectives and portfolio structure

EFAC has set the following investment objectives for the Exchange Fund:

(a) to preserve capital;

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

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

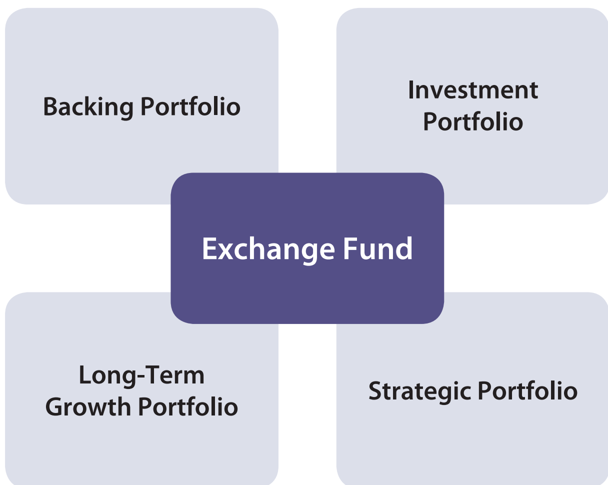
(d) subject to (a)–(c), to achieve an investment return that will help preserve the Fund's long-term purchasing power.

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 is invested 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 the assets.

To better manage risks and enhance returns in the medium and long term, the HKMA has been diversifying part of the Exchange Fund's investments, in a prudent and incremental manner, into a wider variety of asset classes, including emerging market and Mainland bonds and equities, private equity 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 one-third of the accumulated surplus of the Exchange Fund, with further capacity arising from the allocation of part of the Future Fund to long-term assets.

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



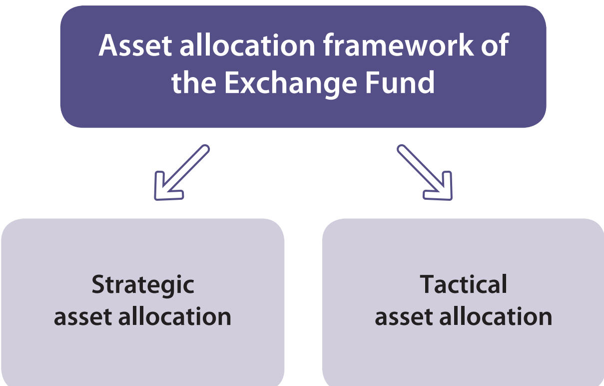
Reserves Management

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 exception of the Future Fund which links its interest rate to both the IP and the LTGP depending on the portfolio mix. As at the end of 2017, the portfolio mix of the Future Fund between the IP and the LTGP was about 65:35. The portion of the Future Fund linked with the LTGP is expected to gradually build up to around 50% by 2018.

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 the long-term optimal 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 limit are determined by the Financial Secretary in consultation with 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 take positions to take advantage of short-term market movements.



Investment management

Direct investment

HKMA staff in the Reserves Management Department directly manage about 73% of the investments of the Exchange Fund, which includes 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 27% 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 capture sustainable returns, to benefit from diverse and complementary investment styles and to share market insights and technical expertise with the Exchange Fund.

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

Risk management and compliance

The high volatility of the financial markets subsequent to the 2008/09 global financial crisis has highlighted the importance of risk management. Stringent controls and investment guidelines have been established for both internally and externally managed portfolios, and compliance with guidelines and regulations is closely monitored. Risk assessment has been strengthened to support the Exchange Fund's increased pace of investment diversification. Risk-control tools are deployed to assess market risks under both normal and adverse market conditions. Detailed performance attribution analyses are also conducted to identify sources of performance, allowing the HKMA to make the best use of the investment skills of internal and external managers.

[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.

Responsible investment

The HKMA is supportive of responsible investment. For instance, the HKMA supports the Principles of Responsible Ownership issued by the Securities and Futures Commission on 7 March 2016, which are voluntary and help investors determine how best to meet their ownership responsibilities in relation to their investments in Hong Kong-listed companies. For the management of the Exchange Fund, the HKMA has encouraged the appointed external fund managers for its Hong Kong equity portfolio to adopt the Principles of Responsible Ownership in managing the investments. Furthermore, the front offices and the Risk Management and Compliance Division have incorporated environmental, social and governance (ESG) factors into various internal procedures for making and monitoring investment activities. The HKMA will closely monitor the development of ESG standards and assess how these standards can be further integrated into the investment process.

PERFORMANCE OF THE EXCHANGE FUND

The financial markets in 2017

The global economy and financial markets in 2017 performed better than expected. On the back of synchronised economic growth in major developed and emerging market economies, strong corporate earnings, and market expectation of slow and gradual tightening of monetary policies by major central banks, the global equity markets performed well. In particular, the Hong Kong equity market rose by 36%, outperforming other major equity markets.

In the bond markets, short-dated US Treasury yields shot up as the US Federal Reserve raised interest rates three times as expected, and began to reduce its balance sheet in October. Nevertheless, the 10-year US Treasury yield remained stable at about 2.4% over the year. Other major 10-Year government bond yields also ended the year little changed, with the exception of German Bunds which rose on the euro area's solid economic growth and market expectation of the European Central Bank's policy tightening.

In the currency markets, the US dollar weakened against other major currencies, despite the US Federal Reserve's interest rate hikes and the beginning of its balance sheet reduction. The depreciation of the US dollar was a result of the reviving economic growth in Europe and Japan, and market expectation of diminishing monetary policy divergence between the US and other major economies. The euro and yen appreciated by around 14% and 4% respectively against the US dollar in 2017.

The performance of major currencies as well as bond and equity markets in 2017 is shown in Table 1.

Table 1 2017 market returns

Currencies	
Appreciation (+)/depreciation (–) against US dollar	
Euro	+13.8%
Yen	+3.5%
Bond markets	
Relevant US Government Bond (1–30 years) Index	+2.5%
Equity markets[1]	
Standard & Poor's 500 Index	+19.4%
Hang Seng Index	+36.0%

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

Reserves Management

The Exchange Fund's performance

A record high investment income of **HK$264 billion**, representing an investment return of **7.4%**.

The Exchange Fund recorded an investment income of HK$264 billion in 2017. This comprised gains of HK$80.4 billion on overseas equities, gains of HK$58.3 billion on Hong Kong equities, gains of HK$34.4 billion on bonds, a positive currency translation effect of HK$53.5 billion on non-Hong Kong dollar assets and gains of HK$37.4 billion on other investments held by the investment holding subsidiaries of the Exchange Fund. Separately, the Strategic Portfolio recorded a valuation gain of HK$4.5 billion.

The investment income of HK$264 billion last year is a record high for the Exchange Fund, surpassing the previous record in 2007 (HK$142.2 billion) by HK$121.8 billion.

The total assets of the Exchange Fund reached HK$4,015.3 billion at year end. The market value of investments under the LTGP totalled HK$235.6 billion, with private equity amounting to HK$157.2 billion and real estate at HK$78.4 billion. Outstanding investment commitments amounted to HK$162.4 billion.

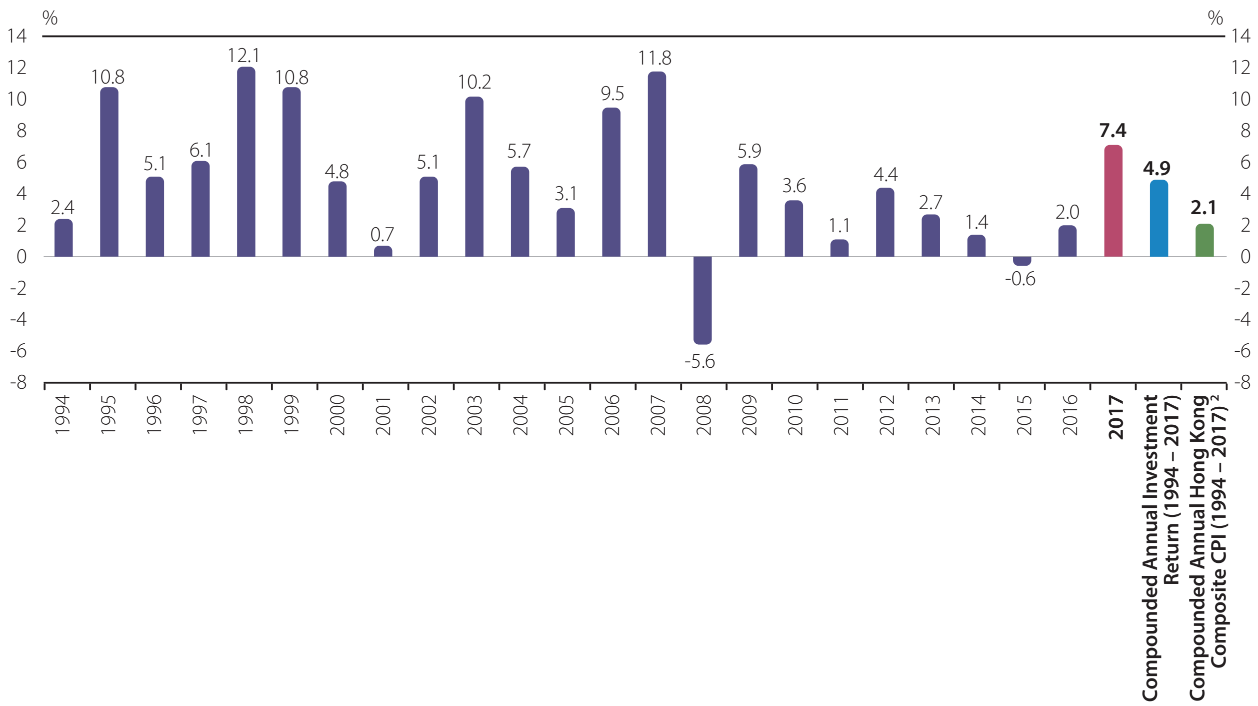
The investment return of the Exchange Fund (excluding the Strategic Portfolio) in 2017 was 7.4%. Specifically, the IP achieved a rate of return of 12.1%, while the BP gained 1.8%. The LTGP recorded an annualised internal rate of return of 13.7% since its inception in 2009.

The annual return of the Exchange Fund from 1994 to 2017 is set out in Chart 1. Table 2 shows the 2017 investment return and the average investment returns of the Fund over several different time horizons. The average return was 2.9% over the past three years, 2.5% over the past five years, 2.2% over the past ten years and 4.9% since 1994.[2] Table 3 shows the currency mix of the Fund's assets as at 31 December 2017.

HKMA Deputy Chief Executive, Mr Eddie Yue (middle), speaks at the press conference on 2017 Exchange Fund Results.

[2] Averages over different time horizons are calculated on an annually compounded basis.

Chart 1 Investment return of the Exchange Fund (1994–2017)[1]



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

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

	Investment return[2 & 3]
2017	**7.4%**
3-year average (2015–2017)	2.9%
5-year average (2013–2017)	2.5%
10-year average (2008–2017)	2.2%
Average since 1994	4.9%

1. The investment returns for 2001 to 2003 are in US dollar terms.
2. Investment return calculation excludes the 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 2017 (including forward transactions)

	HK$ billion	%
US dollar	**3,319.9**	82.7
Hong Kong dollar	**297.7**	7.4
Others[1]	**397.7**	9.9
Total	**4,015.3**	100.0

1. Other currencies included mainly euro, renminbi, pound sterling and Japanese yen.

Corporate Functions

The HKMA maintains effective communication with the community and the market through the media, public education programmes and other various channels to facilitate public understanding of its policies and operations. During the year, the HKMA continued to improve corporate governance by supporting professional development of staff, instituting rigorous financial discipline and enhancing IT security to cope with challenges arising from the implementation of new initiatives and the increasing complexity of work.

ENGAGING THE COMMUNITY
CORPORATE DEVELOPMENT

Media relations

The HKMA works closely with the media to enhance transparency and promote public understanding about its policies and work. In 2017, 86 open press events were organised, comprising nine press conferences, 16 stand-up interviews and 61 other public functions. In addition, 42 media interviews were arranged and a total of 360 bilingual press releases were issued. It also handles a large number of media enquiries every day.

To raise awareness of the HKMA's key functions, guided tours were organised for the media to visit the newly revamped HKMA Information Centre. Furthermore, in-depth media briefings and educational workshops were conducted for local and overseas media on a wide range of topics, including the Bond Connect scheme, prudential measures for property mortgage loans, the Resolution Regime and Exchange Fund investments.

HKMA Chief Executive, Mr Norman Chan, introduces a mosaic artwork called "Small Change, Big Ode" to the media at the HKMA Information Centre. The artwork, featuring the Victoria Harbour and the Hong Kong skyline, was created using a total of 135,811 pieces of Hong Kong coins in different denominations.

HKMA Chief Executive, Mr Norman Chan, conducts a media interview with local newspapers regarding the key initiatives of the HKMA's Infrastructure Financing Facilitation Office and Fintech Facilitation Office.

Corporate Functions

Public enquiries

The Public Enquiry Service provides an effective means for the public to better understand the key functions and operations of the HKMA. A total of 8,752 enquiries were handled in 2017, about half of which were related to banking policies and regulations, monetary and economic issues, consumer banking issues as well as notes and coins. Notable examples included the Coin Collection Programme, banking products and services, banking-related guidelines and circulars, monetary and economic statistics, prudential measures for property mortgage loans, and prevention of money laundering and terrorist financing.

Chart 1 shows the number of public enquiries received since 2014 and Chart 2 provides a breakdown in terms of the nature of enquiries received in 2017.

Chart 1 Total number of public enquiries

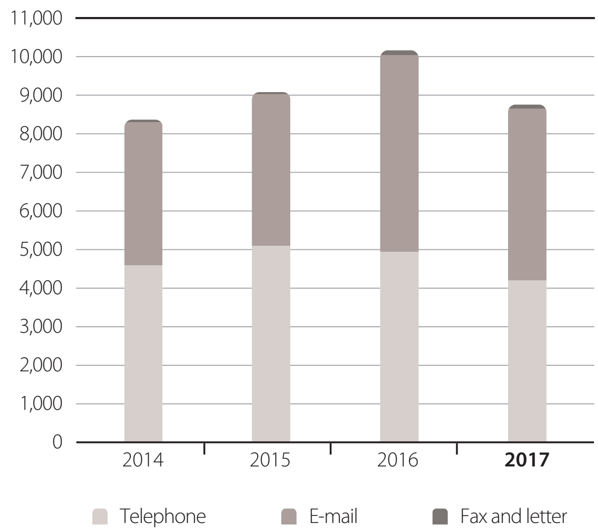
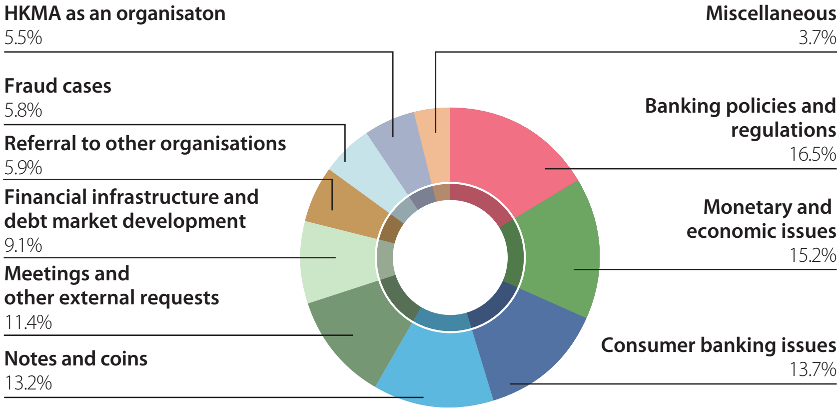


Chart 2 Nature of enquiries received in 2017



Publications

Apart from the *HKMA Annual Report*, in 2017 the HKMA published two issues of the *Half-Yearly Monetary and Financial Stability Report* and four issues of the *Quarterly Bulletin*, and released regular updates of the *Monthly Statistical Bulletin* to provide up-to-date and thematic information and analyses on monetary, banking and economic issues in Hong Kong. In addition, the HKMA issued a total of 23 *inSight* articles, covering various topical issues related to its work.

HKMA website

The HKMA corporate website (www.hkma.gov.hk), with over 60,000 pages in English and traditional and simplified Chinese, is the public access gateway to up-to-date information about the HKMA. It also 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. Dedicated webpages and eye-catching short-cut links are designed to draw public attention to the new initiatives of the HKMA, such as account opening, the regulatory regime for SVFs, the Infrastructure Financing Facilitation Office and the Fintech Facilitation Office, as well as important and timely information, such as reminders on the need to remain vigilant against bogus telephone calls and the location of Coin Carts under the Coin Collection Programme.

Public Education Programme

The HKMA Information Centre on the 55th floor of Two International Finance Centre is an important resource for 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, and is open to the public six days a week. The exhibition area introduces the work of the HKMA and the development of money and banking in Hong Kong. It also contains reading materials and exhibits for the study of Hong Kong's monetary, banking and financial affairs.

The new look of the policy section of the Information Centre, which introduces the work of the HKMA and related financial concepts, was re-opened to the public on 24 February 2017 upon completion of the refurbishment work. The revamped policy section contains various interactive games and devices that integrate play into learning and explain complicated financial concepts in a simple way. Feedback from the visitors has been positive.

Students try out the educational games at the policy section of the Information Centre to learn about the work of the HKMA.

Corporate Functions

Guided tours of the Information Centre are organised for visitors. During the year, it received more than 59,000 visitors and hosted over 650 guided tours for schools and other groups (Chart 3). More than 645,000 people have visited the Information Centre since it opened in December 2003.

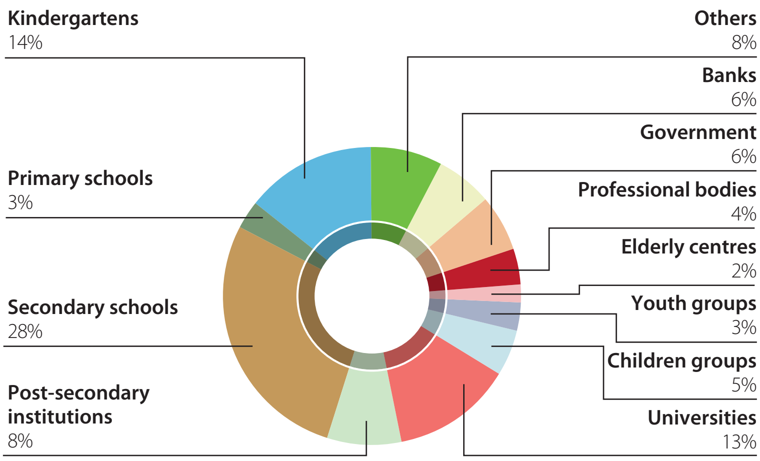
The library, situated next to the exhibition area, houses more than 23,000 books, journals and other publications for the study of Hong Kong's monetary, banking and financial affairs and central banking topics. It also maintains the register of AIs and local representative offices and the register of securities staff of AIs, as required by section 20 of the Banking Ordinance.

The library in the HKMA Information Centre.

To reach out to the community and raise public awareness of the HKMA's work, the HKMA organised four public education seminars for about 2,000 secondary school students and teachers in 2017. Topics covered in the seminars included the Linked Exchange Rate System, Hong Kong banknotes, banking stability, consumer protection, the Deposit Protection Scheme, fintech, the Belt and Road Initiative and careers in the financial industry. More than 58,400 people have participated in this public education programme since its launch in 1998.

Students and teachers from secondary schools in different districts participate in one of the public education seminars.

Chart 3 Types of group visits to the Information Centre in 2017



HUMAN RESOURCES

The HKMA recruits, develops and maintains a highly professional workforce to support its policy objectives and respond flexibly to changing work priorities. While the HKMA is an integral part of the Government, it employs staff on terms different from those of the civil service to attract personnel with the right experience and expertise. As a public organisation, the HKMA aims to maintain a lean and flexible structure and, where possible, to redeploy staff resources to undertake new initiatives and meet increasing workload.

Organisational changes

The Resolution Office was established on 1 April 2017 to implement the Financial Institutions (Resolution) Ordinance enacted in June 2016. The Office aims to ensure that the Hong Kong resolution regime is operational for banks. This is essential to enhancing the resilience of the Hong Kong banking sector in the event of any crisis.

Staffing

The establishment of the HKMA in 2017 was 927. This will be increased by 35 to 962 in 2018 (an increase of 3.8%) to ensure that sufficient resources are provided to cope with the new initiatives and the increasing complexity and volume of existing work. The new posts are deployed to the following functions:

- Enhancing banking and financial stability, which includes:
  - enhancing capacity to support the launch of the Faster Payment System and easy banking initiatives;
  - strengthening supervisory capacity to deal with the regional and business expansion of banks and to facilitate (i) the wider adoption of fintech in the provision of banking services and (ii) collaboration with other regulatory authorities on cyber security and fintech issues; and
  - supporting the work of the Fraud and Money Laundering Intelligence Taskforce to fight against fraud, money laundering and other types of financial crimes, and strengthening legal support for enforcement actions under legislation governing anti-money laundering and SVFs.
- Strengthening investment, risk management and other related support for the further expansion and diversification of the Exchange Fund's investment activities.
- Stepping up global macro and financial-sector surveillance, and strengthening talent development programmes to ensure that the HKMA has the necessary human capital to meet the long-term development needs of the organisation.

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 2018

Department	Functions	Senior staff		Others	
		Establishment	Strength	Establishment	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	84	78
Banking Policy	To formulate supervisory policies for promoting the safety and soundness of the banking sector, enhance capacity building of industry practitioners and consumer education, and take charge of deposit protection function.	1	1	45	42
Banking Supervision	To supervise operations of AIs.	1	1	165	155
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	94
External	To help develop and promote Hong Kong as an international financial centre, foster regional monetary co-operation through participation in the international central banking and financial community, and promote the development of financial markets.	1	1	56	52
Financial Infrastructure	To develop and enhance the financial market infrastructure for maintaining and strengthening Hong Kong's status as an international financial centre, take charge of settlement function, and ensure adequate supply of banknotes and coins.	1	1	46	45
Monetary Management	To maintain financial and monetary stability through macro-financial surveillance and monitoring of market operations, license and supervise SVFs, and designate and oversee important Retail Payment Systems.	1	1	49	49
Research	To conduct research and analyses on economic and financial market developments in Hong Kong and other economies.	1	1	39	36
Reserves Management	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	94	74
Risk and Compliance	To oversee all risk-generating activities, including investment risks and other non-investment related corporate risks of the HKMA.	1	1	42	40
Office of the General Counsel	To provide in-house legal support and advice.	1	1	26	21
Corporate Services	To provide support services in the form of administrative, finance, human resources, information technology and secretariat services, and handle media and community relations.	1	1	172	159
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 orderly resolution of a failing AI or a cross-sectoral group if needed.	0	0	10	8
Total		**16**	**16**	**946**	**872**

Temporary resources are deployed to meet other work demands. The HKMA also transfers staff members on secondment to other international or local organisations, such as the International Monetary Fund (IMF) and the Financial Services Development Council, to assist in activities or policy initiatives in which Hong Kong or the HKMA has an interest. Some staff members are deployed on a full-time or part-time basis to provide operational support to the Hong Kong Deposit Protection Board and the Treasury Markets Association.

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, which 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 for individual meritorious staff members to maintain their pay competitiveness.

Any approved annual adjustments to the fixed pay and any variable pay awards for the HKMA are distributed to individual staff members based on their performance. Investment professionals in the HKMA 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 and within the approved overall pay awards.

Remuneration of senior staff members

The remuneration packages of senior staff members in 2017 are shown in Table 2.

Table 2 Remuneration packages of HKMA senior staff members in 2017[1]

HK$'000	Chief Executive	Deputy Chief Executive/ Senior Executive Director (average)	Executive Director (average)
Number of staff[2]	1	4	14
Annualised pay			
Fixed pay	7,116	5,786	3,853
Variable pay	2,600	1,547	1,013
Other benefits[3]	1,059	773	515

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 in this table includes staff members who did not serve out a full year. The HKMA senior staff members include the Chief Executive Officer of the Hong Kong Mortgage Corporation and the Commissioner of Resolution 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.

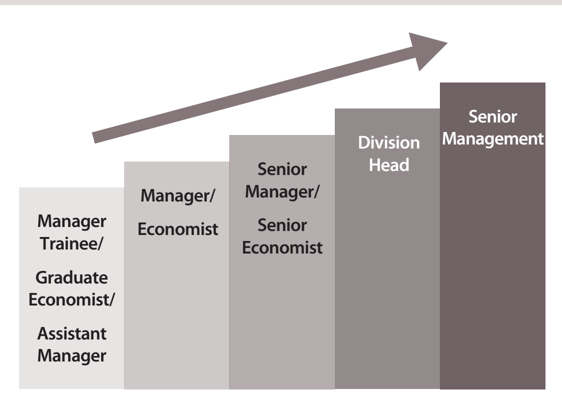
Manager Trainee (MT) and Graduate Economist (GE) programmes

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 a period of two years.

The MT programme prepares young graduates interested in central banking work to become the HKMA's future key management staff and contribute to the financial stability and prosperity of Hong Kong. Each MT undergoes on-the-job training in two to three departments to acquire hands-on experience on the important functions of the HKMA. For the GE programme, young graduates interested in economic research are offered the opportunity to harness their research skills in two to three departments to provide important input to the policy formulation process.

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 also attend structured foundation central banking courses organised internally and by leading international or regional organisations. Upon successful completion of the respective programme, MTs are offered appointments as Managers and GEs as Economists to continue their pursuit of a professional career in the organisation.

Career Prospect



MTs and GEs participate in team-building activities.

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 the banking system. A small number of AMs work in other functions, providing analytical and other forms of support. Young graduates with keen interest in banking supervisory and regulatory work would find the position of AM a good starting point for a fulfilling career.

Training and development

The HKMA attaches great importance to developing staff capabilities to meet operational demand, career development needs and new challenges. During the year, HKMA staff attended various training courses equivalent to 4,236 days. These included 1,593 days of horizontal training in general skills, and 2,643 days of vertical training in job-specific issues. Each staff member received on average 4.9 days of training. These training courses were organised in-house, or by the Government, other central banking institutions, local and overseas universities, consultants and training institutions.

As part of the horizontal training programme, an annual in-house induction course covering an overview of the roles and functions of the HKMA was organised for new recruits. Other horizontal training programmes attended by staff during the year included public policy, national studies, leadership and executive coaching, communication and presentation skills, team building, computer skills, language courses and conduct-related matters.

Vertical training for staff covered various job-specific areas, including fintech, big data, supervision of technology risks, trends in cyber security and cyber crime, the Belt and Road Initiative, the Bond Connect scheme, regulatory litigation, insurance law and practice, recovery and resolution planning, bank risks and cryptocurrencies. Staff members were also sponsored to attend courses run by local professional bodies and training consultants.

To enhance work-related knowledge and professional standards of staff, the HKMA runs a training sponsorship scheme to help staff pursue studies relevant to the work of the HKMA. The scheme covers degree and diploma courses, professional examinations and short-term courses. Reimbursement of membership fees of relevant professional bodies is also provided.

GENERAL ADMINISTRATION

The HKMA continues to streamline its work to improve efficiency and cost-effectiveness in coping with the increasing workload. Business continuity plans 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 every year to ensure the responsiveness and preparedness of staff in carrying out various business continuity measures. A dedicated team monitors influenza alerts and other relevant infectious diseases to ensure that necessary precautionary and contingency measures are taken in a timely manner.

The HKMA has an established environmental policy to protect and preserve the environment. Office green measures include the use of energy-saving devices, recycled paper and envelopes, arrangements for recycling, and minimal printing and use of paper products. Green achievements in 2017 included reductions in the consumption of electricity by 0.64%, chilled water by 4.2% and envelopes by 55.1%, while the collection of waste paper increased by 6.1%.

The HKMA organises staff activities to enhance physical wellness, promote a sense of belonging and foster cooperation among colleagues. These activities include interest classes, sports competitions and volunteer activities.

During the year, HKMA staff continued to support various charitable events. The HKMA team participated in the "Challenging 12 Hours Charity Marathon" to support Sowers Action in promoting education aid in Mainland China. The Team came 11 out of 73 teams, and completed the 42km marathon in 8 hours and 12 minutes. HKMA staff took part actively in the Blood Donation Day, Territory-Wide Flag Day, the Community Chest's Green Day, Love Teeth Day, Skip Lunch Day, and Dress Casual Day. Staff also participated in regular campaigns that collect clothes, toys and other reusable items for donation to charities.

In 2017, members of the HKMA Volunteer Team devoted 485 hours of their free time to serving the community. They participated in numerous charitable events, including "Step Out for Children", organised by The Society for the Relief of Disabled Children to raise funds for mitochondrial disease diagnostic tests for children; "Yo! Let's Walk the Road", organised by the Youth Outreach to help at-risk youth grow into responsible members of the community; "Cane-a-thon International White Cane Day 2017", organised by the Hong Kong Blind Union to raise funds for advocacy work and services for the visually impaired; "V-Run and Walk", organised by the Agency for Volunteer Service to develop volunteerism; "New World Harbour Race 2017", organised by the Hong Kong Amateur Swimming Association to advocate a strong Lion Rock spirit; and "Oxfam Trailwalker 2017", organised by Oxfam to support poverty alleviation and emergency relief projects in Africa and Asia. In recognition of its commitment in caring for the community, the HKMA was accredited with the "10 Years Plus Caring Organisation Logo" by the Hong Kong Council of Social Service.

The HKMA Basketball Team participates in the Supervisory Cup Basketball Competition 2017.

HKMA volunteers participate in the fund-raising event, "YO! Let's Walk the Road", organised by the Youth Outreach on 7 October 2017.

FINANCE

Annual budget

In drawing up the annual budget, the HKMA takes into account its ongoing operations and strategic development set out in a three-year plan approved by the FS on the advice of the 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 critically assess 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 headcount proposal) for further scrutiny by senior management. The GSC of the EFAC then deliberates on the proposed budget and recommends any changes it considers necessary, before putting it through the EFAC to the FS for approval.

All expenditure items are subject to stringent financial controls through 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 2017 and the budgeted expenditure for core activities in 2018 are shown in Table 3. The difference between the 2017 actual expenditure and the 2018 budget is mainly due to an increase in staff costs, including the full-year effect of staff changes and pay review in 2017, and a planned net increase of 35 posts in 2018.

Table 4 shows other expenses that are not related directly to the HKMA's own operations. Expenses related to the provision of premises for international organisations, whose presence in Hong Kong promotes the city's status as an international financial centre, are expected to remain broadly stable in 2018. Spending on financial infrastructure is related to the operation and continued development of payment and settlement systems to enable 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).

Table 3 HKMA administrative expenditure

HK$ million	2017 Budget	2017 Actual	2018 Budget
Staff costs	1,371		1,475
Salaries and other staff costs		1,140	
Retirement benefit costs		105	
Premises expenses			
Operating lease charges	34	33	31
Other premises expenses (including management fees and utility charges)	68	58	72
General operating costs			
Maintenance of office and computer equipment	111	100	104
Financial information and communication services (including trading, dealing terminals and data link charges)	63	53	69
External relations (including international meetings)	51	29	62
Public education and publicity	25	17	24
Professional and other services	85	45	98
Training	13	8	17
Others	12	9	14
Total administrative expenditure	**1,833**	**1,597**	**1,966**

Table 4 Additional expenses

HK$ million	2017 Budget	2017 Actual	2018 Budget
Subsidy to the Hong Kong Institute for Monetary Research	20	14	20
Premises expenses of international financial organisations in Hong Kong	39	39	41
Service fees for financial infrastructure	147	113	189

Corporate Functions

Financial disclosure

The HKMA adopts international standards in financial disclosure as far as they 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. Working with the external auditor and other accounting professionals, the Finance Division prepares and presents 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*.

INFORMATION TECHNOLOGY (IT)

The IT Division maintains a reliable and secure IT environment that supports the smooth and efficient operation of the HKMA.

In 2017, all time-critical systems of the HKMA maintained full operational uptime. During the year a virtual desktop infrastructure was rolled out as planned to further enhance the efficiency of the office automation services and support the use of more advanced technology and solutions to strengthen the systems' cyber resilience.

IT security continued to be a high-priority task of the IT Division in 2017. Emerging threats in the cyber space are closely monitored and the preparedness of the IT security system is put under regular reviews. System enhancements are carried out and, where necessary, internal controls are strengthened to better prepare the HKMA in preventing, detecting and responding to cyber threats. Business contingency plan is also in place to ensure continued operation of critical systems.

SETTLEMENT SERVICES

The Settlement Section provides robust and reliable settlement services and operational support to the reserves management, monetary operations and other initiatives undertaken by the HKMA. In 2017, the Settlement Section has further strengthened its operational controls in the settlement processes and system security to mitigate potential risk of cyber attacks to ensure accurate, efficient and safe transfers of funds and assets of the Exchange Fund. The Settlement Section will remain versatile to meet new service demands and cyber resilience requirements.

OFFICE OF THE GENERAL COUNSEL

The Office of the General Counsel (OGC) is responsible for providing legal advice to the HKMA on all aspects of its functions.

In addition to providing legal support for the operation of each line department within the HKMA, the OGC assists in the planning and implementation of specific projects and initiatives which can involve complex issues of commercial, regulatory and administrative law. Examples in 2017 include:

- continued implementation of the Basel III framework, including the Banking (Capital) (Amendment) Rules 2017 and the Banking (Liquidity) (Amendment) Rules 2017

- establishment and maintenance of the bank resolution regime, including a peer review conducted by the Financial Stability Board (discussed on page 75 of the Banking Stability chapter); recovery and resolution planning for global systemically important banks, including advising on the drafting of bank-specific, cross-border co-operation agreements; operationalisation of the Financial Institutions (Resolution) Ordinance (Cap. 628), including the preparation of subsidiary legislation; as well as participation in the Financial Stability Board Resolution Steering Group and its Legal Experts Group on Cross-border Recognition of Resolution Actions

- implementation of Bond Connect, launched in July, for the purpose of facilitating mutual access to capital markets between Mainland China and Hong Kong

- provision of advice on issues relating to legislative and regulatory reforms in overseas jurisdictions, including the Markets in Financial Instruments Directive II.

The OGC also provides commentary to government bureaux on significant legislative proposals which may impact the functions or mandates of the HKMA.

OGC lawyers participate in regular meetings and conferences for central bankers, financial regulators and the banking community to keep abreast of topical developments in major international financial centres and to discuss and resolve issues of current legal concern.

INTERNAL AUDIT

The Internal Audit (IA) Division independently assesses the adequacy and effectiveness of control, risk management and governance processes, and advises on opportunities for improvement. The IA Division reports directly to the Chief Executive of the HKMA and the Audit Sub-Committee (ASC) of the EFAC.

Using a risk-based approach, operational audits and system security reviews were conducted to cover all significant risk areas of the HKMA. Advice was also provided on major system development projects and internal control issues in response to requests from management and senior executives. The IA Division provided quarterly business risk updates to the Risk Committee, and quarterly reports on audit engagement progress updates and key internal control matters to the senior executives and the ASC.

RISK MANAGEMENT

One of the most important tasks of the HKMA 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 of the HKMA 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. Both committees 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 engaged in, and the increasing public expectations of the organisation's work, the operational risk management process was strengthened in 2012. The framework now covers organisational risks at two levels: entity-level and 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 or emerging risks identified by the business units, and the adequacy of the control measures and mitigating strategies they devise, are reported and reviewed quarterly. 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. These assessments are discussed at the Risk Committee, which decide on appropriate follow-up actions.

EXTERNAL AUDITOR

In accordance with section 7 of the Exchange Fund Ordinance, the Audit Commission of the Government of the Hong Kong Special Administrative Region audits the financial statements of the Exchange Fund. The Commission does not charge for this service.

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 157 to 243, which comprise the balance sheets of the Exchange Fund and of the Group as at 31 December 2017, 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 2017, 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 2017. 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 36.1 to the financial statements.* As at 31 December 2017, the Group had financial assets totalling HK$3,671,918 million and financial liabilities totalling HK$1,050,952 million valued at fair value. For 94% 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 6% 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$226,881 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 2.12, 17 and 18 to the financial statements.* The Group's investment properties were stated at their fair values, totalling HK$26,242 million as at 31 December 2017. The Group also had interests in three associates and fourteen joint ventures totalling HK$35,747 million, whose principal activities were holding overseas investment properties. The fair values of these investment properties, whether held by the Group directly or by associates or 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 associates or 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 2017 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;

– 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;

Report of the Director of Audit (continued)

– 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.

David Sun
Director of Audit

Audit Commission
26th Floor
Immigration Tower
7 Gloucester Road
Wanchai, Hong Kong

11 April 2018

Contents

Exchange Fund – Income and Expenditure Account

for the year ended 31 December 2017

		Group		Fund	
(Expressed in millions of Hong Kong dollars)	Note	**2017**	2016	**2017**	2016
INCOME					
Interest income		**39,131**	25,361	**37,947**	24,341
Dividend income		**16,126**	13,743	**13,834**	12,797
Income from investment properties		**1,894**	463	**–**	–
Net realised and unrealised gains		**137,221**	37,755	**125,828**	29,226
Net exchange gain/(loss)		**50,303**	(14,521)	**53,502**	(15,828)
Investment income	4(a)	**244,675**	62,801	**231,111**	50,536
Bank licence fees		**125**	130	**125**	130
Other income		**591**	807	**84**	67
TOTAL INCOME		**245,391**	63,738	**231,320**	50,733
EXPENDITURE					
Interest expense on placements by Fiscal Reserves, HKSAR Government funds and statutory bodies	4(b)	**(54,802)**	(42,686)	**(54,802)**	(42,686)
Other interest expense	4(c)	**(5,919)**	(2,976)	**(5,140)**	(2,258)
Operating expenses	4(d)	**(5,471)**	(4,467)	**(4,379)**	(3,674)
Note and coin expenses	4(e)	**(372)**	(457)	**(372)**	(457)
TOTAL EXPENDITURE		**(66,564)**	(50,586)	**(64,693)**	(49,075)
SURPLUS BEFORE SHARE OF PROFIT OF ASSOCIATES AND JOINT VENTURES		**178,827**	13,152	**166,627**	1,658
Share of profit of associates and joint ventures, net of tax		**2,629**	3,009	**–**	–
SURPLUS BEFORE TAXATION		**181,456**	16,161	**166,627**	1,658
Income tax	5	**(109)**	(57)	**–**	–
SURPLUS FOR THE YEAR		**181,347**	16,104	**166,627**	1,658
ATTRIBUTABLE TO:					
Owner of the Fund		**180,985**	15,958	**166,627**	1,658
Non-controlling interests		**362**	146	**–**	–
		181,347	16,104	**166,627**	1,658

The notes on pages 163 to 243 form part of these financial statements.

Exchange Fund – Statement of Comprehensive Income

for the year ended 31 December 2017

(Expressed in millions of Hong Kong dollars)	Note	Group 2017	Group 2016	Fund 2017	Fund 2016
SURPLUS FOR THE YEAR		**181,347**	16,104	**166,627**	1,658
OTHER COMPREHENSIVE INCOME					
Items that may be reclassified subsequently to income and expenditure account					
Available-for-sale securities					
fair value changes on revaluation		**14,643**	4,356	**–**	–
fair value changes on disposal reclassified to income and expenditure account		**224**	(130)	**–**	–
impairment losses reclassified to income and expenditure account	10	**6,561**	–	**–**	–
tax effect		**18**	20	**–**	–
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures		**2,679**	(1,937)	**–**	–
OTHER COMPREHENSIVE INCOME FOR THE YEAR, NET OF TAX		**24,125**	2,309	**–**	–
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**205,472**	18,413	**166,627**	1,658
TOTAL COMPREHENSIVE INCOME FOR THE YEAR ATTRIBUTABLE TO:					
Owner of the Fund		**205,035**	18,304	**166,627**	1,658
Non-controlling interests		**437**	109	**–**	–
		205,472	18,413	**166,627**	1,658

The notes on pages 163 to 243 form part of these financial statements.

Exchange Fund – Balance Sheet

as at 31 December 2017

		Group		Fund	
(Expressed in millions of Hong Kong dollars)	Note	**2017**	2016	**2017**	2016
ASSETS					
Cash and money at call	7	**216,372**	207,587	**215,649**	206,954
Placements with banks and other financial institutions	8	**156,688**	203,704	**131,251**	179,712
Financial assets designated at fair value	9	**3,489,593**	3,057,356	**3,473,286**	3,042,754
Available-for-sale securities	10	**180,415**	132,849	**493**	493
Derivative financial instruments	11(a)	**2,403**	9,263	**2,069**	9,018
Held-to-maturity securities	12	**10,348**	9,932	**–**	–
Loan portfolio	13	**7,830**	9,534	**–**	–
Gold	14	**677**	600	**677**	600
Other assets	15	**52,574**	56,673	**51,419**	55,117
Interests in subsidiaries	16	**–**	–	**137,531**	121,114
Interests in associates and joint ventures	17	**35,747**	32,083	**–**	–
Investment properties	18	**26,242**	22,723	**–**	–
Property, plant and equipment	19(a)	**3,138**	3,191	**2,882**	2,944
TOTAL ASSETS		**4,182,027**	3,745,495	**4,015,257**	3,618,706
LIABILITIES AND EQUITY					
Certificates of Indebtedness	20	**456,726**	405,345	**456,726**	405,345
Government-issued currency notes and coins in circulation	20	**12,213**	11,928	**12,213**	11,928
Balance of the banking system	21	**179,790**	259,593	**179,790**	259,593
Placements by banks and other financial institutions	22	**59,337**	56,136	**59,337**	56,136
Placements by Fiscal Reserves	23	**1,073,794**	914,598	**1,073,794**	914,598
Placements by Hong Kong Special Administrative Region Government funds and statutory bodies	24	**305,110**	302,485	**305,110**	302,485
Exchange Fund Bills and Notes issued	25	**1,045,248**	960,982	**1,045,748**	960,982
Derivative financial instruments	11(a)	**5,562**	2,858	**5,293**	929
Bank loans	26	**13,250**	11,724	**–**	–
Other debt securities issued	27	**35,517**	34,233	**–**	–
Other liabilities	28	**171,914**	167,522	**164,106**	160,197
Total liabilities		**3,358,461**	3,127,404	**3,302,117**	3,072,193
Accumulated surplus		**788,465**	607,480	**713,140**	546,513
Revaluation reserve		**34,191**	12,748	**–**	–
Translation reserve		**(1,047)**	(3,654)	**–**	–
Total equity attributable to owner of the Fund		**821,609**	616,574	**713,140**	546,513
Non-controlling interests		**1,957**	1,517	**–**	–
Total equity		**823,566**	618,091	**713,140**	546,513
TOTAL LIABILITIES AND EQUITY		**4,182,027**	3,745,495	**4,015,257**	3,618,706

Norman T. L. Chan
Monetary Authority
10 April 2018

The notes on pages 163 to 243 form part of these financial statements.

Exchange Fund – Statement of Changes in Equity

for the year ended 31 December 2017

	Attributable to owner of the Fund					
(Expressed in millions of Hong Kong dollars)	Accumulated surplus	Revaluation reserve	Translation reserve	Total attributable to owner of the Fund	Non-controlling interests	Total
Group						
At 1 January 2016	591,522	8,501	(1,753)	598,270	1,085	599,355
Surplus for the year	15,958	–	–	15,958	146	16,104
Other comprehensive income for the year						
Fair value changes on available-for-sale securities:						
– revaluation	–	4,357	–	4,357	(1)	4,356
– reclassification on disposal	–	(130)	–	(130)	–	(130)
– tax effect	–	20	–	20	–	20
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures	–	–	(1,901)	(1,901)	(36)	(1,937)
Total comprehensive income for the year	15,958	4,247	(1,901)	18,304	109	18,413
Capital injection by non-controlling interests	–	–	–	–	333	333
Dividends paid to non-controlling interests	–	–	–	–	(10)	(10)
At 31 December 2016	607,480	12,748	(3,654)	616,574	1,517	618,091
At 1 January 2017	**607,480**	**12,748**	**(3,654)**	**616,574**	**1,517**	**618,091**
Surplus for the year	**180,985**	**–**	**–**	**180,985**	**362**	**181,347**
Other comprehensive income for the year						
Fair value changes on available-for-sale securities:						
– revaluation	**–**	**14,640**	**–**	**14,640**	**3**	**14,643**
– reclassification on disposal	**–**	**224**	**–**	**224**	**–**	**224**
– reclassification as impairment losses	**–**	**6,561**	**–**	**6,561**	**–**	**6,561**
– tax effect	**–**	**18**	**–**	**18**	**–**	**18**
Exchange difference on translation of financial statements of overseas subsidiaries, associates and joint ventures	**–**	**–**	**2,607**	**2,607**	**72**	**2,679**
Total comprehensive income for the year	**180,985**	**21,443**	**2,607**	**205,035**	**437**	**205,472**
Capital injection by non-controlling interests	**–**	**–**	**–**	**–**	**18**	**18**
Dividends paid to non-controlling interests	**–**	**–**	**–**	**–**	**(15)**	**(15)**
At 31 December 2017	**788,465**	**34,191**	**(1,047)**	**821,609**	**1,957**	**823,566**
Fund						
At 1 January 2016	544,855	–	–	544,855	–	544,855
Surplus and total comprehensive income for the year	1,658	–	–	1,658	–	1,658
At 31 December 2016	546,513	–	–	546,513	–	546,513
At 1 January 2017	**546,513**	**–**	**–**	**546,513**	**–**	**546,513**
Surplus and total comprehensive income for the year	**166,627**	**–**	**–**	**166,627**	**–**	**166,627**
At 31 December 2017	**713,140**	**–**	**–**	**713,140**	**–**	**713,140**

The notes on pages 163 to 243 form part of these financial statements.

Exchange Fund – Statement of Cash Flows

for the year ended 31 December 2017

		Group		Fund	
(Expressed in millions of Hong Kong dollars)	Note	**2017**	2016	**2017**	2016
Cash flows from operating activities					
Surplus before taxation		**181,456**	16,161	**166,627**	1,658
Adjustments for:					
Interest income	4(a)	**(39,131)**	(25,361)	**(37,947)**	(24,341)
Dividend income	4(a)	**(16,126)**	(13,743)	**(13,834)**	(12,797)
Change in fair value of investment properties	4(a)	**(582)**	805	**–**	–
Net gains on disposal of available-for-sale securities	4(a)	**(15,079)**	(6,954)	**–**	–
Impairment losses on available-for-sale securities	4(a)	**6,561**	–	**–**	–
Interest expense	4(b) & 4(c)	**60,721**	45,662	**59,942**	44,944
Depreciation	4(d)	**214**	204	**169**	156
Share of profit of associates and joint ventures		**(2,629)**	(3,009)	**–**	–
Net loss on disposal of property, plant and equipment		**1**	–	**–**	–
Elimination of exchange differences and other non-cash items		**(12,993)**	9,227	**(12,819)**	8,683
Interest received		**38,181**	25,090	**36,949**	24,108
Interest paid		**(35,802)**	(33,101)	**(35,071)**	(32,455)
Dividends received		**16,087**	13,676	**13,778**	11,929
Income tax refunded/(paid)		**10**	(74)	**–**	–
		180,889	28,583	**177,794**	21,885
Change in fair value of derivatives and other debt securities issued		**11,229**	(3,893)	**11,304**	(3,823)
Change in carrying amount of:					
– placements with banks and other financial institutions		**9,098**	(3,811)	**1,631**	712
– financial assets designated at fair value		**(487,499)**	(49,813)	**(485,794)**	(47,993)
– loan portfolio		**1,704**	1,969	**–**	–
– gold		**(77)**	(50)	**(77)**	(50)
– other assets		**5,101**	(33,501)	**4,743**	(32,818)
– Certificates of Indebtedness, government-issued currency notes and coins in circulation		**51,666**	48,075	**51,666**	48,075
– balance of the banking system		**(79,803)**	(131,750)	**(79,803)**	(131,750)
– placements by banks and other financial institutions		**3,201**	(10,771)	**3,201**	(10,771)
– placements by Fiscal Reserves		**159,196**	81,050	**159,196**	81,050
– placements by Hong Kong Special Administrative Region Government funds and statutory bodies		**2,625**	21,639	**2,625**	21,639
– Exchange Fund Bills and Notes issued		**84,266**	133,190	**84,766**	133,190
– other liabilities		**(20,564)**	40,739	**(20,962)**	40,413
Net cash (used in)/from operating activities		**(78,968)**	121,656	**(89,710)**	119,759

Exchange Fund – Statement of Cash Flows (continued)

for the year ended 31 December 2017

(Expressed in millions of Hong Kong dollars)	Note	Group 2017	Group 2016	Fund 2017	Fund 2016
Cash flows from investing activities					
Loans to subsidiaries		–	–	(16,417)	(22,783)
Decrease/(Increase) in interests in associates and joint ventures		95	(8,235)	–	–
Proceeds from sale or redemption of available-for-sale securities		34,654	21,335	–	–
Purchase of available-for-sale securities		(51,932)	(38,616)	–	–
Proceeds from sale or redemption of held-to-maturity securities		2,747	982	–	–
Purchase of held-to-maturity securities		(3,113)	(676)	–	–
Purchase of investment properties		(180)	(3,104)	–	–
Purchase of property, plant and equipment		(162)	(203)	(107)	(91)
Dividends received from subsidiaries		–	–	18	801
Net cash used in investing activities		(17,891)	(28,517)	(16,506)	(22,073)
Cash flows from financing activities					
Bank loans raised	29(c)	106	1,601	–	–
Proceeds from issue of other debt securities	29(c)	29,027	24,502	–	–
Redemption of other debt securities issued	29(c)	(29,509)	(23,686)	–	–
Capital injection by non-controlling interests		18	333	–	–
Dividends paid to non-controlling interests		(15)	(10)	–	–
Net cash (used in)/from financing activities		(373)	2,740	–	–
Net (decrease)/increase in cash and cash equivalents		(97,232)	95,879	(106,216)	97,686
Cash and cash equivalents at 1 January		461,950	374,756	455,108	366,105
Effect of foreign exchange rate changes		12,837	(8,685)	12,819	(8,683)
Cash and cash equivalents at 31 December	29(a)	377,555	461,950	361,711	455,108

The notes on pages 163 to 243 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. 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 Government of the Hong Kong Special Administrative Region (HKSAR) for the account of the Fund for strategic purposes. Operating segment information is set out in note 30.

2 SIGNIFICANT ACCOUNTING POLICIES

2.1 Statement of compliance

These financial statements have been prepared in accordance with all applicable Hong Kong Financial Reporting Standards (HKFRSs), which is a collective term that includes all applicable individual Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards (HKASs) 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 and revised HKFRSs that are first effective or available for early adoption for the current accounting period. Note 3 provides information on the changes, if any, in accounting policies resulting from initial adoption 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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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 16 and 17.

The measurement basis used in the preparation of the financial statements is historical cost except that the following assets and liabilities are stated at their fair values as explained in the accounting policies set out below:

- trading financial instruments (note 2.6.2.1);

- financial assets and financial liabilities designated at fair value (note 2.6.2.2);

- available-for-sale securities (note 2.6.2.5);

- gold (note 2.11); and

- investment properties (note 2.12).

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.

Note 18 contains information about the assumptions relating to fair value estimation of investment properties. Note 36 contains information about the assumptions relating to fair value estimation of financial instruments. Apart from the accounting judgements involving these fair value estimations, there are no other critical accounting judgements involved in the application of the Group's accounting policies.

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 the Group 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 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 2.6.1).

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 balance sheet date. The fair values of financial instruments measured at amortised cost are disclosed in note 36.

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 for 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 balance sheet 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

The Group classifies its financial assets and financial liabilities into different categories at inception, depending on the purpose for which the assets were acquired or the liabilities were incurred. The categories are: trading financial instruments, financial assets and financial liabilities designated at fair value, loans and receivables, held-to-maturity securities, available-for-sale securities and other financial liabilities.

An analysis of the Group's financial assets and financial liabilities by category is set out in note 6.

Financial assets and financial liabilities are measured initially at fair value plus, in the case of a financial asset or financial liability not at fair value through the 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 on trading financial instruments and financial assets and financial liabilities designated at fair value are expensed immediately.

The Group recognises financial assets and financial liabilities on the date it becomes a party to the contractual provisions of the instrument. Purchases or sales of derivative financial instruments are recognised using trade date accounting. Purchases or sales of trading liabilities and financial assets and financial liabilities designated at fair value, which are settled within the time frame established generally by regulation or convention in the market place concerned, are also recognised using trade date accounting.

2.6.2 Categorisation

2.6.2.1 Trading financial instruments

Derivatives that do not qualify for hedge accounting (note 2.9) are categorised as "trading" under HKAS 39, Financial Instruments: Recognition and Measurement.

Trading financial instruments are carried at fair value. Changes in the fair value are included in the income and expenditure account in the period in which they arise.

2.6.2.2 Financial assets and financial liabilities designated at fair value

Financial assets and financial liabilities designated at fair value primarily consist of:

– financial assets and financial liabilities that are managed, evaluated and reported internally on a fair value basis; and

– debt securities issued by the Group through a subsidiary, The Hong Kong Mortgage Corporation Limited (HKMC), which contain embedded derivatives that significantly modify the cash flows that would otherwise be required under the contracts.

Financial assets and financial liabilities under this category are carried at fair value. Changes in the fair value are included 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.)

2.6.2.3 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and which the Group has no intention of trading, other than those that the Group, upon initial recognition, designates as at fair value or as available-for-sale. This category includes placements with banks and other financial institutions, cash and money at call, and the loan portfolio purchased by the Group through the HKMC.

Loans and receivables are carried at amortised cost using the effective interest method, less impairment losses if any (note 2.10).

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. The calculation includes all fees paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums or discounts.

2.6.2.4 Held-to-maturity securities

Held-to-maturity securities are non-derivative financial assets with fixed or determinable payments and fixed maturity which the Group has the positive intention and ability to hold to maturity, other than (a) those that the Group, upon initial recognition, designates as at fair value or as available-for-sale; and (b) those that meet the definition of loans and receivables.

Held-to-maturity securities are carried at amortised cost using the effective interest method, less impairment losses if any (note 2.10).

2.6.2.5 Available-for-sale securities

Available-for-sale securities are non-derivative securities that are designated as available-for-sale or are not classified in any of the other categories above. They include securities intended to be held for an indefinite period of time, but which may be sold in response to needs for liquidity or changes in the market environment.

Available-for-sale securities are carried at fair value. Unrealised gains and losses arising from changes in the fair value are recognised in other comprehensive income and accumulated separately in the revaluation reserve, except for impairment losses, if any (note 2.10). Foreign exchange gains and losses on monetary items are recognised in the income and expenditure account. Foreign exchange gains and losses on non-monetary items are recognised in other comprehensive income.

The investment by the Fund in the shares of the Bank for International Settlements is held in order to participate in it on a long-term basis. As these shares do not have a quoted market price in an active market and the fair value cannot be reliably measured, they are carried at cost less impairment losses, if any (note 2.10).

When available-for-sale securities are sold, gains or losses on disposal include the difference between the net sale proceeds and the carrying amount, and the accumulated fair value adjustments which are released from equity to the income and expenditure account.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.6.2.6 Other financial liabilities

Other financial liabilities are financial liabilities other than trading liabilities and those designated at fair value.

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), the 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, bank loans and other debt securities (other than those which contain embedded derivatives) issued by the Group through the subsidiaries.

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 2.16.1) 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.

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 balance sheet 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.

The Group uses the weighted average method to determine realised gains and losses to be recognised in the income and expenditure account on derecognition.

A financial liability is derecognised when the obligation specified in the contract is discharged, is cancelled or expires.

Liabilities for Exchange Fund Bills and Notes (EFBN) in issue are derecognised when they are repurchased as a result of market making activities. The repurchase is considered a redemption of the debt.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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.

2.6.5 Embedded derivatives

An embedded derivative is a component of a hybrid (combined) instrument that includes both the derivative and a host contract with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

An embedded derivative is separated from the host contract and accounted for as a derivative when (a) the economic characteristics and risks of the embedded derivative are not closely related to the host contract; and (b) the hybrid (combined) instrument is not measured at fair value with changes in fair value recognised in the income and expenditure account.

Where the embedded derivative is separated, the host contract is accounted for according to its category (note 2.6.2). The embedded derivative is measured at fair value with change in fair value recognised in the income and expenditure account.

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.

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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.9 Hedging

Hedge accounting recognises the offsetting effects on income and expenditure of changes in the fair values of the hedging instrument and the hedged item.

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 of hedged items.

The Group uses fair value hedges to offset risks of changes in the fair value of a recognised asset or liability that will give rise to a gain or loss being recognised in the income and expenditure account.

Derivatives that are designated and qualify as fair value hedges are measured at fair value, with fair value changes recognised in the income and expenditure account, together with any changes in the fair value of the hedged item attributable to the risk being hedged.

When (a) a hedging instrument expires or is sold, terminated or exercised; (b) a hedge no longer meets the criteria for hedge accounting; or (c) the Group revokes designation of the hedge relationship, any 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.

2.10 Impairment of financial assets

The carrying amounts of loans and receivables, held-to-maturity securities and available-for-sale securities are reviewed at each balance sheet date to determine whether there is objective evidence of impairment. Objective evidence that a financial asset is impaired includes observable data that come to the attention of the Group about one or more of the following loss events which have an impact on the future cash flows of the financial asset that can be estimated reliably:

– significant financial difficulties of the issuer or borrower;

– a breach of contract such as default or delinquency in interest or principal payments;

– it becoming probable that the issuer or borrower will enter bankruptcy or other financial reorganisation;

– significant changes in the technological, market, economic or legal environment that have an adverse effect on the issuer or borrower;

– disappearance of an active market for that financial asset; and

– a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

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

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

If any such evidence exists, the carrying amount of the financial asset is reduced to the estimated recoverable amount and the impairment loss is determined and recognised as described below.

For loans and receivables and held-to-maturity securities, an impairment loss is the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account and the impairment loss is recognised in the income and expenditure account.

If in a subsequent period the amount of such impairment loss decreases and the decrease can be linked objectively to an event occurring after the impairment loss was recognised, the impairment loss is reversed through the income and expenditure account. A reversal of impairment losses is limited to the asset's carrying amount that would have been determined had no impairment loss been recognised in prior years.

For available-for-sale securities carried at fair value, the cumulative loss that has been recognised in the revaluation reserve is reclassified to the income and expenditure account. The amount of cumulative loss that is recognised in the income and expenditure account is the difference between the acquisition cost (net of any principal repayment and amortisation) and the current fair value, less any impairment loss on that financial asset previously recognised in the income and expenditure account. Impairment losses for debt securities are reversed if the subsequent increase in fair value can be objectively related to an event occurring after the impairment loss was recognised. Reversals of impairment losses in such circumstances are recognised in the income and expenditure account. Impairment losses for equity securities are not reversed through the income and expenditure account. Any subsequent increase in the fair value of equity securities is recognised in other comprehensive income.

For available-for-sale equity securities carried at cost, the impairment loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the current market rate of return for a similar instrument. Such impairment losses are not reversed.

2.11 Gold

Gold is carried at fair value. Changes in the fair value of gold are included in the income and expenditure account in the period in which they arise.

2.12 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 the income and expenditure account in equal instalments over the periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the use of the leased asset.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.13 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):

- a building held for own use situated on freehold land;
- land classified as held under a finance lease and building held for own use situated thereon; and
- plant and equipment, including plant, machinery, furniture, fixtures, equipment, motor vehicles and personal computers.

Intangible assets including computer software licences and system development costs are included in property, plant and equipment.

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 classified as held under a finance lease	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
– 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.

2.14 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 balance sheet 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 greater 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 Revenue and expenditure recognition

2.16.1 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 23 and 24). 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 Exchange Fund (note 23). 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.

2.16.2 Net realised and unrealised gains/(losses)

Realised gains or losses on financial instruments are recognised in the income and expenditure account when the financial instruments are derecognised.

Changes in fair value of trading financial instruments and financial assets and financial liabilities designated at fair value are recognised as unrealised gains or losses in the income and expenditure account in the period in which they arise.

2.16.3 Dividend and other 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.

Bank licence fees are fees receivable from authorized institutions under the Banking Ordinance (Cap. 155) and are accounted for in the period when the fees become receivable.

Other income includes rental income, fee income from the provision of financial market infrastructure services and net insurance premiums earned from the mortgage insurance business of the HKMC. Rental income is recognised on a straight-line basis over the lease term. The net premiums are recognised on a time-apportioned basis during the time the insurance coverage is effective. Other income is accounted for in the period when it becomes receivable.

2.16.4 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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.16.5 Rental payments under operating leases

Leases where substantially all the rewards and risks of ownership remain with the lessor are classified as operating leases. Rental payments made under operating leases are charged to the income and expenditure account on a straight-line basis over the period of the relevant leases.

2.16.6 Income tax

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 balance sheet date. Deferred tax assets and liabilities are not discounted.

2.17 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 balance sheet 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 designated at fair value or on trading 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 end of the reporting period. 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 profit or loss on disposal is recognised.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.18 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.

(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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

2.19 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 monetary and financial systems of Hong Kong, 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 30.

3 CHANGES IN ACCOUNTING POLICIES

The HKICPA has issued certain new or revised HKFRSs that are effective for the current accounting period. None of them impact on the accounting policies of the Group. However, additional disclosure has been included in note 29(c) to satisfy the new disclosure requirements introduced by the amendments to HKAS 7 "Statement of Cash Flows: Disclosure Initiative". The amendments require disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes.

The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period (note 37).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

4 INCOME AND EXPENDITURE

(a) Investment income

	Group		Fund	
	2017	2016	**2017**	2016
Interest income:				
– from derivative financial instruments	**404**	423	**404**	423
– from financial assets designated at fair value	**34,741**	22,464	**34,735**	22,459
– from other financial assets	**3,986**	2,474	**2,808**	1,459
	39,131	25,361	**37,947**	24,341
Dividend income:				
– from financial assets designated at fair value	**14,227**	12,243	**13,802**	11,986
– from other financial assets	**1,899**	1,500	**14**	10
– from subsidiaries	**–**	–	**18**	801
	16,126	13,743	**13,834**	12,797
Income from investment properties:				
– rental income	**1,312**	1,268	**–**	–
– change in fair value on revaluation	**582**	(805)	**–**	–
	1,894	463	**–**	–
Net realised and unrealised gains/(losses):				
– on derivative financial instruments	**(4,207)**	(2,443)	**(5,983)**	(2,230)
– on financial assets and financial liabilities designated at fair value	**132,839**	33,194	**131,740**	31,406
– on disposal of available-for-sale securities	**15,079**	6,954	**–**	–
– from impairment losses on available-for-sale securities (note 10)	**(6,561)**	–	**–**	–
– on gold	**71**	50	**71**	50
	137,221	37,755	**125,828**	29,226
Net exchange gain/(loss)	**50,303**	(14,521)	**53,502**	(15,828)
TOTAL	**244,675**	62,801	**231,111**	50,536

Net realised and unrealised gains/(losses) included a gain of HK$1,676 million (2016: HK$95 million loss) on hedging instruments designated as fair value hedge and a loss of HK$1,676 million (2016: HK$86 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	
	2017	2016
Interest on placements by Fiscal Reserves:		
– at a fixed rate determined annually[1]	**23,482**	23,042
– at market-based rates	**1**	–
– at a composite rate determined annually[2]	**22,729**	10,071
Interest on placements by HKSAR Government funds and statutory bodies:		
– at a fixed rate determined annually[1]	**8,581**	9,566
– at market-based rates	**9**	7
TOTAL	**54,802**	42,686

[1] This rate was fixed at 2.8% per annum for 2017 (2016: 3.3%) – notes 23, 24 and 28.

[2] The composite rate was 9.6% per annum for 2017 (2016: 4.5%) – notes 23 and 28.

(c) Other interest expense

	Group		Fund	
	2017	2016	**2017**	2016
Interest on Exchange Fund Bills and Notes issued	**5,053**	2,161	**5,053**	2,161
Interest expense on derivative financial instruments	**101**	116	**7**	22
Interest expense on other debt securities issued designated at fair value and trading liabilities	**8**	3	**7**	2
Interest expense on other financial instruments	**757**	696	**73**	73
TOTAL	**5,919**	2,976	**5,140**	2,258

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(d) Operating expenses

	Group		Fund	
	2017	2016	**2017**	2016
Staff costs				
Salaries and other staff costs	**1,422**	1,320	**1,140**	1,059
Retirement benefit costs	**124**	114	**105**	98
Premises and equipment expenses				
Depreciation	**214**	204	**169**	156
Rental expenses under operating leases	**100**	93	**67**	62
Other premises expenses	**73**	73	**63**	63
General operating costs				
Maintenance of office and computer equipment	**112**	105	**100**	93
Financial information and communication services	**60**	57	**53**	49
External relations	**30**	31	**29**	30
Public education and publicity	**33**	25	**17**	14
Service fees for financial infrastructure	**113**	50	**113**	50
Professional and other services	**165**	132	**45**	30
Training	**9**	10	**8**	7
Operating expenses relating to investment properties	**207**	156	**–**	–
Others	**37**	30	**23**	23
Investment management and custodian fees				
Management and custodian fees	**1,815**	1,355	**1,496**	1,232
Transaction costs	**227**	177	**226**	176
Withholding tax	**662**	453	**662**	453
Others	**68**	82	**63**	79
TOTAL	**5,471**	4,467	**4,379**	3,674

The aggregate emoluments of senior staff (Executive Directors and above) of the Group were as follows:

	Group	
	2017	2016
Fixed pay	**80.1**	75.8
Variable pay	**21.6**	21.5
Other benefits	**10.9**	11.1
	112.6	108.4

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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The numbers of senior staff (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 (2016: 17). The higher figures in the table below reflected staff movements during the respective years.

	Group	
HK$	2017	2016
500,000 or below	1	–
1,500,001 to 2,000,000	–	1
2,500,001 to 3,000,000	1	1
3,500,001 to 4,000,000	–	1
4,000,001 to 4,500,000	1	2
4,500,001 to 5,000,000	3	3
5,000,001 to 5,500,000	4	3
5,500,001 to 6,000,000	2	1
6,000,001 to 6,500,000	1	2
6,500,001 to 7,000,000	2	1
7,000,001 to 7,500,000	–	1
7,500,001 to 8,000,000	1	–
9,000,001 to 9,500,000	–	1
9,500,001 to 10,000,000	2	1
10,500,001 to 11,000,000	1	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.)

5 INCOME TAX

(a) Income tax charged in the income and expenditure account

	Group		Fund	
	2017	2016	**2017**	2016
Current tax				
Hong Kong profits tax				
– Current year	**31**	27	**–**	–
– Over-provision in prior years	**–**	(9)	**–**	–
Taxation outside Hong Kong				
– Current year	**51**	2	**–**	–
– Under-provision/(Over-provision) in prior years	**6**	(4)	**–**	–
Deferred tax				
Charge for current year	**21**	41	**–**	–
	109	57	**–**	–

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 2017, it is calculated at 16.5% (2016: 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.

Reconciliation between tax expense and accounting profit at applicable tax rates:

	Group		Fund	
	2017	2016	**2017**	2016
Surplus before taxation	**181,456**	16,161	**166,627**	1,658
Surplus subject to tax in Hong Kong and elsewhere	**3,706**	5,387	**–**	–
Tax calculated at domestic tax rates in the respective countries	**664**	838	**–**	–
Tax effect of:				
non-deductible expenses	**633**	290	**–**	–
non-taxable income	**(1,203)**	(1,085)	**–**	–
tax losses not recognised	**1**	17	**–**	–
utilisation of tax losses previously not recognised	**(6)**	–	**–**	–
under-provision/(over-provision) in prior years	**6**	(13)	**–**	–
others	**14**	10	**–**	–
Actual tax expense	**109**	57	**–**	–

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Tax (recoverable)/payable

		Group		Fund	
	Note	**2017**	2016	**2017**	2016
Tax recoverable	15	**–**	(12)	**–**	–
Tax payable	28	**179**	93	**–**	–
		179	81	**–**	–

(c) Deferred tax

		Group		Fund	
	Note	**2017**	2016	**2017**	2016
Deferred tax assets	15	**–**	(6)	**–**	–
Deferred tax liabilities	28	**118**	111	**–**	–
		118	105	**–**	–

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

	Group				
	Adjustments on bank loans and derivative financial instruments	Fair value changes on financial instruments and investment properties	Accelerated tax depreciation	Others	Net deferred tax (assets)/ liabilities
At 1 January 2016	(32)	91	27	(3)	83
Charged to the income and expenditure account	30	3	11	(3)	41
Credited to other comprehensive income	–	(20)	–	–	(20)
Exchange differences	2	(1)	–	–	1
At 31 December 2016	–	73	38	(6)	105
At 1 January 2017	**–**	**73**	**38**	**(6)**	**105**
Charged to the income and expenditure account	**–**	**18**	**–**	**3**	**21**
Credited to other comprehensive income	**–**	**(18)**	**–**	**–**	**(18)**
Exchange differences	**–**	**10**	**–**	**–**	**10**
At 31 December 2017	**–**	**83**	**38**	**(3)**	**118**

There was no significant unprovided deferred tax as at 31 December 2017 and 2016.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

6 CATEGORIES OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES

		Group – 2017						
	Note	Total	Trading financial instruments and hedging instruments	Financial assets and financial liabilities designated at fair value	Loans and receivables	Held-to-maturity securities	Available-for-sale securities	Other financial liabilities
Cash and money at call	7	216,372	–	–	216,372	–	–	–
Placements with banks and other financial institutions	8	156,688	–	–	156,688	–	–	–
Financial assets designated at fair value	9	3,489,593	–	3,489,593	–	–	–	–
Available-for-sale securities	10	180,415	–	–	–	–	180,415	–
Derivative financial instruments	11(a)	2,403	2,403	–	–	–	–	–
Held-to-maturity securities	12	10,348	–	–	–	10,348	–	–
Loan portfolio	13	7,830	–	–	7,830	–	–	–
Others		52,395	–	–	52,395	–	–	–
FINANCIAL ASSETS		4,116,044	2,403	3,489,593	433,285	10,348	180,415	–
Certificates of Indebtedness	20	456,726	–	–	–	–	–	456,726
Government-issued currency notes and coins in circulation	20	12,213	–	–	–	–	–	12,213
Balance of the banking system	21	179,790	–	–	–	–	–	179,790
Placements by banks and other financial institutions	22	59,337	–	–	–	–	–	59,337
Placements by Fiscal Reserves	23	1,073,794	–	–	–	–	–	1,073,794
Placements by HKSAR Government funds and statutory bodies	24	305,110	–	–	–	–	–	305,110
Exchange Fund Bills and Notes issued	25	1,045,248	–	1,045,248	–	–	–	–
Derivative financial instruments	11(a)	5,562	5,562	–	–	–	–	–
Bank loans	26	13,250	–	–	–	–	–	13,250
Other debt securities issued	27	35,517	–	142	–	–	–	35,375
Others		171,071	–	–	–	–	–	171,071
FINANCIAL LIABILITIES		3,357,618	5,562	1,045,390	–	–	–	2,306,666

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Group – 2016						
	Note	Total	Trading financial instruments and hedging instruments	Financial assets and financial liabilities designated at fair value	Loans and receivables	Held-to-maturity securities	Available-for-sale securities	Other financial liabilities
Cash and money at call	7	207,587	–	–	207,587	–	–	–
Placements with banks and other financial institutions	8	203,704	–	–	203,704	–	–	–
Financial assets designated at fair value	9	3,057,356	–	3,057,356	–	–	–	–
Available-for-sale securities	10	132,849	–	–	–	–	132,849	–
Derivative financial instruments	11(a)	9,263	9,263	–	–	–	–	–
Held-to-maturity securities	12	9,932	–	–	–	9,932	–	–
Loan portfolio	13	9,534	–	–	9,534	–	–	–
Others		56,453	–	–	56,453	–	–	–
FINANCIAL ASSETS		3,686,678	9,263	3,057,356	477,278	9,932	132,849	–
Certificates of Indebtedness	20	405,345	–	–	–	–	–	405,345
Government-issued currency notes and coins in circulation	20	11,928	–	–	–	–	–	11,928
Balance of the banking system	21	259,593	–	–	–	–	–	259,593
Placements by banks and other financial institutions	22	56,136	–	–	–	–	–	56,136
Placements by Fiscal Reserves	23	914,598	–	–	–	–	–	914,598
Placements by HKSAR Government funds and statutory bodies	24	302,485	–	–	–	–	–	302,485
Exchange Fund Bills and Notes issued	25	960,982	–	960,982	–	–	–	–
Derivative financial instruments	11(a)	2,858	2,858	–	–	–	–	–
Bank loans	26	11,724	–	–	–	–	–	11,724
Other debt securities issued	27	34,233	–	137	–	–	–	34,096
Others		166,810	–	–	–	–	–	166,810
FINANCIAL LIABILITIES		3,126,692	2,858	961,119	–	–	–	2,162,715

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Fund – 2017						
	Note	Total	Trading financial instruments	Financial assets and financial liabilities designated at fair value	Loans and receivables	Held-to-maturity securities	Available-for-sale securities	Other financial liabilities
Cash and money at call	7	215,649	–	–	215,649	–	–	–
Placements with banks and other financial institutions	8	131,251	–	–	131,251	–	–	–
Financial assets designated at fair value	9	3,473,286	–	3,473,286	–	–	–	–
Available-for-sale securities	10	493	–	–	–	–	493	–
Derivative financial instruments	11(a)	2,069	2,069	–	–	–	–	–
Others		51,379	–	–	51,379	–	–	–
FINANCIAL ASSETS		3,874,127	2,069	3,473,286	398,279	–	493	–
Certificates of Indebtedness	20	456,726	–	–	–	–	–	456,726
Government-issued currency notes and coins in circulation	20	12,213	–	–	–	–	–	12,213
Balance of the banking system	21	179,790	–	–	–	–	–	179,790
Placements by banks and other financial institutions	22	59,337	–	–	–	–	–	59,337
Placements by Fiscal Reserves	23	1,073,794	–	–	–	–	–	1,073,794
Placements by HKSAR Government funds and statutory bodies	24	305,110	–	–	–	–	–	305,110
Exchange Fund Bills and Notes issued	25	1,045,748	–	1,045,748	–	–	–	–
Derivative financial instruments	11(a)	5,293	5,293	–	–	–	–	–
Others		164,002	–	–	–	–	–	164,002
FINANCIAL LIABILITIES		3,302,013	5,293	1,045,748	–	–	–	2,250,972

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

		Fund – 2016						
	Note	Total	Trading financial instruments	Financial assets and financial liabilities designated at fair value	Loans and receivables	Held-to-maturity securities	Available-for-sale securities	Other financial liabilities
Cash and money at call	7	206,954	–	–	206,954	–	–	–
Placements with banks and other financial institutions	8	179,712	–	–	179,712	–	–	–
Financial assets designated at fair value	9	3,042,754	–	3,042,754	–	–	–	–
Available-for-sale securities	10	493	–	–	–	–	493	–
Derivative financial instruments	11(a)	9,018	9,018	–	–	–	–	–
Others		55,100	–	–	55,100	–	–	–
FINANCIAL ASSETS		3,494,031	9,018	3,042,754	441,766	–	493	–
Certificates of Indebtedness	20	405,345	–	–	–	–	–	405,345
Government-issued currency notes and coins in circulation	20	11,928	–	–	–	–	–	11,928
Balance of the banking system	21	259,593	–	–	–	–	–	259,593
Placements by banks and other financial institutions	22	56,136	–	–	–	–	–	56,136
Placements by Fiscal Reserves	23	914,598	–	–	–	–	–	914,598
Placements by HKSAR Government funds and statutory bodies	24	302,485	–	–	–	–	–	302,485
Exchange Fund Bills and Notes issued	25	960,982	–	960,982	–	–	–	–
Derivative financial instruments	11(a)	929	929	–	–	–	–	–
Others		160,094	–	–	–	–	–	160,094
FINANCIAL LIABILITIES		3,072,090	929	960,982	–	–	–	2,110,179

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

7 CASH AND MONEY AT CALL

	Group		Fund	
	2017	2016	**2017**	2016
At amortised cost				
Balance with central banks	**75,935**	66,307	**75,935**	66,307
Balance with banks	**140,437**	141,280	**139,714**	140,647
TOTAL	**216,372**	207,587	**215,649**	206,954

8 PLACEMENTS WITH BANKS AND OTHER FINANCIAL INSTITUTIONS

	Group		Fund	
	2017	2016	**2017**	2016
At amortised cost				
Placements in respect of reverse repurchase agreements:				
– with central banks	**48,056**	37,970	**48,056**	37,970
– with banks and other financial institutions	**1,497**	8,896	**1,497**	8,896
Other placements:				
– with banks	**107,135**	156,838	**81,698**	132,846
TOTAL	**156,688**	203,704	**131,251**	179,712

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

9 FINANCIAL ASSETS DESIGNATED AT FAIR VALUE

	Group		Fund	
	2017	2016	**2017**	2016
At fair value				
Debt securities				
Treasury bills and commercial paper				
Listed outside Hong Kong	**255,572**	336,594	**255,572**	336,594
Unlisted	**926,396**	647,892	**926,396**	647,892
Certificates of deposit				
Listed outside Hong Kong	**7,174**	–	**7,174**	–
Unlisted	**164,319**	80,190	**164,319**	80,190
Other debt securities				
Listed in Hong Kong	**6,254**	3,966	**6,254**	3,966
Listed outside Hong Kong	**1,198,095**	1,035,088	**1,198,095**	1,035,088
Unlisted	**216,252**	375,178	**203,764**	362,423
Total debt securities	**2,774,062**	2,478,908	**2,761,574**	2,466,153
Equity securities				
Listed in Hong Kong	**204,202**	147,330	**204,202**	147,330
Listed outside Hong Kong	**342,941**	306,783	**342,941**	306,783
Unlisted	**168,388**	124,335	**164,569**	122,488
Total equity securities	**715,531**	578,448	**711,712**	576,601
TOTAL	**3,489,593**	3,057,356	**3,473,286**	3,042,754

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

10 AVAILABLE-FOR-SALE SECURITIES

	Group		Fund	
	2017	2016	**2017**	2016
Debt securities, at fair value				
Listed in Hong Kong	**481**	1,482	**–**	–
Listed outside Hong Kong	**2,315**	1,880	**–**	–
Unlisted	**2,386**	2,624	**–**	–
	5,182	5,986	**–**	–
Equity securities				
Listed in Hong Kong, at fair value	**1,456**	992	**–**	–
Unlisted, at cost	**493**	493	**493**	493
	1,949	1,485	**493**	493
Investment funds, at fair value				
Unlisted	**173,284**	125,378	**–**	–
TOTAL	**180,415**	132,849	**493**	493

The Group's investment in unlisted equity securities as at 31 December 2017 represents a holding of 4,285 shares (2016: 4,285 shares) in the Bank for International Settlements. The nominal value of each share is 5,000 Special Drawing Rights and is 25% paid up (note 33(a)).

Investment in unlisted investment funds mainly represents the Group's holding of private equity funds under the Long-Term Growth Portfolio (LTGP). Their fair value changes were recognised in the statement of comprehensive income and accumulated separately in the revaluation reserve as cumulative fair value gains net of losses, instead of through the income and expenditure account. Certain unlisted investments, with fair value losses incurred over a number of years, were individually determined in 2017 to be impaired on the basis of a significant or prolonged decline in their fair values below their costs. The impairment losses, totalling HK$6,561 million, were reclassified from revaluation reserve to the income and expenditure account (note 4(a)).

As the interim and annual results announced by the Hong Kong Monetary Authority (HKMA) take into account the fair value gains/losses of these investment funds recognised through the statement of comprehensive income, any subsequent reclassification between the income and expenditure account and revaluation reserve would not affect the results previously announced. Similarly, it would not affect the annual composite rate of return of the Future Fund, part of which was linked with the performance of the LTGP (note 23).

In addition, this was a one-off exercise since investment funds of this nature will be classified under fair value through the income and expenditure account after the adoption of HKFRS 9 "Financial Instruments" from the financial year 2018 and onwards (note 37).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

11 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, forward foreign exchange contracts and bond and equity index option 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 35.

(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			
	2017		2016		**2017**		2016	
	Assets	**Liabilities**	Assets	Liabilities	**Assets**	**Liabilities**	Assets	Liabilities
Derivatives categorised as trading financial instruments								
Interest rate derivatives								
Interest rate swap contracts	**554**	**246**	489	468	**548**	**94**	482	242
Interest rate futures contracts	**1**	**1**	–	1	**1**	**1**	–	1
Equity derivatives								
Equity index futures contracts	**249**	**55**	184	104	**249**	**55**	184	104
Equity index option contracts	**214**	**455**	–	–	**214**	**455**	–	–
Currency derivatives								
Forward foreign exchange contracts	**940**	**4,644**	8,310	464	**940**	**4,644**	8,310	464
Bond derivatives								
Bond futures contracts	**42**	**33**	17	79	**42**	**33**	17	79
Bond option contracts	**19**	**–**	–	–	**19**	**–**	–	–
Commodity derivatives								
Commodity futures contracts	**56**	**11**	25	39	**56**	**11**	25	39
	2,075	**5,445**	9,025	1,155	**2,069**	**5,293**	9,018	929
Derivatives designated as hedging instruments in fair value hedges								
Interest rate derivatives								
Interest rate swap contracts	**177**	**66**	238	101	**–**	**–**	–	–
Currency derivatives								
Currency swap contracts	**151**	**51**	–	1,602	**–**	**–**	–	–
	328	**117**	238	1,703	**–**	**–**	–	–
TOTAL	**2,403**	**5,562**	9,263	2,858	**2,069**	**5,293**	9,018	929

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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 securities due to movements in market interest rates.

(b) Notional amounts of derivative financial instruments

An analysis of the notional amounts of derivative financial instruments held at the balance sheet 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									
	2017					2016				
	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 trading financial instruments										
Interest rate derivatives										
Interest rate swap contracts	**29,746**	**–**	**800**	**16,334**	**12,612**	41,579	–	15,600	13,334	12,645
Interest rate futures contracts	**9,188**	**85**	**4,553**	**4,550**	**–**	5,365	944	1,742	2,679	–
Equity derivatives										
Equity index futures contracts	**74,297**	**74,297**	**–**	**–**	**–**	66,630	66,630	–	–	–
Equity index option contracts	**42,530**	**14,404**	**28,126**	**–**	**–**	–	–	–	–	–
Currency derivatives										
Forward foreign exchange contracts	**404,603**	**323,731**	**80,872**	**–**	**–**	386,843	322,235	64,608	–	–
Bond derivatives										
Bond futures contracts	**41,808**	**41,808**	**–**	**–**	**–**	47,564	47,564	–	–	–
Bond option contracts	**3,909**	**–**	**3,909**	**–**	**–**	–	–	–	–	–
Commodity derivatives										
Commodity futures contracts	**11,279**	**7,449**	**3,830**	**–**	**–**	10,378	7,414	2,902	62	–
	617,360	**461,774**	**122,090**	**20,884**	**12,612**	558,359	444,787	84,852	16,075	12,645
Derivatives designated as hedging instruments in fair value hedges										
Interest rate derivatives										
Interest rate swap contracts	**13,909**	**1,826**	**4,378**	**6,540**	**1,165**	19,233	2,340	8,453	6,947	1,493
Currency derivatives										
Currency swap contracts	**7,302**	**1,457**	**3,592**	**812**	**1,441**	7,217	5,594	–	570	1,053
	21,211	**3,283**	**7,970**	**7,352**	**2,606**	26,450	7,934	8,453	7,517	2,546
TOTAL	**638,571**	**465,057**	**130,060**	**28,236**	**15,218**	584,809	452,721	93,305	23,592	15,191

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									
	2017					2016				
	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 trading financial instruments										
Interest rate derivatives										
Interest rate swap contracts	**18,282**	**–**	**800**	**5,882**	**11,600**	33,845	–	15,600	5,600	12,645
Interest rate futures contracts	**9,188**	**85**	**4,553**	**4,550**	**–**	5,365	944	1,742	2,679	–
Equity derivatives										
Equity index futures contracts	**74,297**	**74,297**	**–**	**–**	**–**	66,630	66,630	–	–	–
Equity index option contracts	**42,530**	**14,404**	**28,126**	**–**	**–**	–	–	–	–	–
Currency derivatives										
Forward foreign exchange contracts	**404,603**	**323,731**	**80,872**	**–**	**–**	386,843	322,235	64,608	–	–
Bond derivatives										
Bond futures contracts	**41,808**	**41,808**	**–**	**–**	**–**	47,564	47,564	–	–	–
Bond option contracts	**3,909**	**–**	**3,909**	**–**	**–**	–	–	–	–	–
Commodity derivatives										
Commodity futures contracts	**11,279**	**7,449**	**3,830**	**–**	**–**	10,378	7,414	2,902	62	–
TOTAL	**605,896**	**461,774**	**122,090**	**10,432**	**11,600**	550,625	444,787	84,852	8,341	12,645

12 HELD-TO-MATURITY SECURITIES

	Group		Fund	
	2017	2016	**2017**	2016
At amortised cost				
Debt securities				
Listed in Hong Kong	**5,502**	4,359	**–**	–
Listed outside Hong Kong	**1,959**	1,835	**–**	–
Unlisted	**2,887**	3,738	**–**	–
TOTAL	**10,348**	9,932	**–**	–

Fair value information of the above held-to-maturity securities is provided in note 36.2.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

13 LOAN PORTFOLIO

	Group		Fund	
	2017	2016	**2017**	2016
Mortgage loans, at amortised cost	**7,485**	9,085	**–**	–
Non-mortgage loans, at amortised cost	**345**	450	**–**	–
Allowance for loan impairment	**–**	(1)	**–**	–
TOTAL	**7,830**	9,534	**–**	–

14 GOLD

	Group and Fund	
	2017	2016
Gold, at fair value		
66,798 ounces (2016: 66,798 ounces)	**677**	600

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.

15 OTHER ASSETS

	Group		Fund	
	2017	2016	**2017**	2016
Interest and dividends receivable	**9,012**	7,992	**8,693**	7,648
Unsettled sales and redemption of securities	**22,904**	31,558	**22,904**	31,558
Prepayments, receivables and other assets	**20,022**	16,403	**19,186**	15,209
Staff housing loans	**174**	162	**174**	162
Loan to the International Monetary Fund	**462**	540	**462**	540
Tax recoverable	**–**	12	**–**	–
Deferred tax assets	**–**	6	**–**	–
TOTAL	**52,574**	56,673	**51,419**	55,117

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

16 INTERESTS IN SUBSIDIARIES

	Fund	
	2017	2016
Unlisted shares, at cost	**2,312**	2,312
Loans to subsidiaries	**135,219**	118,802
TOTAL	**137,531**	121,114

The following is a list of the principal subsidiaries held directly by the Fund as at 31 December 2017:

Name of company	Place of incorporation and operation	Principal activities	Issued equity capital	Fund's interest in equity capital
The Hong Kong Mortgage Corporation Limited	Hong Kong	Investment in mortgages and loans, mortgage securitisation and guarantee	HK$2,000,000,000	100%
Hong Kong Note Printing Limited	Hong Kong	Banknote printing	HK$255,000,000	55%
Hong Kong FMI Services Limited	Hong Kong	Performance of financial market infrastructure related operations	HK$167,000,000	100%
Debt Capital Solutions Company Limited	Hong Kong	Investment holding	HK$1	100%
Drawbridge Investment Limited	Hong Kong	Investment holding	HK$1	100%
Eight Finance Investment Company Limited	Hong Kong	Investment holding	HK$1	100%
Stewardship Investment Company Limited	Hong Kong	Investment holding	HK$1	100%
Stratosphere Finance Company Limited	Hong Kong	Investment holding	HK$1	100%
Real Avenue Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%
Real Boulevard Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%
Real Gate Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%
Real Horizon Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%
Real Plaza Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%
Real Summit Investment Company Limited	Hong Kong	Investment properties holding	HK$1	100%

Loans to subsidiaries which principally hold investments including properties are unsecured, interest-free and repayable on demand.

The financial statements of these subsidiaries are audited by firms other than the Audit Commission. The aggregate net assets of these subsidiaries not audited by the Audit Commission amounted to approximately 14% (2016: 12%) of the Group's net assets.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

17 INTERESTS IN ASSOCIATES AND JOINT VENTURES

	Group	
	2017	2016
Associates[1]		
Share of net assets	**8,812**	8,208
Joint ventures[2]		
Share of net assets	**8,332**	5,300
Due from joint ventures	**18,603**	18,575
	26,935	23,875
TOTAL	**35,747**	32,083

[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 (2016: HK$5,000).

[2] The Fund does not directly hold investment in joint ventures.

The Group holds investments in four associates. One associate, incorporated in Hong Kong, provides interbank clearing services. The other three associates, incorporated outside Hong Kong, hold overseas investment properties. The Group holds equity interest in these associates ranging from 25% to 50%.

Aggregate information of the Group's associates, which are not individually material, is summarised below:

	Group	
	2017	2016
Share of profit for the year	**434**	1,482
Share of other comprehensive income/(loss)	**248**	(75)
Share of total comprehensive income	**682**	1,407
Aggregate carrying amount of interests in the associates	**8,812**	8,208

The Group's share of outstanding investment commitments to associates is shown below:

	Group	
	2017	2016
Commitments to contribute funds	**1,804**	1,689

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Group holds investments in fourteen joint ventures, which are all incorporated outside Hong Kong. The principal activities of these joint ventures are the holding of overseas investment properties. At the end of 2017, the Group held equity interest in these joint ventures ranging from 48% 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. At 31 December 2017, the aggregate interest in these joint ventures amounted to 0.64% (2016: 0.64%) of the Group's total assets.

Aggregate information of the Group's joint ventures, which are not individually material, is summarised below:

	Group	
	2017	2016
Share of profit for the year	**2,195**	1,527
Share of other comprehensive income/(loss)	**837**	(222)
Share of total comprehensive income	**3,032**	1,305
Aggregate carrying amount of interests in the joint ventures	**26,935**	23,875

The Group's share of outstanding investment commitments to joint ventures is shown below:

	Group	
	2017	2016
Commitments to contribute funds	**1,334**	1,400

18 INVESTMENT PROPERTIES

	Group		Fund	
	2017	2016	**2017**	2016
At fair value				
At 1 January	**22,723**	23,621	**–**	–
Additions	**180**	3,104	**–**	–
Change in fair value on revaluation	**582**	(805)	**–**	–
Exchange differences	**2,757**	(3,197)	**–**	–
At 31 December	**26,242**	22,723	**–**	–

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The carrying amount of the Group's investment properties is analysed as follows:

	Group		Fund	
	2017	2016	**2017**	2016
Held outside Hong Kong				
on freehold	**13,136**	11,279	**–**	–
on long-term lease (over 50 years)	**13,106**	11,444	**–**	–
TOTAL	**26,242**	22,723	**–**	–

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	
	2017	2016	**2017**	2016
Gross rental income	**1,312**	1,268	**–**	–
Direct expenses	**(207)**	(156)	**–**	–
Net rental income	**1,105**	1,112	**–**	–

The Group's total future minimum lease payments receivable under non-cancellable operating leases are as follows:

	Group		Fund	
	2017	2016	**2017**	2016
Within one year	**1,209**	1,058	**–**	–
After one year but not later than five years	**4,083**	3,938	**–**	–
After five years but not later than ten years	**2,539**	2,832	**–**	–
After ten years but not later than fifteen years	**9**	144	**–**	–
After fifteen years but not later than twenty years	**4**	6	**–**	–
TOTAL	**7,844**	7,978	**–**	–

At 31 December 2017, investment properties with a fair value of HK$26,242 million (2016: HK$22,723 million) were pledged to secure general banking facilities granted to the Group (note 26).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

18.1 Fair value measurement of investment properties

The Group's investment properties are revalued by independent professional valuers on an open market value basis at the end of each financial year. 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 5.00% to 5.60% (2016: 4.94% to 6.05%), net initial yields which ranged from 3.40% to 6.20% (2016: 3.37% to 5.65%) and terminal capitalisation rates which ranged from 4.00% to 6.03% (2016: 3.20% to 5.81%). Significant increases or decreases in any of those inputs in isolation would result in significantly lower or higher fair value measurements, respectively.

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.

An analysis of the movement between opening and closing balances of Level 3 investment properties, measured at fair value using a valuation technique with significant unobservable inputs, is shown below:

	Group		Fund	
	2017	2016	**2017**	2016
At 1 January	**22,723**	23,621	**–**	–
Additions	**180**	3,104	**–**	–
Change in fair value on revaluation recognised as "income from investment properties" in the income and expenditure account	**582**	(805)	**–**	–
Exchange differences recognised in other comprehensive income	**2,757**	(3,197)	**–**	–
At 31 December	**26,242**	22,723	**–**	–
Net gains/(losses) recognised in the income and expenditure account held at the balance sheet date	**582**	(805)	**–**	–

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

19 PROPERTY, PLANT AND EQUIPMENT

(a)

	Group			
	Premises	Plant and equipment	Computer software licences and system development costs	Total
Cost				
At 1 January 2016	3,852	1,130	384	5,366
Additions	–	187	16	203
Disposals	–	(18)	–	(18)
At 31 December 2016	3,852	1,299	400	5,551
At 1 January 2017	**3,852**	**1,299**	**400**	**5,551**
Additions	**–**	**141**	**21**	**162**
Disposals	**–**	**(47)**	**–**	**(47)**
At 31 December 2017	**3,852**	**1,393**	**421**	**5,666**
Accumulated depreciation				
At 1 January 2016	1,073	805	296	2,174
Charge for the year	89	91	24	204
Written back on disposal	–	(18)	–	(18)
At 31 December 2016	1,162	878	320	2,360
At 1 January 2017	**1,162**	**878**	**320**	**2,360**
Charge for the year	**87**	**102**	**25**	**214**
Written back on disposal	**–**	**(46)**	**–**	**(46)**
At 31 December 2017	**1,249**	**934**	**345**	**2,528**
Net book value				
At 31 December 2017	**2,603**	**459**	**76**	**3,138**
At 31 December 2016	2,690	421	80	3,191

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund			
	Premises	Plant and equipment	Computer software licences and system development costs	Total
Cost				
At 1 January 2016	3,843	487	384	4,714
Additions	–	75	16	91
Disposals	–	(6)	–	(6)
At 31 December 2016	3,843	556	400	4,799
At 1 January 2017	**3,843**	**556**	**400**	**4,799**
Additions	**–**	**86**	**21**	**107**
Disposals	**–**	**(15)**	**–**	**(15)**
At 31 December 2017	**3,843**	**627**	**421**	**4,891**
Accumulated depreciation				
At 1 January 2016	1,067	342	296	1,705
Charge for the year	88	44	24	156
Written back on disposal	–	(6)	–	(6)
At 31 December 2016	1,155	380	320	1,855
At 1 January 2017	**1,155**	**380**	**320**	**1,855**
Charge for the year	**87**	**57**	**25**	**169**
Written back on disposal	**–**	**(15)**	**–**	**(15)**
At 31 December 2017	**1,242**	**422**	**345**	**2,009**
Net book value				
At 31 December 2017	**2,601**	**205**	**76**	**2,882**
At 31 December 2016	2,688	176	80	2,944

(b) The net book value of premises comprises:

	Group		Fund	
	2017	2016	**2017**	2016
In Hong Kong				
Leasehold land and the building situated thereon (leasehold between 10 and 50 years)	**2,581**	2,668	**2,579**	2,666
Outside Hong Kong				
Freehold land and the building situated thereon	**22**	22	**22**	22
TOTAL	**2,603**	2,690	**2,601**	2,688

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

20 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	
	2017	2016	**2017**	2016
Carrying amount	**456,726**	405,345	**12,213**	11,928
Reconciliation with face value:				
Hong Kong dollar face value	**455,715**	407,795	**12,186**	12,000
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$58,425 million**	US$52,281 million	**US$1,562 million**	US$1,538 million
Market exchange rate for translation into Hong Kong dollars	**US$1=HK$7.8173**	US$1=HK$7.75315	**US$1=HK$7.8173**	US$1=HK$7.75315
Carrying amount	**456,726**	405,345	**12,213**	11,928

21 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 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, non-interest-bearing and is shown at its Hong Kong dollar amount.

22 PLACEMENTS BY BANKS AND OTHER FINANCIAL INSTITUTIONS

	Group and Fund	
	2017	2016
At amortised cost		
Placements by central banks	**59,337**	56,136

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

23 PLACEMENTS BY FISCAL RESERVES

	Group and Fund	
	2017	2016
Placements by Operating and Capital Reserves		
(i) with interest payable at a fixed rate determined annually		
General Revenue Account	**589,950**	542,138
Capital Works Reserve Fund	**186,524**	78,534
Civil Service Pension Reserve Fund	**35,129**	31,899
Disaster Relief Fund	**17**	28
Innovation and Technology Fund	**7,271**	8,317
Lotteries Fund	**23,210**	22,792
Capital Investment Fund	**3,020**	2,042
Loan Fund	**4,141**	4,309
	849,262	690,059
(ii) with interest payable at market-based rates		
General Revenue Account	**2**	9
	849,264	690,068
Placements by Future Fund with interest payable at a composite rate determined annually		
Land Fund	**219,730**	219,730
General Revenue Account	**4,800**	4,800
	224,530	224,530
TOTAL	**1,073,794**	914,598

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 2.8% per annum for 2017 (2016: 3.3%).

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 2017 was 9.6% (2016: 4.5%). Placements by Future Fund, together with the interest thereon (note 28), are repayable on 31 December 2025 unless otherwise directed by the Financial Secretary according to the terms of the placements.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

24 PLACEMENTS BY HONG KONG SPECIAL ADMINISTRATIVE REGION GOVERNMENT FUNDS AND STATUTORY BODIES

	Group and Fund	
	2017	2016
Placements with interest payable at a fixed rate[1] determined annually		
Bond Fund	**145,702**	132,644
Community Care Fund	**18,499**	17,995
Elite Athletes Development Fund	**6,273**	6,604
Employees Retraining Board	**14,432**	14,039
Environment and Conservation Fund	**5,569**	5,418
Hospital Authority	**18,833**	18,319
Housing Authority	**29,494**	41,329
Language Fund	**5,760**	5,603
Research Endowment Fund	**26,266**	26,319
Samaritan Fund	**7,373**	7,172
Trading Funds	**7,619**	8,143
West Kowloon Cultural District Authority	**12,438**	12,099
Other funds[2]	**5,936**	3,719
	304,194	299,403
Placements with interest payable at market-based rates		
Deposit Protection Scheme Fund	**916**	3,082
TOTAL	**305,110**	302,485

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 2.8% per annum for 2017 (2016: 3.3%).

2 This is a collective placement by 12 HKSAR Government funds (2016: 11 HKSAR Government funds).

25 EXCHANGE FUND BILLS AND NOTES ISSUED

	Group		Fund	
	2017	2016	**2017**	2016
At fair value				
Exchange Fund Bills and Notes issued				
Exchange Fund Bills	**1,008,939**	913,811	**1,008,939**	913,811
Exchange Fund Notes	**38,305**	48,768	**38,305**	48,768
	1,047,244	962,579	**1,047,244**	962,579
Exchange Fund Bills held	**(1,996)**	(1,597)	**(1,496)**	(1,597)
TOTAL	**1,045,248**	960,982	**1,045,748**	960,982

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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 2-year, 3-year, 5-year, 7-year, 10-year and 15-year maturities. EFBN issued are valued at offer prices derived from the "HKMA EFBN Closing Reference" adjusted by observed market spreads.

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 derecognised.

An analysis of the nominal value of EFBN issued at the beginning and the end of year is set out below:

	Group				Fund			
	2017		2016		**2017**		2016	
	Exchange Fund Bills	**Exchange Fund Notes**	Exchange Fund Bills	Exchange Fund Notes	**Exchange Fund Bills**	**Exchange Fund Notes**	Exchange Fund Bills	Exchange Fund Notes
Issued by Currency Board Operations segment								
Nominal value at 1 January	**914,898**	**48,200**	769,821	58,600	**914,898**	**48,200**	769,821	58,600
Issuance	**2,995,629**	**4,800**	2,724,292	4,800	**2,995,629**	**4,800**	2,724,292	4,800
Redemption	**(2,899,848)**	**(15,200)**	(2,579,215)	(15,200)	**(2,899,848)**	**(15,200)**	(2,579,215)	(15,200)
Nominal value at 31 December	**1,010,679**	**37,800**	914,898	48,200	**1,010,679**	**37,800**	914,898	48,200
Long positions held by Financial Stability and Other Activities segment								
Nominal value at 31 December	**(2,000)**	**–**	(1,600)	–	**(1,500)**	**–**	(1,600)	–
Total nominal value	**1,008,679**	**37,800**	913,298	48,200	**1,009,179**	**37,800**	913,298	48,200
Carrying amount, at fair value	**1,006,943**	**38,305**	912,214	48,768	**1,007,443**	**38,305**	912,214	48,768
Difference	**1,736**	**(505)**	1,084	(568)	**1,736**	**(505)**	1,084	(568)

The fair value changes of EFBN issued are attributable to changes in benchmark interest rates.

26 BANK LOANS

	Group		Fund	
	2017	2016	**2017**	2016
At amortised cost				
Bank loans repayable:				
After two years but not later than five years	**10,370**	9,117	**–**	–
After five years but not later than ten years	**2,880**	2,607	**–**	–
TOTAL	**13,250**	11,724	**–**	–

At 31 December 2017, the banking facilities of the Group were secured by mortgage over the investment properties with a fair value of HK$26,242 million (2016: HK$22,723 million) (note 18).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

27 OTHER DEBT SECURITIES ISSUED

	Group		Fund	
	2017	2016	**2017**	2016
Debt securities issued, carried at amortised cost	**13,937**	9,098	**–**	–
Debt securities issued, designated as hedged items under fair value hedge	**21,438**	24,998	**–**	–
Debt securities issued, designated at fair value	**142**	137	**–**	–
TOTAL	**35,517**	34,233	**–**	–

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	
	2017	2016	**2017**	2016
Total debt securities issued				
Nominal value at 1 January	**35,783**	34,938	**–**	–
Issuance	**29,071**	24,531	**–**	–
Redemption	**(29,509)**	(23,686)	**–**	–
Foreign currency translation differences	**53**	–	**–**	–
Nominal value at 31 December	**35,398**	35,783	**–**	–
Carrying amount	**35,517**	34,233	**–**	–
Difference	**(119)**	1,550	**–**	–
Debt securities issued, designated at fair value				
Nominal value	**184**	184	**–**	–
Carrying amount, at fair value	**142**	137	**–**	–
Difference	**42**	47	**–**	–

The fair value changes of debt securities issued designated at fair value are attributable to changes in benchmark interest rates.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

28 OTHER LIABILITIES

	Group		Fund	
	2017	2016	**2017**	2016
Unsettled purchases of securities	**51,324**	72,706	**51,324**	72,658
Housing Reserve[1]	**78,753**	76,608	**78,753**	76,608
Accrued interest on placements by Fiscal Reserves (Future Fund)[2]	**32,800**	10,071	**32,800**	10,071
Accrued charges and other liabilities	**8,364**	7,546	**1,107**	735
Other interest payable	**376**	387	**122**	125
Tax payable	**179**	93	**–**	–
Deferred tax liabilities	**118**	111	**–**	–
TOTAL	**171,914**	167,522	**164,106**	160,197

[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 23) on an annual basis and shall be paid on a date determined by the Financial Secretary. The interest accrued on the Housing Reserve for 2017 was HK$2,145 million (2016: HK$2,454 million).

[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 23) 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.

29 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION

(a) Components of cash and cash equivalents

	Group		Fund	
	2017	2016	**2017**	2016
Cash and money at call	**216,372**	207,587	**215,649**	206,954
Placements with banks and other financial institutions	**144,829**	182,747	**129,708**	176,538
Treasury bills and commercial paper	**12,227**	71,616	**12,227**	71,616
Certificates of deposit	**4,127**	–	**4,127**	–
TOTAL	**377,555**	461,950	**361,711**	455,108

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(b) Reconciliation of cash and cash equivalents

		Group		Fund	
	Note	**2017**	2016	**2017**	2016
Amounts shown in the balance sheet					
Cash and money at call	7	**216,372**	207,587	**215,649**	206,954
Placements with banks and other financial institutions	8	**156,688**	203,704	**131,251**	179,712
Treasury bills and commercial paper	9	**1,181,968**	984,486	**1,181,968**	984,486
Certificates of deposit	9	**171,493**	–	**171,493**	–
		1,726,521	1,395,777	**1,700,361**	1,371,152
Less: Amounts with original maturity beyond 3 months		**(1,348,966)**	(933,827)	**(1,338,650)**	(916,044)
Cash and cash equivalents in the statement of cash flows		**377,555**	461,950	**361,711**	455,108

(c) Reconciliation of liabilities arising from financing activities

The table below shows changes in the Group's 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		
	Bank loans (Note 26)	Other debt securities issued (Note 27)	Total
At 1 January 2017	**11,724**	**34,233**	**45,957**
Changes from financing cash flows			
Bank loans raised	**106**	**–**	**106**
Proceeds from issue of other debt securities	**–**	**29,027**	**29,027**
Redemption of other debt securities issued	**–**	**(29,509)**	**(29,509)**
Non-cash changes			
Amortisation	**16**	**39**	**55**
Exchange differences	**1,404**	**52**	**1,456**
Fair value changes	**–**	**1,675**	**1,675**
At 31 December 2017	**13,250**	**35,517**	**48,767**

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

30 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 2.19.

	Group							
	Currency Board Operations (note (a))		Reserves Management		Financial Stability and Other Activities		Total	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016
Income								
Interest and dividend income	**20,423**	10,531	**32,950**	27,043	**1,884**	1,530	**55,257**	39,104
Investment gains/(losses)	**7,873**	1,093	**177,273**	25,369	**4,272**	(2,765)	**189,418**	23,697
Other income	**–**	–	**45**	345	**671**	592	**716**	937
	28,296	11,624	**210,268**	52,757	**6,827**	(643)	**245,391**	63,738
Expenditure								
Interest expense	**5,053**	2,161	**55,257**	43,162	**411**	339	**60,721**	45,662
Other expenses	**1,347**	1,124	**1,992**	1,412	**2,504**	2,388	**5,843**	4,924
	6,400	3,285	**57,249**	44,574	**2,915**	2,727	**66,564**	50,586
Surplus/(Deficit) before share of profit of associates and joint ventures	**21,896**	8,339	**153,019**	8,183	**3,912**	(3,370)	**178,827**	13,152
Share of profit of associates and joint ventures, net of tax	**–**	–	**2,589**	2,991	**40**	18	**2,629**	3,009
Surplus/(Deficit) before taxation	**21,896**	8,339	**155,608**	11,174	**3,952**	(3,352)	**181,456**	16,161

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 (note (b) & (c))		Total	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016
Assets										
Backing Assets										
Investment in designated US dollar assets	**1,821,395**	1,759,179	**–**	–	**–**	–	**–**	–	**1,821,395**	1,759,179
Interest receivable on designated US dollar assets	**1,976**	1,658	**–**	–	**–**	–	**–**	–	**1,976**	1,658
Net accounts receivable/(payable)	**8,076**	(8,931)	**–**	–	**–**	–	**2**	18,984	**8,078**	10,053
Other investments	**–**	–	**2,110,585**	1,685,554	**193,928**	233,232	**(1,996)**	(1,597)	**2,302,517**	1,917,189
Other assets	**–**	–	**42,611**	51,013	**4,902**	5,939	**548**	464	**48,061**	57,416
TOTAL ASSETS	**1,831,447**	1,751,906	**2,153,196**	1,736,567	**198,830**	239,171	**(1,446)**	17,851	**4,182,027**	3,745,495
Liabilities										
Monetary Base										
Certificates of Indebtedness	**456,726**	405,345	**–**	–	**–**	–	**–**	–	**456,726**	405,345
Government-issued currency notes and coins in circulation	**12,213**	11,928	**–**	–	**–**	–	**–**	–	**12,213**	11,928
Balance of the banking system	**179,790**	259,593	**–**	–	**–**	–	**–**	–	**179,790**	259,593
Exchange Fund Bills and Notes issued	**1,047,244**	962,579	**–**	–	**–**	–	**(1,996)**	(1,597)	**1,045,248**	960,982
Interest payable on Exchange Fund Notes	**122**	125	**–**	–	**–**	–	**–**	–	**122**	125
Net accounts (receivable)/payable	**(458)**	(232)	**–**	–	**–**	–	**548**	464	**90**	232
Other debt securities issued	**–**	–	**676**	–	**34,841**	34,233	**–**	–	**35,517**	34,233
Placements by banks and other financial institutions	**–**	–	**–**	–	**59,337**	56,136	**–**	–	**59,337**	56,136
Bank loans	**–**	–	**13,250**	11,724	**–**	–	**–**	–	**13,250**	11,724
Placements by Fiscal Reserves	**–**	–	**1,073,794**	914,598	**–**	–	**–**	–	**1,073,794**	914,598
Placements by HKSAR Government funds and statutory bodies	**–**	–	**304,194**	299,403	**916**	3,082	**–**	–	**305,110**	302,485
Other liabilities	**–**	–	**168,886**	142,436	**8,376**	8,603	**2**	18,984	**177,264**	170,023
TOTAL LIABILITIES	**1,695,637**	1,639,338	**1,560,800**	1,368,161	**103,470**	102,054	**(1,446)**	17,851	**3,358,461**	3,127,404

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, the 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 108.08% as at 31 December 2017 (2016: 106.7%).

(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. This re-allocation adjustment adds back these items in order to reconcile the segmental information to the Group balance sheet.

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 2017, deductions from the Backing Assets comprised "other liabilities" of HK$2 million (2016: HK$18,984 million).

The Monetary Base is also presented on a net basis. 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$20 million (2016: HK$20 million) and unrealised gains of HK$528 million (2016: HK$444 million) on these interest rate swaps are included in "net accounts (receivable)/payable" to reduce the Monetary Base. As at 31 December 2017, deductions from the Monetary Base comprised "other assets" of HK$548 million (2016: HK$464 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.)

31 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	**2017**	2016	**2017**	2016
Secured liabilities					
Bond futures contracts, at fair value	11(a)	**–**	62	**–**	62
Commodity futures contracts, at fair value	11(a)	**–**	14	**–**	14
Interest rate swap contracts, at fair value		**4**	10	**4**	10
Bank loans	26	**13,250**	11,724	**–**	–
Other debt securities issued		**676**	–	**–**	–
Assets pledged					
Cash and money at call		**85**	77	**85**	77
Available-for-sale securities		**1,762**	–	**–**	–
Financial assets designated at fair value		**4,859**	4,842	**4,859**	4,842
Investment properties	18	**26,242**	22,723	**–**	–

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.

32 COMMITMENTS

(a) Capital commitments

Capital expenditure authorised but not provided for in the financial statements at the balance sheet date was as follows:

	Group		Fund	
	2017	2016	**2017**	2016
Contracted for	**46**	16	**42**	6
Authorised but not yet contracted for	**301**	380	**250**	359
	347	396	**292**	365

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 2017, the Fund had an undertaking under the NAB to lend foreign currencies to the IMF up to HK$3,788 million equivalent (2016: HK$3,545 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$462 million equivalent with a repayment term of five years (2016: HK$540 million equivalent) (note 15).

(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 (2016: 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 2017, there was no outstanding balance due from the HKDPB under this facility (2016: Nil).

(d) Credit facility to The Hong Kong Mortgage Corporation Limited

The Fund has provided the HKMC with a revolving credit facility of HK$30 billion (2016: HK$30 billion) at prevailing market interest rates. As at 31 December 2017, there was no outstanding balance due from the HKMC under this facility (2016: Nil).

(e) 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$44,949 million equivalent (2016: HK$44,581 million equivalent). The arrangement allows each organisation to enhance the liquidity of its foreign reserve portfolio with minimal additional risk. As at 31 December 2017, there was no outstanding transaction with any central bank under this arrangement (2016: Nil).

(f) 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 (2016: US$240 billion). Hong Kong, through the HKMA, participates in the CMIM and has undertaken to commit up to US$8.4 billion (2016: US$8.4 billion) out of the Fund. Hong Kong has the right to request liquidity support up to US$6.3 billion (2016: US$6.3 billion) from the CMIM in case of emergency. Up to 31 December 2017, there had been no request to activate the CMIM (2016: Nil).

(g) Bilateral swap agreement

The People's Bank of China and the HKMA renewed a bilateral swap agreement in November 2017 for another three years, with a size of RMB400 billion/HK$470 billion. This currency swap agreement helps facilitate the development of offshore renminbi business in Hong Kong. The bilateral swap outstanding as at 31 December 2017 was RMB56.8 billion (2016: RMB56.0 billion).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(h) Investment commitments

The Group's subsidiaries with principal activities of holding investments, including properties, had outstanding investment commitment of HK$170,171 million equivalent as at 31 December 2017 (2016: HK$133,792 million equivalent).

(i) Lease commitments

As at 31 December 2017, the total future minimum lease payments payable under non-cancellable operating leases of premises were as follows:

	Group		Fund	
	2017	2016	**2017**	2016
Within one year	**119**	97	**69**	66
After one year but not later than five years	**220**	185	**125**	184
TOTAL	**339**	282	**194**	250

(j) Financial Dispute Resolution Centre Limited

The HKMA signed a Memorandum of Understanding together with the Financial Services and the Treasury Bureau and the Securities and Futures Commission on 21 December 2011 regarding the funding arrangement on the set-up and operating costs of the Financial Dispute Resolution Centre Limited (FDRCL). There was no contribution to FDRCL in 2017 (2016: HK$3.5 million). The outstanding commitment of the Fund to contribute to FDRCL as at 31 December 2017 was HK$10.5 million (2016: HK$10.5 million).

33 CONTINGENT LIABILITIES

(a) Uncalled portion of investment in the Bank for International Settlements

As at 31 December 2017, the Fund had a contingent liability of up to 16.1 million Special Drawing Rights (SDRs) or HK$179 million equivalent (2016: 16.1 million SDRs or HK$168 million equivalent), in respect of the uncalled portion of its 4,285 shares (2016: 4,285 shares) in the Bank for International Settlements (note 10).

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 2017, SDR 1 was valued at US$1.42501 (2016: US$1.34472).

(b) Financial guarantees

The Group has provided guarantees in respect of bank loans granted to joint ventures. The maximum liability as at 31 December 2017 was HK$1,287 million equivalent (2016: HK$875 million equivalent).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

34 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.

In addition to the transactions and balances disclosed elsewhere in these financial statements, during the year, the Group, through the HKMC, purchased HK$293 million (2016: HK$170 million) of mortgage loans from the HKSAR Government.

The Exchange Fund Advisory Committee (EFAC) through its Sub-Committees advises 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.

35 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.

35.1 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 and economic affairs and of investment issues, 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 Reserves Management Department of the HKMA conducts the day-to-day investment management of the Fund while the Risk and Compliance Department, which is independent of the Reserves Management Department, carries out the risk management activities of the Fund.

35.2 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 were as follows:

	2017	2016
Asset type		
Bonds	**71%**	71%
Equities and related investments	**29%**	29%
	100%	100%
Currency		
US dollar and Hong Kong dollar	**89%**	91%
Others[1]	**11%**	9%
	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.

35.3 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 of the HKMC.

35.3.1 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 Reserves Management Department, the Monetary Management Department, the Research Department and the Risk and Compliance 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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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.

(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 four-pronged approach is established for (i) selecting Approved Sellers carefully, (ii) adopting prudent mortgage purchasing criteria and insurance eligibility criteria, (iii) conducting effective due diligence reviews and (iv) ensuring adequate protection for higher-risk mortgages.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

35.3.2 Exposure to credit risk

The maximum exposure to credit risk of the financial assets of the Group and the Fund are equal to their carrying amounts. The maximum exposures to credit risk of off-balance sheet exposures are as follows:

		Group		Fund	
	Note	2017	2016	2017	2016
Risk in force – mortgage insurance	35.6	**21,101**	16,840	**–**	–
Risk in force – other guarantees and insurance	35.6	**6,877**	4,333	**–**	–
Loan commitments, guarantees and other credit related commitments		**405,409**	367,389	**263,951**	262,722
TOTAL		**433,387**	388,562	**263,951**	262,722

35.3.3 Credit quality

The Group predominantly invests in liquid Organisation for Economic Co-operation and Development (OECD) government bonds and other quasi-government debt securities issues. As at 31 December 2017, approximately 78% (2016: 85%) of the debt securities held by the Group were rated "double-A" or above by Moody's, Standard & Poor's, and Fitch. The credit quality of major financial assets is analysed below:

	Group		Fund	
	2017	2016	2017	2016
Cash and money at call, placements with banks and other financial institutions, by credit rating[1]				
AA- to AA+	**73,168**	82,563	**72,343**	76,651
A- to A+	**212,836**	242,121	**190,214**	224,092
Lower than A- or un-rated[2]	**87,056**	86,607	**84,343**	85,923
	373,060	411,291	**346,900**	386,666
Debt securities, by credit rating[1]				
AAA	**588,135**	549,413	**587,220**	547,907
AA- to AA+	**1,585,181**	1,575,837	**1,579,065**	1,566,106
A- to A+	**383,228**	160,911	**374,930**	157,619
Lower than A- or un-rated[2]	**233,048**	208,665	**220,359**	194,521
	2,789,592	2,494,826	**2,761,574**	2,466,153
Loan portfolio				
Neither past due nor impaired (note (a))	**7,653**	9,303	**–**	–
Past due but not impaired (note (b))	**177**	231	**–**	–
Impaired (note (c))	**–**	1	**–**	–
Allowance for loan impairment	**–**	(1)	**–**	–
	7,830	9,534	**–**	–
TOTAL	**3,170,482**	2,915,651	**3,108,474**	2,852,819

[1] This is the lowest of ratings designated by Moody's, Standard & Poor's and Fitch.

[2] These included mainly balances with central banks and debt securities issued by the Bank for International Settlements which are not rated.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

(a) Loans that are neither past due nor impaired

An internal rating system is used for assessing the credit quality of the loan portfolio. Grades 1 to 3 include loans with either insignificant credit risk or no recent past due history and with different levels of credit enhancements in addition to the collateral. Grade 4 includes loans with recent past due history and with credit enhancements in addition to collateral. Grade 5 includes loans with recent past due history and with collateral only. The credit quality of loans that were neither past due nor impaired at the balance sheet date is analysed below:

	Group		Fund	
	2017	2016	**2017**	2016
Grades				
1 to 3	**7,649**	9,294	**–**	–
4	**–**	–	**–**	–
5	**4**	9	**–**	–
TOTAL	**7,653**	9,303	**–**	–

(b) Loans that are past due but not impaired

These are loans where contractual interest or principal payments are past due but the Group believes that recognising an impairment loss is not appropriate on the basis of the level of collateral held. The loans that were past due but not impaired at the balance sheet date are analysed below:

	Group		Fund	
	2017	2016	**2017**	2016
Loans that were past due				
90 days or less	**177**	229	**–**	–
91 to 180 days	**–**	–	**–**	–
over 180 days	**–**	2	**–**	–
TOTAL	**177**	231	**–**	–
Of which fair value of collateral	**2,410**	2,348	**–**	–

(c) Impaired loans

These are loans where the Group determines on an individual basis that it is probable that it will be unable to collect all principal and interest due according to the contractual terms of the loan agreements. As at 31 December 2017, individually impaired loans of the Group before taking into account the cash flows from collateral held amounted to HK$0.4 million (2016: HK$1 million). There was no collateral held against these impaired loans (2016: Nil).

(d) Repossessed collateral

The Group obtained assets by taking possession of collateral held as security. Repossessed assets are sold as soon as practicable, with the proceeds used to reduce the outstanding indebtedness. As at 31 December 2017, repossessed assets of the Group amounted to HK$4 million (2016: HK$1 million).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

35.3.4 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 governments and other quasi-government entities. The maximum credit risk exposure by industry groups is analysed below:

	Group		Fund	
	2017	2016	**2017**	2016
Governments and government agencies[1]	**2,248,103**	2,092,648	**2,247,481**	2,092,581
Supra-nationals	**262,833**	249,592	**262,833**	249,592
States, provinces and public-sector entities[2]	**207,394**	197,616	**236,892**	226,661
Financial institutions	**454,945**	437,451	**419,787**	403,872
Others[3]	**485,392**	392,622	**394,099**	325,755
TOTAL	**3,658,667**	3,369,929	**3,561,092**	3,298,461

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.

35.4 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.

35.4.1 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.

35.4.2 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 maximum size of the Long-Term Growth Portfolio is set at one-third of the Accumulated Surplus of the Fund, with room for further expansion due to the funding of the Future Fund.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

35.4.3 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 balance sheet date and categorised by the earlier of contractual repricing dates or maturity dates.

	Group – 2017 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	147,940	–	–	–	–	–	147,940	68,432
Placements with banks and other financial institutions	139,554	13,023	4,093	–	–	–	156,670	18
Financial assets designated at fair value	500,523	639,230	629,532	642,385	195,178	139,797	2,746,645	742,948
Available-for-sale securities	638	3,045	715	583	–	–	4,981	175,434
Held-to-maturity securities	117	1,009	464	4,802	3,956	–	10,348	–
Loan portfolio	7,778	26	11	15	–	–	7,830	–
Interest-bearing assets	796,550	656,333	634,815	647,785	199,134	139,797	3,074,414	
Liabilities								
Placements by banks and other financial institutions	–	–	–	–	–	–	–	59,337
Placements by Fiscal Reserves with interest payable at market-based rates[1]	2	–	–	–	–	–	2	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	916	–	–	–	–	–	916	–
Exchange Fund Bills and Notes issued	336,628	451,533	229,192	15,914	9,473	2,508	1,045,248	–
Bank loans	8,417	–	–	1,954	2,879	–	13,250	–
Other debt securities issued	9,410	9,502	4,751	7,564	2,775	1,515	35,517	–
Interest-bearing liabilities	355,373	461,035	233,943	25,432	15,127	4,023	1,094,933	
Net interest-bearing assets	441,177	195,298	400,872	622,353	184,007	135,774	1,979,481	
Interest rate derivatives (net position, notional amounts)	8,101	(19,874)	1,160	(2,337)	10,576	2,400	26	
Interest rate sensitivity gap	449,278	175,424	402,032	620,016	194,583	138,174	1,979,507	

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 23 and 24). As at 31 December 2017, such placements amounted to HK$1,377,986 million.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2016 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	142,672	–	–	–	–	–	142,672	64,915
Placements with banks and other financial institutions	179,423	17,621	6,641	–	–	–	203,685	19
Financial assets designated at fair value	606,924	569,897	397,370	587,347	173,163	119,551	2,454,252	603,104
Available-for-sale securities	–	1,445	2,017	1,135	–	–	4,597	128,252
Held-to-maturity securities	156	300	2,285	4,064	3,127	–	9,932	–
Loan portfolio	9,470	33	8	23	–	–	9,534	–
Interest-bearing assets	938,645	589,296	408,321	592,569	176,290	119,551	2,824,672	
Liabilities								
Placements by banks and other financial institutions	–	–	–	–	–	–	–	56,136
Placements by Fiscal Reserves with interest payable at market-based rates[1]	9	–	–	–	–	–	9	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	3,082	–	–	–	–	–	3,082	–
Exchange Fund Bills and Notes issued	260,433	446,504	220,484	19,380	10,569	3,612	960,982	–
Bank loans	7,516	–	–	1,601	2,607	–	11,724	–
Other debt securities issued	5,769	8,858	8,464	7,660	2,098	1,384	34,233	–
Interest-bearing liabilities	276,809	455,362	228,948	28,641	15,274	4,996	1,010,030	
Net interest-bearing assets	661,836	133,934	179,373	563,928	161,016	114,555	1,814,642	
Interest rate derivatives (net position, notional amounts)	15,320	(30,086)	(7,053)	5,632	10,491	4,055	(1,641)	
Interest rate sensitivity gap	677,156	103,848	172,320	569,560	171,507	118,610	1,813,001	

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 23 and 24). As at 31 December 2016, such placements amounted to HK$1,213,992 million.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2017 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	147,398	–	–	–	–	–	147,398	68,251
Placements with banks and other financial institutions	128,595	2,656	–	–	–	–	131,251	–
Financial assets designated at fair value	500,523	639,230	629,532	642,385	195,178	139,797	2,746,645	726,641
Interest-bearing assets	776,516	641,886	629,532	642,385	195,178	139,797	3,025,294	
Liabilities								
Placements by banks and other financial institutions	–	–	–	–	–	–	–	59,337
Placements by Fiscal Reserves with interest payable at market-based rates[1]	2	–	–	–	–	–	2	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	916	–	–	–	–	–	916	–
Exchange Fund Bills and Notes issued	337,128	451,533	229,192	15,914	9,473	2,508	1,045,748	–
Interest-bearing liabilities	338,046	451,533	229,192	15,914	9,473	2,508	1,046,666	
Net interest-bearing assets	438,470	190,353	400,340	626,471	185,705	137,289	1,978,628	
Interest rate derivatives (net position, notional amounts)	–	(17,718)	800	5,318	9,200	2,400	–	
Interest rate sensitivity gap	438,470	172,635	401,140	631,789	194,905	139,689	1,978,628	

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 23 and 24). As at 31 December 2017, such placements amounted to HK$1,377,986 million.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2016 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	142,199	–	–	–	–	–	142,199	64,755
Placements with banks and other financial institutions	174,338	4,565	809	–	–	–	179,712	–
Financial assets designated at fair value	606,924	569,897	397,370	587,347	173,163	119,551	2,454,252	588,502
Interest-bearing assets	923,461	574,462	398,179	587,347	173,163	119,551	2,776,163	
Liabilities								
Placements by banks and other financial institutions	–	–	–	–	–	–	–	56,136
Placements by Fiscal Reserves with interest payable at market-based rates[1]	9	–	–	–	–	–	9	–
Placements by HKSAR Government funds and statutory bodies with interest payable at market-based rates[1]	3,082	–	–	–	–	–	3,082	–
Exchange Fund Bills and Notes issued	260,433	446,504	220,484	19,380	10,569	3,612	960,982	–
Interest-bearing liabilities	263,524	446,504	220,484	19,380	10,569	3,612	964,073	
Net interest-bearing assets	659,937	127,958	177,695	567,967	162,594	115,939	1,812,090	
Interest rate derivatives (net position, notional amounts)	15,506	(17,755)	(15,506)	5,600	8,555	3,600	–	
Interest rate sensitivity gap	675,443	110,203	162,189	573,567	171,149	119,539	1,812,090	

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 23 and 24). As at 31 December 2016, such placements amounted to HK$1,213,992 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			
	2017		2016	
	Assets (in HK$ billion)	**Liabilities (in HK$ billion)**	Assets (in HK$ billion)	Liabilities (in HK$ billion)
Hong Kong dollar	**333.2**	**2,809.4**	320.1	2,618.1
US dollar	**3,408.4**	**523.6**	3,115.1	490.8
	3,741.6	**3,333.0**	3,435.2	3,108.9
Others[1]	**440.4**	**25.5**	310.3	18.5
TOTAL	**4,182.0**	**3,358.5**	3,745.5	3,127.4

	Fund			
	2017		2016	
	Assets (in HK$ billion)	**Liabilities (in HK$ billion)**	Assets (in HK$ billion)	Liabilities (in HK$ billion)
Hong Kong dollar	**297.7**	**2,775.9**	286.9	2,581.2
US dollar	**3,319.9**	**521.3**	3,050.2	490.4
	3,617.6	**3,297.2**	3,337.1	3,071.6
Others[1]	**397.7**	**4.9**	281.6	0.6
TOTAL	**4,015.3**	**3,302.1**	3,618.7	3,072.2

[1] Other currencies included mainly euro, renminbi, pound sterling and Japanese yen.

(c) Equity price risk

As at 31 December 2017 and 2016, the majority of equity investments were reported as "financial assets designated at fair value" as shown in note 9.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

35.4.4 Sensitivity analysis

The Value-at-Risk positions of the Fund at 31 December and during the year, based on a 95% confidence level and one-month time horizon, were as follows:

	Fund	
	2017	2016
Value-at-Risk		
At 31 December[1]	**22,943**	25,727
During the year		
Average	**22,721**	33,990
Maximum	**27,051**	44,479
Minimum	**19,520**	25,727

1 The amount represented 0.6 % of the Fund's investments which were subject to VaR measurement as at 31 December 2017 (2016: 0.8%).

35.5 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.

35.5.1 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.)

35.5.2 Exposure to liquidity risk

The remaining contractual maturities at the balance sheet 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 – 2017 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	456,726	–	–	–	–	–	456,726
Government-issued currency notes and coins in circulation	12,213	–	–	–	–	–	12,213
Balance of the banking system	179,790	–	–	–	–	–	179,790
Placements by banks and other financial institutions	–	–	59,337	–	–	–	59,337
Placements by Fiscal Reserves	849,264	–	–	–	224,530	–	1,073,794
Placements by HKSAR Government funds and statutory bodies	173,418	6,000	11,000	103,312	11,380	–	305,110
Exchange Fund Bills and Notes issued	336,738	452,395	230,520	17,190	9,880	2,469	1,049,192
Bank loans	67	22	272	11,371	3,268	–	15,000
Other debt securities issued	4,927	2,177	12,031	13,691	3,163	2,168	38,157
Other liabilities	126,975	10,295	305	320	32,800	–	170,695
Loan commitments, guarantees and other credit related commitments	405,409	–	–	–	–	–	405,409
TOTAL	2,545,527	470,889	313,465	145,884	285,021	4,637	3,765,423
Derivative cash (inflows)/outflows							
Derivative financial instruments settled:							
– on net basis	100	457	(45)	86	69	17	684
– on gross basis							
Total outflows	100,388	132,523	72,895	994	1,540	–	308,340
Total inflows	(98,506)	(130,773)	(72,342)	(1,103)	(1,532)	–	(304,256)
TOTAL	1,982	2,207	508	(23)	77	17	4,768

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2016 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	405,345	–	–	–	–	–	405,345
Government-issued currency notes and coins in circulation	11,928	–	–	–	–	–	11,928
Balance of the banking system	259,593	–	–	–	–	–	259,593
Placements by banks and other financial institutions	–	–	56,136	–	–	–	56,136
Placements by Fiscal Reserves	690,068	–	–	–	224,530	–	914,598
Placements by HKSAR Government funds and statutory bodies	162,573	–	19,600	101,140	19,172	–	302,485
Exchange Fund Bills and Notes issued	260,481	447,074	221,590	20,806	11,101	3,730	964,782
Bank loans	60	19	243	10,246	3,063	–	13,631
Other debt securities issued	2,582	7,867	9,953	11,669	2,316	2,084	36,471
Other liabilities	151,728	4,449	71	104	10,071	–	166,423
Loan commitments, guarantees and other credit related commitments	367,389	–	–	–	–	–	367,389
TOTAL	2,311,747	459,409	307,593	143,965	270,253	5,814	3,498,781
Derivative cash (inflows)/outflows							
Derivative financial instruments settled:							
– on net basis	226	(17)	(67)	172	202	50	566
– on gross basis							
Total outflows	37,341	16,650	22	711	1,154	–	55,878
Total inflows	(37,040)	(15,131)	(34)	(713)	(1,022)	–	(53,940)
TOTAL	527	1,502	(79)	170	334	50	2,504

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2017						
	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	456,726	–	–	–	–	–	456,726
Government-issued currency notes and coins in circulation	12,213	–	–	–	–	–	12,213
Balance of the banking system	179,790	–	–	–	–	–	179,790
Placements by banks and other financial institutions	–	–	59,337	–	–	–	59,337
Placements by Fiscal Reserves	849,264	–	–	–	224,530	–	1,073,794
Placements by HKSAR Government funds and statutory bodies	173,418	6,000	11,000	103,312	11,380	–	305,110
Exchange Fund Bills and Notes issued	337,238	452,395	230,520	17,190	9,880	2,469	1,049,692
Other liabilities	120,489	10,286	305	–	32,800	–	163,880
Loan commitments and other credit related commitments	263,950	–	–	–	–	–	263,950
TOTAL	2,393,088	468,681	301,162	120,502	278,590	2,469	3,564,492
Derivative cash (inflows)/outflows							
Derivative financial instruments settled:							
– on net basis	101	446	(13)	73	54	1	662
– on gross basis							
Total outflows	100,215	131,218	69,246	–	–	–	300,679
Total inflows	(98,333)	(129,449)	(68,552)	–	–	–	(296,334)
TOTAL	1,983	2,215	681	73	54	1	5,007

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2016 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	405,345	–	–	–	–	–	405,345
Government-issued currency notes and coins in circulation	11,928	–	–	–	–	–	11,928
Balance of the banking system	259,593	–	–	–	–	–	259,593
Placements by banks and other financial institutions	–	–	56,136	–	–	–	56,136
Placements by Fiscal Reserves	690,068	–	–	–	224,530	–	914,598
Placements by HKSAR Government funds and statutory bodies	162,573	–	19,600	101,140	19,172	–	302,485
Exchange Fund Bills and Notes issued	260,481	447,074	221,590	20,806	11,101	3,730	964,782
Other liabilities	145,423	4,410	66	–	10,071	–	159,970
Loan commitments and other credit related commitments	262,722	–	–	–	–	–	262,722
TOTAL	2,198,133	451,484	297,392	121,946	264,874	3,730	3,337,559
Derivative cash (inflows)/outflows							
Derivative financial instruments settled:							
– on net basis	223	(25)	(28)	142	174	23	509
– on gross basis							
Total outflows	36,769	11,605	–	–	–	–	48,374
Total inflows	(36,484)	(11,462)	–	–	–	–	(47,946)
TOTAL	508	118	(28)	142	174	23	937

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

35.6 Insurance risk

The Group provides (i) mortgage insurance cover to authorized institutions in respect of mortgage loans originated by such authorized institutions and secured on residential properties in Hong Kong; (ii) insurance cover to authorized institutions in respect of reverse mortgage loans originated by such authorized institutions to elderly people; (iii) insurance cover to authorized institutions in respect of lump-sum loans to owners of properties of subsidised housing schemes for land premium settlement; and (iv) financial guarantee cover to authorized institutions in respect of loans originated by such authorized institutions to small and medium sized enterprises (SMEs) and non-listed enterprises in Hong Kong. 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, through the HKMC, offers mortgage insurance that covers authorized institutions for first credit losses 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 2017, the total risk-in-force was HK$21.1 billion (2016: HK$16.8 billion), of which HK$17.6 billion (2016: HK$14.1 billion) was retained by the Group after reinsurance. The Group also provides financial guarantee cover to authorized institutions up to 50% to 70% of the banking facilities granted to SMEs and non-listed enterprises in Hong Kong, and insurance cover to authorized institutions in respect of reverse mortgage loans originated by such authorized institutions and secured on residential properties, and in respect of lump-sum loans advanced by such authorized institutions to owners of properties of subsidised housing schemes primarily for land premium settlement and secured on these properties. As at 31 December 2017, the total risk-in-force was HK$6.9 billion (2016: HK$4.3 billion).

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.

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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

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. The reinsurers are selected according to prudent criteria and their credit ratings are reviewed regularly. For financial guarantee cover provided to authorized institutions, 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.

35.7 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 two Deputy Chief Executives and a Senior Executive Director 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 Internal Audit 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 also form the basis for the development of an annual Internal Audit work plan. Internal Audit 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.

Operational risk is also inherent in the investment activities and processes of the Reserves Management Department. To enhance its operational risk oversight, the Risk and Compliance Department formalised its operational risk management framework for the Reserves Management Department. 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 Reserves Management Department; handling of operational risk incidents; and issuing monthly operational risk reports to relevant senior executives.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

36 FAIR VALUE MEASUREMENT OF FINANCIAL INSTRUMENTS

36.1 Fair value of financial instruments measured at fair value on a recurring basis

36.1.1 Fair value hierarchy

The carrying values of financial instruments measured at fair value at the balance sheet date across the three levels of the fair value hierarchy are shown below:

	Group – 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets designated at fair value				
Treasury bills and commercial paper	458,493	723,475	–	1,181,968
Certificates of deposit	7,174	164,319	–	171,493
Other debt securities	1,322,331	85,782	12,488	1,420,601
Equity securities	547,143	125,388	43,000	715,531
	2,335,141	1,098,964	55,488	3,489,593
Available-for-sale securities				
Debt securities	5,182	–	–	5,182
Equity securities	1,456	–	–	1,456
Investment funds	–	1,891	171,393	173,284
	6,638	1,891	171,393	179,922
Derivative financial instruments	348	2,055	–	2,403
	2,342,127	1,102,910	226,881	3,671,918
Liabilities				
Exchange Fund Bills and Notes issued	–	1,045,248	–	1,045,248
Derivative financial instruments	100	5,462	–	5,562
Other debt securities issued, designated at fair value	–	142	–	142
	100	1,050,852	–	1,050,952

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Group – 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets designated at fair value				
Treasury bills and commercial paper	380,287	604,199	–	984,486
Certificates of deposit	–	80,190	–	80,190
Other debt securities	1,336,056	65,421	12,755	1,414,232
Equity securities	453,872	85,963	38,613	578,448
	2,170,215	835,773	51,368	3,057,356
Available-for-sale securities				
Debt securities	5,336	650	–	5,986
Equity securities	992	–	–	992
Investment funds	–	860	124,518	125,378
	6,328	1,510	124,518	132,356
Derivative financial instruments	226	9,037	–	9,263
	2,176,769	846,320	175,886	3,198,975
Liabilities				
Exchange Fund Bills and Notes issued	–	960,982	–	960,982
Derivative financial instruments	223	2,635	–	2,858
Other debt securities issued, designated at fair value	–	137	–	137
	223	963,754	–	963,977

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

	Fund – 2017			
	Level 1	**Level 2**	**Level 3**	**Total**
Assets				
Financial assets designated at fair value				
Treasury bills and commercial paper	**458,493**	**723,475**	**–**	**1,181,968**
Certificates of deposit	**7,174**	**164,319**	**–**	**171,493**
Other debt securities	**1,322,331**	**85,782**	**–**	**1,408,113**
Equity securities	**547,143**	**125,388**	**39,181**	**711,712**
	2,335,141	**1,098,964**	**39,181**	**3,473,286**
Derivative financial instruments	**348**	**1,721**	**–**	**2,069**
	2,335,489	**1,100,685**	**39,181**	**3,475,355**
Liabilities				
Exchange Fund Bills and Notes issued	**–**	**1,045,748**	**–**	**1,045,748**
Derivative financial instruments	**100**	**5,193**	**–**	**5,293**
	100	**1,050,941**	**–**	**1,051,041**

	Fund – 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Financial assets designated at fair value				
Treasury bills and commercial paper	380,287	604,199	–	984,486
Certificates of deposit	–	80,190	–	80,190
Other debt securities	1,336,056	65,421	–	1,401,477
Equity securities	453,872	85,963	36,766	576,601
	2,170,215	835,773	36,766	3,042,754
Derivative financial instruments	226	8,792	–	9,018
	2,170,441	844,565	36,766	3,051,772
Liabilities				
Exchange Fund Bills and Notes issued	–	960,982	–	960,982
Derivative financial instruments	223	706	–	929
	223	961,688	–	961,911

The Group's policy is to recognise transfers between levels of fair value hierarchy as at the end of the reporting period 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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

An analysis of the movement between opening and closing balances of Level 3 assets, measured at fair value using a valuation technique with significant unobservable inputs, is shown below:

	Group			
	Designated at fair value		Available-for-sale	
	2017	2016	2017	2016
At 1 January	51,368	47,349	124,518	97,344
Net gains recognised in the income and expenditure account	5,715	2,653	–	–
Net gains recognised in other comprehensive income	–	–	14,504	4,236
Purchases	11,867	13,807	48,503	33,366
Sales	(15,631)	(12,707)	(16,132)	(10,428)
Transfers into Level 3	3,262	2,070	–	–
Transfers out of Level 3	(1,093)	(1,804)	–	–
At 31 December	55,488	51,368	171,393	124,518
Net gains recognised in the income and expenditure account relating to those assets held at the balance sheet date	5,797	2,779	–	–

	Fund	
	Designated at fair value	
	2017	2016
At 1 January	36,766	34,580
Net gains recognised in the income and expenditure account	3,412	1,622
Purchases	7,613	9,756
Sales	(10,779)	(9,458)
Transfers into Level 3	3,262	2,070
Transfers out of Level 3	(1,093)	(1,804)
At 31 December	39,181	36,766
Net gains recognised in the income and expenditure account relating to those assets held at the balance sheet date	2,606	1,737

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.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

36.1.2 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 balance sheet 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, using inputs based on market conditions existing at the balance sheet date. Specific valuation techniques and key inputs used to value these financial instruments include:

i) quoted market price or broker quotes for similar instruments;

ii) derivative financial instruments are priced using models with observable market inputs including interest rate swaps and foreign exchange contracts; and

iii) commercial paper and debt securities are priced using discounted cash flow techniques with observable yield curves.

For investments in unlisted investment funds, certain unlisted equity securities and certain unlisted debt securities which are classified under Level 3, their fair values are estimated by making reference to valuation reports provided by 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	
	2017	2016
Earning multiples of similar companies	**7.0 – 11.4**	5.6 – 13.2
Liquidity discount	**20%**	20%

If the prices of these investments had increased/decreased by 10%, it would have resulted in an increase/decrease in the Group's surplus for the year of HK$5,549 million (2016: HK$5,137 million) and in other comprehensive income of HK$17,139 million (2016: HK$12,452 million).

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

36.2 Fair value of debt securities not measured at fair value on a recurring basis

The fair values of held-to-maturity securities and other debt securities issued that were not designated at fair value are shown below:

		Group – 2017			
		Carrying value	Fair value		
	Note		Level 1	Level 2	Total
Financial assets					
Held-to-maturity securities	12	**10,348**	**10,264**	**298**	**10,562**
Financial liabilities					
Other debt securities issued	27	**35,375**	**–**	**35,507**	**35,507**

		Group – 2016			
		Carrying value	Fair value		
	Note		Level 1	Level 2	Total
Financial assets					
Held-to-maturity securities	12	9,932	9,829	300	10,129
Financial liabilities					
Other debt securities issued	27	34,096	–	34,169	34,169

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, using inputs based on market conditions existing at the balance sheet date. Specific valuation techniques and key inputs used to value these debt securities include quoted market prices for securities with similar credit, maturity and yield characteristics for held-to-maturity securities, discounted cash flow model based on a current yield curve appropriate for the remaining term to maturity for other debt securities issued.

All other financial instruments of the Group and the Fund are stated at fair value or carried at amounts not materially different from their fair values as at 31 December 2017 and 2016.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

37 POSSIBLE IMPACT OF AMENDMENTS, NEW STANDARDS AND INTERPRETATIONS ISSUED BUT NOT YET EFFECTIVE FOR THE YEAR ENDED 31 DECEMBER 2017

Up to the date of issue of these financial statements, the HKICPA has issued a number of amendments and new standards which are not yet effective for the year ended 31 December 2017 and which have not been adopted in these financial statements. The new standards include:

	Effective for accounting periods beginning on or after
HKFRS 9 "Financial Instruments"	1 January 2018
HKFRS 16 "Leases"	1 January 2019
HKFRS 17 "Insurance Contracts"	1 January 2021

So far, the Group expects that the adoption of HKFRS 9 and HKFRS 16 is unlikely to have any significant effect on its financial statements and in respect of HKFRS 17, the Group is in the process of assessing the possible impact on its financial statements in the period of initial adoption.

HKFRS 9 "Financial Instruments"

HKFRS 9, which replaces HKAS 39 "Financial Instruments: Recognition and Measurement", introduces new requirements for classification and measurement of financial assets, including the measurement of impairment for financial assets and hedge accounting. On the other hand, HKFRS 9 incorporates without substantive changes the requirements of HKAS 39 for recognition and derecognition of financial instruments and the classification and measurement of financial liabilities.

HKFRS 9 is effective for annual periods beginning on or after 1 January 2018 on a retrospective basis. The Group plans to use the exemption from restating comparative information and will recognise any transition adjustments against the opening balance of equity at 1 January 2018.

Expected impacts of the new requirements on the Group's financial statements are as follows:

(a) Classification and measurement

HKFRS 9 contains three primary categories for measuring financial assets: (1) amortised cost, (2) fair value through profit or loss (FVTPL) and (3) fair value through other comprehensive income (FVTOCI). The basis of classification depends on the entity's business model and contractual cash flow characteristics of the financial assets. Investment in equity instruments are required to be measured at FVTPL with the irrevocable option on initial recognition to classify equity instruments that are not held for trading at FVTOCI. Fair value changes on these equity instruments shall be recognised in other comprehensive income without recycling to the income and expenditure account.

The Group has assessed that its financial assets currently measured at amortised cost and FVTPL will continue with their respective classifications and measurements upon the adoption of HKFRS 9.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

The Group's financial assets currently classified as "available-for-sale securities" comprise investment funds, debt securities and equity securities (note 10). Under HKFRS 9, the Group will classify its holding of investment funds and listed equity securities under FVTPL. This change will have no impact on their value in the balance sheet, but will increase volatility in profit or loss since their fair value changes thereafter will be recognised in the income and expenditure account, instead of statement of comprehensive income. Upon the initial adoption of HKFRS 9, fair value gain of HK$34.2 billion related to these investments will be transferred from revaluation reserve to the accumulated surplus at 1 January 2018. On the other hand, the Group will classify its holding of debt securities under FVTOCI and does not expect any impact on such securities upon the initial adoption of HKFRS 9. In respect of unlisted equity securities, the Group will classify them under FVTOCI with the use of irrevocable option. Since the Group's investment in these securities is currently measured at cost, such securities will need to be restated at fair value upon the adoption of HKFRS 9, with the difference recorded in revaluation reserve as an opening balance adjustment as at 1 January 2018. The Group expects that such difference will increase its revaluation reserve by approximately HK$0.7 billion.

For financial liabilities there are no changes to classification and measurement, except that in respect of financial liabilities designated at FVTPL, any changes in fair value due to a change in own credit risk should be recognised in other comprehensive income. The Group considers this new requirement less applicable to Exchange Fund Bills and Notes issued (note 25) because these instruments are issued for central bank functions and the movement of their yields is mainly driven by market liquidity and demand.

(b) Impairment

HKFRS 9 introduces a new expected credit loss model to replace the incurred loss impairment model used in HKAS 39. This new model will apply to financial assets measured at amortised cost, debt instruments measured at FVTOCI, lease receivables, loan commitments and certain financial guarantee contracts. Under the expected credit loss model, it will no longer be necessary for a loss event to occur before an impairment loss is recognised. Instead, an entity is required to recognise and measure either a 12-month expected credit loss or a lifetime expected credit loss, depending on the assets and the facts and circumstances. The Group expects that the application of the expected credit loss model will result in earlier recognition of credit losses. Based on our assessment, if the Group were to adopt the new impairment requirements at 31 December 2017, provision of impairment loss at that date would increase by approximately HK$6 million. A corresponding adjustment will be made to the opening balances of the financial assets and accumulated surplus at 1 January 2018 accordingly.

(c) Hedge accounting

HKFRS 9 relaxes the requirements for hedge effectiveness by replacing the bright line hedge effectiveness tests and adopting a more principles-based approach. It requires an economic relationship between the hedged item and the hedging instrument and for the hedged ratio to be the same as the one management actually use for risk management purposes. Contemporaneous documentation is still required but is different to that currently prepared under HKAS 39. The Group has assessed that its current hedge relationship will qualify as continuing hedges under HKFRS 9.

HKFRS 9 also introduces expanded disclosure requirements and changes in presentation. These are expected to change the nature and extent of the Group's disclosures about its financial instruments in the financial statements.

Exchange Fund — Notes to the Financial Statements (continued)

(Amounts expressed in millions of Hong Kong dollars, unless otherwise stated.)

HKFRS 16 "Leases"

HKFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. It will supersede HKAS 17 related to leases. It introduces a single lessee accounting model and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. Under HKFRS 16, a lessee is required to recognise a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. Accordingly, a lessee should recognise depreciation of the right-of-use asset and interest on the lease liability. The right-of-use asset and the lease liability are initially measured on a present value basis. The measurement includes non-cancellable lease payments and payments to be made in optional periods if the lessee is reasonably certain to exercise an option to extend the lease. In respect of the lessor accounting, HKFRS 16 substantially carries forward the lessor accounting requirements in HKAS 17.

HKFRS 16 will primarily affect the Group's accounting as a lessee of leases for premises which are currently classified as operating leases. The application of the new accounting model is expected to lead to an increase in both assets and liabilities and to impact on the timing of the expense recognition in the income and expenditure account over the period of the leases. As disclosed in note 32(i), the Group has non-cancellable operating leases commitments of HK$339 million as at 31 December 2017. In view of the amount involved, the Group expects that the adoption of this new standard is unlikely to have a significant effect on its financial statements. The new standard is mandatory for financial years beginning on or after 1 January 2019. At this stage, the Group does not intend to adopt the standard before its effective date.

HKFRS 17 "Insurance Contracts"

HKFRS 17 establishes a comprehensive global insurance standard which provides guidance on the recognition, measurement, presentation and disclosures 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 2021 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.

38 APPROVAL OF FINANCIAL STATEMENTS

The financial statements were approved by the Financial Secretary on the advice of the Exchange Fund Advisory Committee on 10 April 2018.

Annex and Tables

Annex Authorized Institutions and Local Representative Offices

at 31 December 2017

LICENSED BANKS

Incorporated in Hong Kong

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

DAH SING BANK, LIMITED

DBS BANK (HONG KONG) LIMITED

FUBON BANK (HONG KONG) LIMITED

Hang Seng Bank, Limited

Hongkong and Shanghai Banking Corporation Limited (The)

Industrial and Commercial Bank of China (Asia) Limited

Nanyang Commercial Bank, Limited

PUBLIC BANK (HONG KONG) LIMITED

Shanghai Commercial Bank Limited

Standard Chartered Bank (Hong Kong) Limited

Tai Sang Bank Limited

Tai Yau Bank, Limited

OCBC Wing Hang Bank Limited

Wing Lung Bank Limited

Incorporated outside Hong Kong

ABN AMRO Bank N.V.

AGRICULTURAL BANK OF CHINA LIMITED

Allahabad Bank

Australia and New Zealand Banking Group Limited

Axis Bank Limited

Banca Monte dei Paschi di Siena S.p.A.

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 of Tokyo-Mitsubishi UFJ, Ltd. (The)

BANK SINOPAC

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 Construction Bank Corporation

China Development Bank (formerly known as China Development Bank Corporation)

China Everbright 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.

Coutts & Co AG
also known as:
Coutts & Co SA
Coutts & Co Ltd

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

E.Sun Commercial Bank, Ltd.

EAST WEST BANK

Edmond de Rothschild (Suisse) S.A.

EFG Bank AG
also known as:
EFG Bank SA
EFG Bank Ltd

Addition in 2017

Annex Authorized Institutions and Local Representative Offices at 31 December 2017 (continued)

ERSTE GROUP BANK AG

FAR EASTERN INTERNATIONAL BANK

First Abu Dhabi Bank PJSC
(formerly known as National Bank of Abu Dhabi)

First Commercial Bank, Ltd.

Hachijuni Bank, Ltd. (The)

HDFC BANK LIMITED

HONG LEONG BANK BERHAD

HSBC BANK INTERNATIONAL LIMITED

HSBC Bank plc

HSBC Bank USA, National Association

HSBC Private Bank (Suisse) SA

Hua Nan Commercial Bank, Ltd.

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

Iyo Bank, Ltd. (The)

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.

National Australia Bank Limited

National Bank of Pakistan

NATIXIS

O-Bank Co., Ltd.
(formerly known as Industrial Bank of Taiwan Co., Ltd.)

Oversea-Chinese Banking Corporation Limited

Philippine National Bank

Pictet & Cie (Europe) S.A.

PT. Bank Negara Indonesia (Persero) Tbk.

Punjab National Bank

Royal Bank of Canada

Royal Bank of Scotland N.V. (The)

Royal Bank of Scotland public limited company (The)

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)

Ta Chong Bank, Ltd.

TAIPEI FUBON COMMERCIAL BANK CO., LTD.

TAISHIN INTERNATIONAL BANK CO., LTD

Taiwan Business Bank

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

Union Bank of India

United Overseas Bank Ltd.

Wells Fargo Bank, National Association

Westpac Banking Corporation

Woori Bank

Deletion in 2017

BSI LTD
also known as:
BSI AG
BSI SA

Portigon AG

Annex Authorized Institutions and Local Representative Offices at 31 December 2017 (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

Morgan Stanley Asia International Limited

Nippon Wealth Limited

ORIX ASIA LIMITED

SCOTIABANK (HONG KONG) LIMITED

Societe Generale Asia Limited

Deletion in 2017

KOOKMIN BANK HONG KONG LIMITED

UBAF (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

Deletion in 2017

Bank of Ayudhya 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

Gunma Finance (Hong Kong) Limited

Habib Finance International Limited

Henderson International Finance Limited

HKCB Finance Limited

KEB Hana Global Finance Limited

KEXIM ASIA LIMITED

PUBLIC FINANCE LIMITED

SHINHAN ASIA LIMITED

Vietnam Finance Company Limited

WOORI GLOBAL MARKETS ASIA LIMITED

Incorporated outside Hong Kong

NIL

LOCAL REPRESENTATIVE OFFICES

ABC BANKING CORPORATION LTD#

Ashikaga Bank, Ltd. (The)

BANCO BPM SOCIETA' PER AZIONI
(formerly known as Banco Popolare-Societa' Cooperativa)

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.

CAIXABANK S.A.

CHINA BOHAI BANK CO., LTD.

CHINA GUANGFA BANK CO., LTD.

CLEARSTREAM BANKING S.A.

Corporation Bank

Doha Bank Q.S.C.

Dukascopy Bank SA

Export-Import Bank of China (The)

Habib Bank A.G. Zurich

HSH Nordbank AG

HUA XIA BANK CO., Limited

JAPAN POST BANK CO., LTD.

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)

Ping An Bank Co., Ltd.

Resona Bank, Limited

Rothschild Bank AG

Schroder & Co Bank AG
also known as:
Schroder & Co Banque SA
Schroder & Co Banca SA
Schroder & Co Bank Ltd
Schroder & Co Banco SA

Shinkin Central Bank

Shoko Chukin Bank, Ltd. (The)

Silicon Valley Bank

Standard Bank of South Africa Limited (The)

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.

Yuanta Commercial Bank Co., Ltd

Deletion in 2017

AS Expobank

Central Bank of India

FIRST GULF BANK

Investec Bank Limited

Juroku Bank, Ltd. (The)

Ogaki Kyoritsu Bank, Ltd. (The)

Addition in 2017

Table A Major Economic Indicators

	2013	2014	2015	2016	**2017**
I. Gross Domestic Product					
Real GDP growth (%)	3.1	2.8	2.4	2.1	**3.8** [(a)]
Nominal GDP growth (%)	5.0	5.7	6.1	3.9	**6.9** [(a)]
Real growth of major expenditure components of GDP (%)					
– Private consumption expenditure	4.6	3.3	4.8	1.9	**5.4** [(a)]
– Government consumption expenditure	2.7	3.1	3.4	3.3	**3.4** [(a)]
– Gross domestic fixed capital formation	2.6	(0.1)	(3.2)	(0.1)	**4.2** [(a)]
of which					
– Building and construction	(4.3)	9.3	2.2	5.9	**3.0** [(a)]
– Machinery, equipment and intellectual property products	11.3	(8.7)	(7.7)	(6.3)	**1.9** [(a)]
– Exports [(b)]	7.8	1.0	(1.4)	0.7	**5.5** [(a)]
– Imports [(b)]	8.3	1.0	(1.8)	0.9	**6.3** [(a)]
GDP at current market prices (US$ billion)	275.7	291.5	309.4	320.9	**341.6** [(a)]
Per capita GDP at current market prices (US$)	38,404	40,316	42,432	43,737	**46,218** [(a)]
II. External Trade (HK$ billion) [(b)]					
Trade in goods[(c)]					
– Exports of goods	3,926.1	3,986.8	3,889.2	3,892.9	**4,190.2** [(a)]
– Imports of goods	4,142.7	4,237.7	4,066.5	4,022.6	**4,377.2** [(a)]
– Balance of trade in goods	(216.6)	(250.9)	(177.3)	(129.7)	**(187.0)**[(a)]
Trade in services					
– Exports of services	812.6	829.1	808.9	764.8	**810.3** [(a)]
– Imports of services	583.2	573.5	574.3	578.1	**602.3** [(a)]
– Balance of trade in services	229.4	255.6	234.6	186.7	**208.1** [(a)]
III. Fiscal Expenditure and Revenue (HK$ million, fiscal year)					
Total government expenditure [(d)]	433,543	405,871	435,633	462,052	**474,406** [(a)]
Total government revenue	455,346	478,668	450,007	573,125	**612,385** [(a)]
Consolidated surplus/(deficit)	21,803	72,797	14,374	111,073	**137,979** [(a)]
Reserve balance as at end of fiscal year [(e)]	755,717	828,514	842,888	953,960	**1,091,939** [(a)]
IV. Prices (annual change, %)					
Consumer Price Index (A)	5.1	5.6	4.0	2.8	**1.5**
Composite Consumer Price Index	4.3	4.4	3.0	2.4	**1.5**
Trade Unit Value Indices					
– Domestic exports	2.5	0.2	(3.0)	(1.4)	**2.0**
– Re-exports	1.3	2.0	0.1	(1.7)	**1.8**
– Imports	0.9	1.9	(0.4)	(1.7)	**1.9**
Property Price Indices					
– Residential flats	17.5	6.0	15.5	(3.6)	**16.7** [(a)]
– Office premises	22.5	3.2	6.1	(4.9)	**14.1** [(a)]
– Retail premises	20.5	2.8	7.4	(5.8)	**6.0** [(a)]
– Flatted factory premises	33.8	1.9	8.4	(4.3)	**12.4** [(a)]

Table A Major Economic Indicators (continued)

		2013	2014	2015	2016	**2017**
V.	**Labour**					
	Labour force (annual change, %)	1.9	0.4	0.8	0.4	**0.7**
	Employment (annual change, %)	1.8	0.5	0.8	0.4	**1.2**
	Unemployment rate (annual average, %)	3.4	3.3	3.3	3.4	**3.1**
	Underemployment rate (annual average, %)	1.5	1.5	1.4	1.4	**1.2**
	Employment ('000)	3,724	3,744	3,774	3,787	**3,823**
VI.	**Money Supply (HK$ billion)**					
	HK$ money supply					
	–M1	1,000.3	1,116.7	1,253.4	1,428.8	**1,598.0**
	–M2[f]	4,795.1	5,225.8	5,765.5	6,280.2	**7,010.3**
	–M3[f]	4,806.0	5,236.2	5,778.8	6,292.7	**7,024.5**
	Total money supply					
	–M1	1,510.9	1,708.7	1,971.1	2,214.0	**2,431.5**
	–M2	10,056.4	11,011.4	11,618.4	12,508.1	**13,755.3**
	–M3	10,085.2	11,048.9	11,655.0	12,551.3	**13,803.8**
VII.	**Interest Rates (end of period, %)**					
	Three-month interbank rate [g]	0.38	0.38	0.39	1.02	**1.31**
	Savings deposit	0.01	0.01	0.01	0.01	**0.01**
	One-month time deposit	0.01	0.01	0.01	0.01	**0.01**
	Banks' 'Best lending rate'	5.00	5.00	5.00	5.00	**5.00**
	Banks' 'Composite rate'	0.39	0.39	0.26	0.31	**0.38**
VIII.	**Exchange Rates (end of period)**					
	HK$/US$	7.754	7.756	7.751	7.754	**7.814**
	Trade-weighted Effective Exchange Rate Index (Jan 2010=100)	94.8	99.0	104.9	108.8	**100.9**
IX.	**Foreign Currency Reserve Assets (US$ billion)** [h]	311.2	328.5	358.8	386.3	**431.4**
X.	**Stock Market (end of period figures)**					
	Hang Seng Index	23,306	23,605	21,914	22,001	**29,919**
	Average price/earnings ratio	11.2	10.9	9.9	10.5	**16.3**
	Market capitalisation (HK$ billion)	23,908.8	24,892.4	24,425.6	24,450.4	**33,718.0**

(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 changes in provision for loss in investments with the Exchange Fund.
(f) Adjusted to include foreign currency swap deposits.
(g) Refers to three-month Hong Kong Dollar Interest Settlement Rates.
(h) Excludes unsettled forward transactions but includes gold.

Table B Performance Ratios of the Banking Sector[a]

	All Authorized Institutions 2013 %	2014 %	2015 %	2016 %	**2017 %**	Retail Banks 2013 %	2014 %	2015 %	2016 %	**2017 %**
Asset Quality [b]										
As % of total credit exposures [c]										
Total outstanding provisions/impairment allowances	0.35	0.38	0.44	0.49	**0.48**	0.22	0.24	0.28	0.29	**0.26**
Classified [d] exposures:										
– Gross	0.36	0.38	0.49	0.58	**0.47**	0.31	0.33	0.43	0.45	**0.36**
– Net of specific provisions/individual impairment allowances	0.22	0.23	0.31	0.35	**0.25**	0.22	0.23	0.30	0.31	**0.24**
– Net of all provisions/impairment allowances	0.00	0.00	0.05	0.09	**(0.01)**	0.08	0.09	0.15	0.17	**0.10**
As % of total loans [e]										
Total outstanding provisions/impairment allowances	0.55	0.55	0.66	0.76	**0.71**	0.35	0.35	0.46	0.51	**0.45**
Classified [d] loans:										
– Gross	0.54	0.52	0.73	0.85	**0.67**	0.48	0.46	0.69	0.72	**0.54**
– Net of specific provisions/individual impairment allowances	0.35	0.32	0.46	0.51	**0.35**	0.34	0.32	0.49	0.48	**0.35**
– Net of all provisions/impairment allowances	(0.01)	(0.03)	0.07	0.10	**(0.04)**	0.12	0.12	0.23	0.21	**0.10**
Overdue > 3 months and rescheduled loans	0.36	0.34	0.47	0.67	**0.52**	0.33	0.29	0.45	0.53	**0.40**
Profitability										
Return on assets (operating profit)	1.03	0.97	0.88	0.81	**0.91**	1.30	1.19	1.05	1.09	**1.16**
Return on assets (post-tax profit)	1.05	0.81	0.83	1.00	**0.83**	1.39	0.99	1.04	1.44	**1.07**
Net interest margin	1.12	1.14	1.07	1.04	**1.12**	1.40	1.40	1.32	1.32	**1.45**
Cost-to-income ratio	49.1	48.9	50.3	50.4	**47.0**	42.4	43.4	45.3	43.2	**41.9**
Loan impairment charges to total assets	0.06	0.06	0.09	0.10	**0.10**	0.04	0.05	0.09	0.07	**0.06**
Liquidity										
Loan to deposit ratio (all currencies)	70.3	72.2	70.1	68.4	**73.0**	56.2	57.5	56.5	57.0	**59.5**
Loan to deposit [f] ratio (Hong Kong dollar)	82.1	83.3	78.2	77.1	**82.7**	74.8	74.6	71.5	71.2	**73.1**

	Surveyed Institutions 2013 %	2014 %	2015 %	2016 %	**2017 %**
Asset Quality					
Delinquency ratio of residential mortgage loans	0.02	0.03	0.03	0.03	**0.03**
Credit card receivables					
– Delinquency ratio	0.20	0.20	0.25	0.24	**0.22**
– Charge-off ratio	1.84	1.83	1.82	1.92	**1.75**

	Locally Incorporated Licensed Banks 2013 %	2014 %	2015 %	2016 %	**2017 %**
Profitability					
Operating profit to shareholders' funds	14.1	13.1	11.4	10.9	**11.7**
Post-tax profit to shareholders' funds	15.3	11.1	11.4	14.6	**10.9**
Capital Adequacy					
Equity to assets ratio [b]	8.5	8.8	9.3	9.6	**9.6**

	All Locally Incorporated Authorized Institutions 2013 %	2014 %	2015 %	2016 %	**2017 %**
Capital Adequacy [g]					
Common Equity Tier 1 capital ratio	13.2	13.7	14.6	15.5	**15.4**
Tier 1 capital ratio	13.3	13.9	15.3	16.4	**16.6**
Total capital ratio	15.9	16.8	18.3	19.2	**19.1**

(a) Figures are related to Hong Kong offices only unless otherwise stated.
(b) Figures are related to Hong Kong offices. For the 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) Starting from 2015, the coverage was expanded to include locally incorporated AIs' major overseas subsidiaries.
(f) Includes swap deposits.
(g) The ratios are on a consolidated basis.

Table C Authorized Institutions: Domicile and Parentage

	2013	2014	2015	2016	**2017**
Licensed Banks					
(i) Incorporated in Hong Kong	21	21	22	22	**22**
(ii) Incorporated outside Hong Kong	135	138	135	134	**133**
Total	156	159	157	156	**155**
Restricted Licence Banks					
(i) Subsidiaries of licensed banks :					
(a) incorporated in Hong Kong	1	1	1	1	**1**
(b) incorporated outside Hong Kong	6	6	6	5	**5**
(ii) Subsidiaries or branches of foreign banks which are not licensed banks in Hong Kong	12	11	11	10	**7**
(iii) Bank related	1	1	3	3	**3**
(iv) Others	1	2	3	3	**3**
Total	21	21	24	22	**19**
Deposit-taking Companies					
(i) Subsidiaries of licensed banks :					
(a) incorporated in Hong Kong	6	6	4	4	**4**
(b) incorporated outside Hong Kong	3	3	3	3	**3**
(ii) Subsidiaries of foreign banks which are not licensed banks in Hong Kong	7	6	6	6	**6**
(iii) Bank related	2	2	–	–	**–**
(iv) Others	6	6	5	4	**4**
Total	24	23	18	17	**17**
All Authorized Institutions	201	203	199	195	**191**
Local Representative Offices	62	63	64	54	**49**

Table D Authorized Institutions: Region/Economy of Beneficial Ownership

Region/Economy	Licensed Banks					Restricted Licence Banks					Deposit-taking Companies				
	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**
Asia & Pacific															
Hong Kong	9	7	7	7	**7**	–	–	–	–	**–**	7	4	3	2	**2**
Australia	5	5	5	5	**5**	–	–	–	–	**–**	–	–	–	–	**–**
Mainland China	17	19	21	21	**22**	2	2	2	2	**2**	2	3	3	3	**3**
India	12	12	12	12	**12**	–	–	–	–	**-**	1	1	1	1	**1**
Indonesia	1	1	1	1	**1**	1	1	1	1	**1**	–	–	–	–	**–**
Japan	11	11	11	11	**11**	1	1	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**	2	2	1	1	**1**
Philippines	2	2	2	2	**2**	1	1	1	1	**1**	2	2	2	2	**2**
Singapore	5	6	6	6	**6**	–	–	–	–	**–**	–	2	–	–	**–**
South Korea	5	5	4	5	**5**	2	2	2	2	**1**	4	4	4	4	**4**
Taiwan	19	19	19	20	**20**	–	–	–	–	**–**	1	1	1	1	**1**
Thailand	1	1	1	1	**1**	3	3	3	3	**2**	–	–	–	–	**–**
Vietnam	–	–	–	–	**–**	–	–	–	–	**–**	1	1	1	1	**1**
Sub-Total	92	93	94	96	**97**	10	10	12	12	**10**	23	22	18	17	**17**
Europe															
Austria	2	2	2	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
Belgium	1	1	1	1	**1**	1	1	1	1	**1**	–	–	–	–	**–**
France	9	9	8	7	**7**	2	2	2	2	**1**	–	–	–	–	**–**
Germany	4	4	4	4	**3**	–	–	–	–	**–**	–	–	–	–	**–**
Italy	4	4	3	3	**3**	–	–	–	–	**–**	–	–	–	–	**–**
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	6	6	6	8	**7**	–	–	–	–	**–**	–	–	–	–	**–**
United Kingdom	11	11	10	10	**10**	–	–	–	–	**–**	1	1	–	–	**–**
Sub-Total	45	45	42	42	**40**	3	3	3	3	**2**	1	1	0	0	**0**
Middle East															
Iran	1	1	1	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
United Arab Emirates	2	3	3	2	**2**	1	–	–	–	**–**	–	–	–	–	**–**
Sub-Total	3	4	4	3	**3**	1	0	0	0	**0**	0	0	0	0	**0**
North America															
Canada	5	5	5	5	**5**	3	3	3	2	**2**	–	–	–	–	**–**
United States	9	10	10	9	**9**	4	5	6	5	**5**	–	–	–	–	**–**
Sub-Total	14	15	15	14	**14**	7	8	9	7	**7**	0	0	0	0	**0**
Brazil	1	1	2	1	**1**	–	–	–	–	**–**	–	–	–	–	**–**
South Africa	1	1	–	–	**–**	–	–	–	–	**–**	–	–	–	–	**–**
Grand Total	156	159	157	156	**155**	21	21	24	22	**19**	24	23	18	17	**17**

Table E Presence of World's Largest 500 Banks in Hong Kong

Positions at 31.12.2017	Number of Overseas Banks [b]					Licensed Banks [c]					Restricted Licence Banks [c]					Deposit-Taking Companies [c]					Local Representative Offices				
	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**	2013	2014	2015	2016	**2017**
World Ranking [a]																									
1 – 20	20	20	20	20	**20**	40	39	39	36	**34**	5	5	5	6	**5**	–	–	–	–	**1**	–	–	–	–	**–**
21 – 50	26	25	26	27	**27**	24	24	25	27	**28**	3	4	5	4	**4**	2	2	1	2	**1**	4	3	3	2	**2**
51 – 100	24	26	28	28	**28**	23	25	23	21	**22**	2	2	2	3	**2**	3	4	3	3	**3**	4	5	7	8	**8**
101 – 200	43	38	34	32	**34**	24	23	22	22	**24**	3	3	2	–	**1**	2	1	1	1	**1**	22	18	15	10	**10**
201 – 500	47	52	57	56	**47**	26	28	30	32	**29**	4	3	3	3	**2**	3	4	4	4	**5**	16	19	22	19	**13**
Sub-total	160	161	165	163	**156**	137	139	139	138	**137**	17	17	17	16	**14**	10	11	9	10	**11**	46	45	47	39	**33**
Others	45	47	41	31	**31**	19	20	18	18	**18**	4	4	7	6	**5**	14	12	9	7	**6**	16	18	17	15	**16**
Total	205	208	206	194	**187**	156	159	157	156	**155**	21	21	24	22	**19**	24	23	18	17	**17**	62	63	64	54	**49**

(a) Top 500 banks/banking groups in the world ranked by total assets. Figures are extracted from The Banker, July 2017 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

	2013			2014			2015			2016			**2017**		
(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	3,606	2,851	6,457	4,000	3,276	7,276	4,153	3,382	7,535	4,479	3,544	8,023	**5,360**	**3,954**	**9,314**
– Inside Hong Kong [(a)]	3,119	1,410	4,529	3,462	1,596	5,058	3,650	1,604	5,254	3,988	1,651	5,639	**4,654**	**1,860**	**6,514**
– Outside Hong Kong [(b)]	487	1,441	1,928	539	1,680	2,218	503	1,778	2,281	491	1,893	2,384	**706**	**2,093**	**2,800**
Interbank lending	424	4,372	4,795	431	4,948	5,379	561	4,577	5,138	720	4,513	5,233	**652**	**5,343**	**5,995**
– Inside Hong Kong	255	528	783	254	598	852	362	672	1,034	401	673	1,074	**327**	**690**	**1,017**
– Outside Hong Kong	169	3,843	4,012	176	4,351	4,527	199	3,905	4,104	318	3,841	4,159	**326**	**4,652**	**4,978**
Negotiable certificates of deposit (NCDs)	134	173	306	123	144	267	152	269	422	209	355	564	**172**	**429**	**601**
Negotiable debt instruments, other than NCDs	912	2,676	3,588	884	2,620	3,505	962	2,722	3,684	1,160	2,906	4,067	**1,274**	**3,091**	**4,365**
Other assets	726	1,069	1,795	850	1,165	2,015	1,053	1,349	2,403	1,049	1,716	2,766	**924**	**1,498**	**2,421**
Total assets	5,801	11,141	16,941	6,288	12,154	18,442	6,881	12,300	19,181	7,617	13,036	20,652	**8,382**	**14,315**	**22,696**
Liabilities															
Deposits from customers [(c)]	4,391	4,789	9,180	4,800	5,273	10,073	5,312	5,437	10,750	5,809	5,918	11,727	**6,485**	**6,268**	**12,752**
Interbank borrowing	612	4,103	4,715	694	4,293	4,986	805	4,011	4,816	888	3,842	4,730	**829**	**4,653**	**5,482**
– Inside Hong Kong	310	602	912	328	688	1,016	455	743	1,198	533	740	1,273	**458**	**756**	**1,214**
– Outside Hong Kong	302	3,502	3,803	365	3,605	3,971	351	3,267	3,618	355	3,101	3,457	**371**	**3,897**	**4,268**
Negotiable certificates of deposit	222	616	838	213	631	845	240	592	832	265	525	790	**235**	**720**	**955**
Other liabilities	1,133	1,075	2,208	1,205	1,333	2,537	1,322	1,461	2,783	1,563	1,843	3,405	**1,618**	**1,889**	**3,507**
Total liabilities	6,357	10,584	16,941	6,912	11,530	18,442	7,680	11,501	19,181	8,525	12,128	20,652	**9,166**	**13,530**	**22,696**

Retail Banks

	2013			2014			2015			2016			**2017**		
(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	2,966	1,195	4,161	3,264	1,397	4,660	3,376	1,432	4,808	3,611	1,601	5,212	**4,171**	**1,819**	**5,991**
– Inside Hong Kong [(a)]	2,664	750	3,414	2,939	830	3,768	3,091	817	3,908	3,340	907	4,247	**3,819**	**995**	**4,814**
– Outside Hong Kong [(b)]	302	445	747	325	567	892	285	616	900	271	694	965	**352**	**825**	**1,176**
Interbank lending	207	1,764	1,972	236	2,099	2,335	303	1,643	1,946	372	1,683	2,054	**383**	**1,993**	**2,375**
– Inside Hong Kong	148	174	322	156	257	413	227	260	488	264	357	621	**246**	**384**	**630**
– Outside Hong Kong	59	1,590	1,649	80	1,843	1,923	75	1,383	1,458	108	1,325	1,433	**137**	**1,609**	**1,746**
Negotiable certificates of deposit (NCDs)	101	112	213	96	80	177	113	127	240	153	124	277	**119**	**123**	**242**
Negotiable debt instruments, other than NCDs	709	1,791	2,500	677	1,722	2,398	772	1,985	2,757	931	2,047	2,978	**995**	**2,036**	**3,031**
Other assets	580	722	1,302	671	814	1,485	781	935	1,716	771	1,217	1,989	**732**	**1,118**	**1,851**
Total assets	4,563	5,584	10,148	4,944	6,112	11,055	5,344	6,123	11,467	5,838	6,672	12,510	**6,399**	**7,090**	**13,489**
Liabilities															
Deposits from customers [(c)]	3,967	3,432	7,398	4,374	3,734	8,108	4,719	3,787	8,506	5,073	4,072	9,145	**5,704**	**4,356**	**10,061**
Interbank borrowing	238	768	1,006	294	698	992	329	586	915	365	535	900	**304**	**587**	**891**
– Inside Hong Kong	133	364	497	150	350	500	200	281	481	250	242	492	**193**	**248**	**440**
– Outside Hong Kong	105	404	510	144	347	491	130	304	434	115	293	408	**111**	**340**	**451**
Negotiable certificates of deposit	57	175	232	64	176	239	62	123	185	50	85	136	**46**	**125**	**171**
Other liabilities	915	596	1,511	956	760	1,716	1,058	803	1,861	1,235	1,094	2,329	**1,316**	**1,051**	**2,367**
Total liabilities	5,177	4,971	10,148	5,688	5,367	11,055	6,169	5,298	11,467	6,723	5,787	12,510	**7,370**	**6,120**	**13,489**

(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 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	2016	7,260	1,311	1,079	2,677	8,325	20,652
	2017	**8,212**	**1,554**	**1,109**	**3,035**	**8,785**	**22,696**
Deposits from Customers	2016	3,929	436	524	1,477	5,361	11,727
	2017	**4,620**	**390**	**550**	**1,566**	**5,626**	**12,752**
Loans to Customers	2016	3,132	526	230	1,030	3,105	8,023
	2017	**3,585**	**612**	**286**	**1,258**	**3,572**	**9,314**
Loans to Customers	2016	2,081	327	188	637	2,406	5,639
Inside Hong Kong [(a)]	**2017**	**2,414**	**368**	**235**	**729**	**2,768**	**6,514**
Loans to Customers	2016	1,051	199	42	393	699	2,384
Outside Hong Kong [(b)]	**2017**	**1,172**	**243**	**51**	**529**	**805**	**2,800**

(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	2016			2017		
(HK$ billion)	HK$	F/CY	Total	HK$	F/CY	Total
Assets						
Loans to customers	327	162	489	881	409	1,290
– Inside Hong Kong [(a)]	338	47	386	666	209	875
– Outside Hong Kong [(b)]	(12)	115	103	215	201	415
Interbank lending	159	(64)	95	(67)	829	762
– Inside Hong Kong	39	1	40	(75)	17	(57)
– Outside Hong Kong	120	(65)	55	7	812	819
All other assets	251	637	888	(49)	41	(8)
Total assets	736	736	1,471	765	1,279	2,044
Liabilities						
Deposits from customers [(c)]	497	481	978	676	350	1,025
Interbank borrowing	83	(169)	(86)	(59)	811	752
– Inside Hong Kong	78	(3)	75	(75)	15	(59)
– Outside Hong Kong	5	(166)	(161)	16	796	812
All other liabilities	265	314	580	25	241	267
Total liabilities	845	627	1,471	642	1,402	2,044
Net Interbank Borrowing/(Lending)	(76)	(105)	(181)	9	(18)	(9)
Net Customer Lending/(Borrowing)	(170)	(319)	(489)	205	60	265

Retail Banks

Increase/(Decrease) in	2016			2017		
(HK$ billion)	HK$	F/CY	Total	HK$	F/CY	Total
Assets						
Loans to customers	235	169	404	560	219	779
– Inside Hong Kong [(a)]	249	90	339	479	88	567
– Outside Hong Kong [(b)]	(14)	79	64	81	131	212
Interbank lending	69	39	108	11	310	321
– Inside Hong Kong	36	97	133	(18)	26	9
– Outside Hong Kong	33	(58)	(25)	29	284	312
All other assets	189	341	531	(10)	(111)	(121)
Total assets	494	549	1,043	562	418	979
Liabilities						
Deposits from customers [(c)]	354	285	639	631	285	916
Interbank borrowing	36	(50)	(15)	(62)	52	(10)
– Inside Hong Kong	50	(39)	11	(58)	6	(52)
– Outside Hong Kong	(14)	(11)	(25)	(4)	46	42
All other liabilities	164	254	419	77	(4)	73
Total liabilities	554	489	1,043	647	333	979
Net Interbank Borrowing/(Lending)	(33)	(90)	(123)	(73)	(258)	(331)
Net Customer Lending/(Borrowing)	(119)	(116)	(235)	(71)	(66)	(137)

(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	%
2013								
Licensed banks	3,561	2,823	6,384	99	4,380	4,772	9,152	100
Restricted licence banks	21	22	43	1	5	16	21	–
Deposit-taking companies	24	5	29	–	6	2	7	–
Total	3,606	2,851	6,457	100	4,391	4,789	9,180	100
2014								
Licensed banks	3,954	3,241	7,195	99	4,790	5,249	10,039	100
Restricted licence banks	22	29	51	1	5	22	27	–
Deposit-taking companies	24	6	31	–	5	2	7	–
Total	4,000	3,276	7,276	100	4,800	5,273	10,073	100
2015								
Licensed banks	4,118	3,342	7,460	99	5,299	5,420	10,720	100
Restricted licence banks	23	34	57	1	8	17	25	–
Deposit-taking companies	12	6	18	–	5	1	6	–
Total	4,153	3,382	7,535	100	5,312	5,437	10,750	100
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**

(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	2013		2014		2015		2016		**2017**	
(HK$ billion)	HK$	%	HK$	%	HK$	%	HK$	%	**HK$**	**%**
Hong Kong's visible trade	550	12	543	11	454	9	455	8	**494**	**8**
Manufacturing	216	5	266	5	244	5	247	4	**293**	**4**
Transport and transport equipment	247	5	261	5	275	5	295	5	**342**	**5**
Building, construction and property development, and investment	994	22	1,060	21	1,138	22	1,260	22	**1,470**	**23**
Wholesale and retail trade	418	9	473	9	444	8	413	7	**409**	**6**
Financial concerns (other than authorized institutions)	327	7	388	8	453	9	546	10	**821**	**13**
Individuals:										
– to purchase flats in the Home Ownership Scheme, the Private Sector Participation Scheme and the Tenants Purchase Scheme	42	1	42	1	41	1	43	1	**51**	**1**
– to purchase other residential properties	909	20	988	20	1,078	21	1,122	20	**1,208**	**19**
– other purposes	390	9	450	9	490	9	519	9	**618**	**9**
Others	437	10	588	12	637	12	740	13	**807**	**12**
Total [(a)]	4,529	100	5,058	100	5,254	100	5,639	100	**6,514**	**100**

Retail Banks

Sector	2013		2014		2015		2016		**2017**	
(HK$ billion)	HK$	%	HK$	%	HK$	%	HK$	%	**HK$**	**%**
Hong Kong's visible trade	349	10	316	8	294	8	312	7	**327**	**7**
Manufacturing	139	4	163	4	160	4	171	4	**201**	**4**
Transport and transport equipment	156	5	176	5	185	5	192	5	**213**	**4**
Building, construction and property development, and investment	786	23	829	22	856	22	949	22	**1,085**	**23**
Wholesale and retail trade	266	8	310	8	262	7	255	6	**245**	**5**
Financial concerns (other than authorized institutions)	169	5	203	5	224	6	284	7	**425**	**9**
Individuals:										
– to purchase flats in the Home Ownership Scheme, the Private Sector Participation Scheme and the Tenants Purchase Scheme	42	1	42	1	41	1	43	1	**51**	**1**
– to purchase other residential properties	896	26	976	26	1,070	27	1,115	26	**1,202**	**25**
– other purposes	320	9	362	10	398	10	430	10	**495**	**10**
Others	291	9	393	10	417	11	498	12	**571**	**12**
Total [(a)]	3,414	100	3,768	100	3,908	100	4,247	100	**4,814**	**100**

(a) Defined as loans for use in Hong Kong plus trade finance.
Figures may not add up to total because of rounding.

Table K Deposits from Customers

(HK$ billion)	All Authorized Institutions				Retail banks			
	Demand	Savings	Time	Total	Demand	Savings	Time	Total
Hong Kong Dollar [(a)]								
2013	686	2,077	1,628	4,391	610	2,048	1,309	3,967
2014	787	2,242	1,772	4,800	700	2,206	1,468	4,374
2015	904	2,490	1,918	5,312	803	2,436	1,480	4,719
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**
Foreign Currency								
2013	511	1,619	2,659	4,789	305	1,401	1,726	3,432
2014	592	1,723	2,957	5,273	349	1,514	1,871	3,734
2015	718	2,005	2,715	5,437	396	1,706	1,685	3,787
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**
Total								
2013	1,197	3,696	4,287	9,180	914	3,449	3,035	7,398
2014	1,379	3,965	4,729	10,073	1,049	3,721	3,339	8,108
2015	1,622	4,495	4,633	10,750	1,199	4,142	3,165	8,506
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**

(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)	2016 Net Claims on/ (Liabilities to) Banks Outside Hong Kong	2016 Net Claims on/ (Liabilities to) Non-Bank Customers Outside Hong Kong	2016 Total Net Claims/ (Liabilities)	2017 Net Claims on/ (Liabilities to) Banks Outside Hong Kong	2017 Net Claims on/ (Liabilities to) Non-Bank Customers Outside Hong Kong	2017 Total Net Claims/ (Liabilities)
Developed Countries	929	1,047	1,976	390	914	1,303
United States of America	239	412	651	103	383	486
Japan	213	342	555	61	339	401
Australia	214	61	275	245	88	333
Canada	51	55	106	50	42	92
Luxembourg	51	19	71	67	19	86
Germany	61	76	137	10	63	74
France	105	73	178	(6)	64	58
New Zealand	11	17	28	19	19	38
Ireland	(0)	19	18	(1)	24	22
Norway	4	7	11	4	7	11
Austria	(0)	1	0	5	1	5
Denmark	1	3	4	1	2	3
Belgium	(1)	2	1	1	3	3
Finland	1	4	5	1	2	3
Sweden	3	6	10	3	(1)	2
Malta	(0)	1	1	(1)	1	1
Portugal	(0)	(1)	(1)	0	(1)	(0)
Greece	(0)	(1)	(1)	(0)	(1)	(1)
Liechtenstein	2	(0)	1	(1)	(1)	(1)
Cyprus	0	(1)	(1)	(0)	(2)	(2)
Spain	(21)	(2)	(22)	(20)	(1)	(22)
United Kingdom	119	(61)	57	125	(151)	(26)
Italy	(32)	(3)	(35)	(30)	(2)	(31)
Switzerland	8	(5)	3	(83)	(7)	(90)
Netherlands	(99)	21	(78)	(164)	22	(143)
Others	(0)	0	0	(0)	1	1
Offshore centres	(111)	19	(92)	(85)	124	39
West Indies UK	(0)	69	69	0	152	152
Cayman Islands	(67)	51	(16)	(28)	60	33
Bahrain	16	1	17	12	4	15
Jersey	(0)	1	1	(0)	4	4
Panama	(1)	4	3	0	2	2
Isle of Man	(0)	0	0	(0)	1	1
Mauritius	4	0	5	(4)	3	(1)
Vanuatu	(0)	(1)	(1)	(0)	(1)	(1)
Barbados	0	(1)	(1)	0	(1)	(1)
Bermuda	0	(1)	(1)	(0)	(2)	(2)
Bahamas	(4)	2	(2)	(6)	1	(5)
Samoa	(0)	(25)	(25)	(0)	(27)	(27)
Singapore	34	(77)	(43)	39	(87)	(48)
Macao SAR	(94)	2	(92)	(97)	14	(84)
Others	0	(5)	(5)	(0)	0	(0)
Developing Europe	1	(13)	(11)	(1)	(65)	(65)
Turkey	9	1	10	5	0	5
Hungary	2	(0)	1	2	(0)	2
Russia	(0)	(5)	(5)	(0)	(64)	(64)
Others	(9)	(9)	(18)	(8)	(1)	(9)
Developing Latin America and Caribbean	23	9	32	27	16	42
Venezuela	12	0	12	16	1	17
Brazil	8	2	10	8	2	10
Mexico	0	5	6	1	5	6
Peru	1	5	6	0	4	4
Argentina	1	(1)	(0)	1	(0)	0
Chile	0	(5)	(4)	1	(2)	(1)
Others	0	2	2	0	6	6

Table L Geographical Breakdown of Net External Claims/(Liabilities) of All Authorized Institutions (continued)

Region/Economy [a] (HK$ billion)	2016 Net Claims on/ (Liabilities to) Banks Outside Hong Kong	2016 Net Claims on/ (Liabilities to) Non-Bank Customers Outside Hong Kong	2016 Total Net Claims/ (Liabilities)	**2017 Net Claims on/ (Liabilities to) Banks Outside Hong Kong**	**2017 Net Claims on/ (Liabilities to) Non-Bank Customers Outside Hong Kong**	**2017 Total Net Claims/ (Liabilities)**
Developing Africa and Middle East	60	(48)	12	**38**	**19**	**57**
United Arab Emirates	67	15	83	**35**	**30**	**65**
Qatar	14	10	24	**7**	**24**	**31**
Saudi Arabia	(11)	19	8	**(1)**	**20**	**18**
South Africa	(3)	(2)	(5)	**5**	**1**	**6**
Oman	0	2	2	**(0)**	**3**	**2**
Egypt	0	1	2	**1**	**1**	**2**
Kenya	(0)	0	0	**(1)**	**0**	**(0)**
Israel	0	(2)	(1)	**1**	**(2)**	**(0)**
Algeria	(0)	(0)	(1)	**(0)**	**(0)**	**(1)**
Iran	(0)	(0)	(0)	**(0)**	**(1)**	**(1)**
Ghana	(1)	0	(1)	**(1)**	**(0)**	**(1)**
Liberia	0	(3)	(3)	**0**	**(2)**	**(2)**
Kuwait	(2)	(13)	(15)	**(2)**	**(11)**	**(13)**
Nigeria	(2)	0	(2)	**(2)**	**(14)**	**(17)**
Others	(2)	(76)	(78)	**(4)**	**(29)**	**(33)**
Developing Asia and Pacific	792	(632)	160	**1,376**	**(464)**	**912**
Mainland China	393	(368)	25	**904**	**(183)**	**721**
Republic of Korea	200	10	209	**219**	**30**	**248**
India	6	90	96	**(9)**	**86**	**77**
Indonesia	11	17	28	**13**	**18**	**31**
Malaysia	18	(13)	5	**31**	**(10)**	**21**
Bangladesh	12	(2)	10	**15**	**(1)**	**14**
Sri Lanka	9	2	11	**9**	**5**	**14**
Pakistan	6	(1)	5	**5**	**(2)**	**3**
Laos	1	0	1	**3**	**(0)**	**3**
Mongolia	0	2	2	**(0)**	**2**	**1**
Papua New Guinea	0	1	1	**(0)**	**1**	**1**
Myanmar	(0)	(0)	(0)	**(1)**	**1**	**0**
Maldives	0	(1)	(0)	**0**	**(1)**	**(1)**
Brunei Darussalam	(1)	(3)	(4)	**(1)**	**(1)**	**(2)**
Cambodia	(2)	1	(1)	**(4)**	**0**	**(4)**
Thailand	48	(52)	(4)	**57**	**(61)**	**(4)**
Vietnam	(8)	2	(5)	**(14)**	**8**	**(6)**
Kazakhstan	0	(5)	(5)	**(6)**	**(6)**	**(12)**
Nepal	(10)	(0)	(10)	**(13)**	**(1)**	**(14)**
Philippines	(21)	(9)	(30)	**(15)**	**(18)**	**(33)**
Taiwan	133	(309)	(177)	**171**	**(344)**	**(172)**
Others	(3)	5	2	**12**	**12**	**24**
International organisations	0	102	102	**0**	**74**	**74**
Overall Total	1,695	484	2,179	**1,746**	**618**	**2,363**

(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

ADB	–	Asian Development Bank
AEoI	–	Automatic Exchange of Information
AIIB	–	Asian Infrastructure Investment Bank
AIs	–	Authorized institutions
AML/CFT	–	Anti-money laundering and counter-terrorist financing
AMBs	–	Approved money brokers
AMLO	–	Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) Ordinance
API	–	Application Programming Interface
ASEAN	–	Association of Southeast Asian Nations
BDR	–	Banking (Disclosure) Rules
BLR	–	Best lending rate
BO	–	Banking Ordinance
BP	–	Backing Portfolio
BRI	–	Belt and Road Initiative
CBC	–	Currency Board Sub-Committee
CBCM	–	Cross-Border Crisis Management
CDD	–	Customer due diligence
CFI	–	Cybersecurity Fortification Initiative
CFR	–	Core Funding Ratio
CHATS	–	Clearing House Automated Transfer System
CLS	–	Continuous Linked Settlement
CMU	–	Central Moneymarkets Unit
CPMI	–	Committee on Payments and Market Infrastructures
CoP	–	Code of Practice
CSDs	–	Central Securities Depositories
CTCs	–	Corporate treasury centres
CUs	–	Convertibility Undertakings
DLT	–	Distributed ledger technology
DPS	–	Deposit Protection Scheme
DSR	–	Debt servicing ratio
D-SIBs	–	Domestic systemically important banks
DvP	–	Delivery-versus-Payment
EBPP	–	Electronic Bill Presentment and Payment
ECF	–	Enhanced Competency Framework
EFAC	–	Exchange Fund Advisory Committee
EFBNs	–	Exchange Fund Bills and Notes
EMEAP	–	Executives' Meeting of East Asia-Pacific Central Banks
FATF	–	Financial Action Task Force
FFO	–	Fintech Facilitation Office
FIRO	–	Financial Institutions (Resolution) Ordinance
FMIs	–	Financial market infrastructures
FPS	–	Faster Payment System
FS	–	Financial Secretary
FSB	–	Financial Stability Board
FSS	–	Fintech Supervisory Sandbox
G20	–	Group of Twenty
GDP	–	Gross Domestic Product
GSC	–	Governance Sub-Committee
G-SIBs	–	Global systemically important banks
GTCN	–	Global Trade Connectivity Network
HIBOR	–	Hong Kong Interbank Offered Rate
HKAB	–	Hong Kong Association of Banks
HKFRSs	–	Hong Kong Financial Reporting Standards
HKIMR	–	Hong Kong Institute for Monetary Research
HKMA	–	Hong Kong Monetary Authority
HKTFP	–	Hong Kong Trade Finance Platform
HKTR	–	Hong Kong Trade Repository
IA	–	Insurance Authority *(Banking Stability chapter)*
IA	–	Internal Audit *(Corporate Functions chapter)*
IFC	–	International Finance Corporation
IFFO	–	Infrastructure Financing Facilitation Office
IFRS 9	–	International Financial Reporting Standard 9
IMF	–	International Monetary Fund
INED	–	Independent non-executive director
IOSCO	–	International Organization of Securities Commissions
IP	–	Investment Portfolio
IPO	–	Initial public offering
IRB	–	Internal ratings-based
ISDA	–	International Swaps and Derivatives Association, Inc.
KYCU	–	Know-Your-Customer Utility
LAC	–	Loss-absorbing capacity
LCR	–	Liquidity Coverage Ratio
LegCo	–	Legislative Council
LMR	–	Liquidity Maintenance Ratio
LERS	–	Linked Exchange Rate System
LTGP	–	Long-Term Growth Portfolio
LTV	–	Loan-to-value
MAS	–	Monetary Authority of Singapore
MCPP	–	Managed Co-lending Portfolio Program
ML/TF	–	Money laundering and terrorist financing
MPF	–	Mandatory Provident Fund
NCCD	–	Non-centrally cleared over-the-counter derivatives
NCDs	–	Negotiable certificates of deposit
NDIs	–	Negotiable debt instruments
NLTI	–	Non-investment-linked long-term insurance
NSFR	–	Net Stable Funding Ratio
OFDS	–	People's Government of Shenzhen Municipality
OTC	–	Over-the-counter
PBoC	–	People's Bank of China
PFMI	–	Principles for Financial Market Infrastructures
PSSVFO	–	Payment Systems and Stored Value Facilities Ordinance
PvP	–	Payment-versus-payment
PWMA	–	Private Wealth Management Association
RIs	–	Registered Institutions
RMB	–	Renminbi
RPSs	–	Retail payment systems
RQFII	–	Renminbi Qualified Foreign Institutional Investor
RTGS	–	Real Time Gross Settlement
SFC	–	Securities and Futures Commission
SFO	–	Securities and Futures Ordinance
SME	–	Small and medium-sized enterprise
SPM	–	Supervisory Policy Manual
SRC	–	Supervisory and Regulatory Co-operation
SVF	–	Stored value facility
TLAC	–	Total loss-absorbing capacity

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:

HKMA Quarterly Bulletin (online publication)
(published in March, June, September and December each year)

Monthly Statistical Bulletin (online publication)
(published in two batches on the third and sixth business days of each month)

HKMA Background Brief No. 1 – Hong Kong's Linked Exchange Rate System (Second Edition)

HKMA Background Brief No. 2 – Banking Supervision in Hong Kong (Second Edition)

HKMA Background Brief No. 3 – Mandate and Governance of the Hong Kong Monetary Authority

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HKMA Background Brief No. 5 – Reserves Management in Hong Kong

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HKMA publications may be purchased or obtained from the **HKMA Information Centre**, 55th Floor, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. The HKMA Information Centre consists of an exhibition area and a library. The Centre introduces the work of the HKMA and houses books, journals and other texts on central banking and related subjects. The Centre is open to the public six days a week.

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The main texts of the regular briefings by the HKMA to the Legislative Council Panel on Financial Affairs are available online.

The HKMA website contains detailed and extensive information on the whole range of the HKMA's work. This information includes press releases, statistics, speeches, guidelines and circulars, research reports, and features on topical issues.

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