

International Financial Centre

The global economic and financial environment was fraught with challenges in 2015, calling for closer international collaboration and communication to maintain stability. During the year, the HKMA continued to actively participate in international and regional forums while sparing no effort in raising Hong Kong's competitiveness as an international financial centre, including enhancing our financial infrastructure, optimising the regulatory and tax regime, and capitalising on the internationalisation of the renminbi to further develop offshore renminbi business. Hong Kong's strong economic fundamentals and robust fiscal performance continued to be recognised by credit rating agencies with Standard & Poor's maintaining its top-rated AAA rating for Hong Kong.

OVERVIEW

The HKMA actively contributes to international discussions on issues of significance to global and regional financial stability. In July, it assumed co-chairmanship of the Financial Stability Board¹ Regional Consultative Group for Asia (FSB RCG(A)) for a two-year period. The Group's aim is to promote interaction between FSB members and non-members on policy initiatives, encourage implementation of financial reforms and facilitate the exchange of views on financial stability issues. The HKMA continued to work closely with the ASEAN+3² authorities to strengthen the operations of the ASEAN+3 Macroeconomic Research Office (AMRO) — which has been upgraded to an international organisation — to monitor and analyse regional economies and support decision-making of the Chiang Mai Initiative Multilateralisation (CMIM)³.

During the year, Hong Kong's offshore renminbi pool and bond issuance experienced some contraction due to a number of market factors. However the market continued to function orderly, and renminbi trade settlement, bank lending and foreign exchange turnover maintained steady growth. In addition, the growing renminbi business conducted in and through Hong Kong contributed to the recognition of the renminbi by the International Monetary Fund (IMF) as a freely usable currency. The IMF's decision to include it in the Special Drawing Right (SDR) currency basket will add impetus to the internationalisation of the renminbi as well as the further development of the offshore market in Hong Kong.

The safe and efficient operation of Hong Kong's financial infrastructure and its continued development play a significant role in reinforcing the competitive edge of Hong Kong as an international financial centre and the global offshore renminbi business hub. The turnover of the renminbi payment system in Hong Kong hit new highs in 2015, while the trade repository for over-the-counter (OTC) derivatives continued to support entities to report their OTC derivatives transactions as required under the new OTC derivatives market regulatory regime, which was introduced in July.

Hong Kong's financial infrastructure was further enhanced by the HKMA in 2015 with new components and services, including the successful launch of the e-Cheque service in December, which means that over 150 banks are now capable of receiving and processing e-Cheques from their customers through the Internet and mobile channels. The electronic bill presentment and payment (EBPP) service, which was launched in 2013, continued to see growth in merchant participation in 2015. In July, the Central Moneymarkets Unit (CMU) launched a service under its Fund Order Routing Service to support the implementation of the Mainland – Hong Kong Mutual Recognition of Funds (MRF). And, the regulatory framework for retail payment products and services was improved with the commencement in November of the Payment Systems and Stored Value Facilities Ordinance (PSSVFO). Under the PSSVFO, the HKMA is empowered to implement a mandatory licensing regime for multi-purpose stored value facilities and perform relevant supervision and enforcement functions, as well as designating important retail payment systems to ensure their safe and efficient operation under prudential regulation.

¹ The Financial Stability Board (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.

² ASEAN+3 comprises 10 ASEAN member countries (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam), together with Mainland China, Japan and South Korea.

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.

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REVIEW OF 2015

International and regional co-operation

With increased connections among global financial markets, the HKMA proactively fosters co-operation with other jurisdictions in promoting sustainable economic growth and financial system stability through international and regional forums including the FSB, the Bank for International Settlements (BIS) and the Asia-Pacific Economic Co-operation (APEC). The HKMA also continues to implement global financial regulatory reforms, including the recommendations of the G20, to help strengthen the resilience of the global financial system.

The HKMA became a co-chair of the FSB RCG(A) in July and hosted its ninth meeting in Hong Kong in October. The RCG(A) serves as an important platform for FSB members and non-FSB members to communicate and co-operate on financial stability issues. Senior representatives from finance ministries, central banks and financial regulators of 16 Asian jurisdictions attended the meeting to discuss risks facing the region, the implications of increasing asset management activities, misconduct risk and experience with deposit insurance schemes. The HKMA also co-chaired a workshop on macroprudential policies in Hong Kong in August. The workshop was organised by the Committee on the Global Financial System (CGFS)⁴, and attended by representatives from 18 central banks from around the world. Participants shared their experiences in macroprudential policies, focusing on the calibration and evaluation of tools, their interaction with monetary policy, and possible spillover effects. The HKMA also co-hosted a conference with the Bank of England and the IMF, featuring discussions on the challenges that central banks and other policymakers face in choosing the optimal mix of monetary, macroprudential and microprudential policies. The conference was attended by over a hundred participants, including representatives from academia, central banks and international financial institutions.

⁴ The CGFS is one of the standing committees supported by the BIS with a mandate to monitor and examine broad issues relating to financial markets and the global financial system.

Promoting monetary and financial stability in Asia

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. As a co-ordinator of the macro-surveillance work for the Monetary and Financial Stability Committee established under the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)⁵, 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. As Chair of the EMEAP Working Group on Payment and Settlement Systems, the HKMA worked closely with the Deputy Chair to co-ordinate the Group's effort in sharing experiences and exchanging information on risk management, oversight, standards and best practices, and developments in domestic and cross-border payment and settlement systems. It also led the Working Group's sub-group on cross-border co-operation and development. The HKMA hosted meetings of the EMEAP/BIS Forum on Foreign Exchange Markets and the EMEAP Working Group on Financial Markets (WGFM) in Hong Kong in June. Attended by representatives from 17 authorities from the region and major economies, the meetings reviewed the latest developments in financial markets and financial regulatory reforms.

Following the signing of the AMRO Agreement by Hong Kong and the ASEAN+3 authorities last year, AMRO was upgraded to an international organisation in February 2016 to support its pivotal role under the enhanced CMIM.

Hong Kong's credit ratings

The HKMA continued to maintain close dialogue with international credit rating agencies to present a balanced assessment of Hong Kong's economic performance and fiscal strength. These efforts contributed to the affirmation of Hong Kong's credit ratings by all major credit rating agencies in 2015. Standard & Poor's affirmed its highest AAA rating for Hong Kong, reflecting the

⁵ 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.

agency's recognition of Hong Kong's above-average growth prospects for a high-income economy, sizable fiscal reserves, consistently healthy fiscal performance and strong net external asset position. Moody's Investors Service and Fitch Ratings also maintained Hong Kong's ratings at Aa1 and AA+ respectively, just one notch below triple-A.

Development of Hong Kong as the offshore renminbi business centre

In 2015, market factors had an impact on Hong Kong's renminbi pool. At the end of the year, outstanding renminbi customer deposits and certificates of deposit stood at RMB1,010 billion, as compared with RMB1,158 billion a year ago (Chart 1). Offshore renminbi bond issuance moderated amid declining interest rates in the onshore market. As a result, issuance of renminbi bonds in Hong Kong dropped to RMB75 billion. On the other hand, renminbi trade settlement transactions handled by banks in Hong Kong expanded by 9% to RMB6,833 billion. The outstanding amount of renminbi bank loans also increased by 58% year-on-year to RMB297 billion (Chart 2). Average daily turnover in the renminbi Real Time Gross Settlement (RTGS) system increased to RMB947 billion, up 29% from 2014. At the same time, the

offshore renminbi foreign exchange market saw further growth in Hong Kong, with survey results indicating a daily turnover of some US\$93 billion equivalent at the end of April 2015, an increase of 88% from April 2013 when the last BIS Triennial Survey was conducted. Hong Kong remained the largest offshore renminbi business hub with a market of considerable depth and breadth. Another significant development reinforcing this position was the implementation of the MRF initiative in July, which has expanded Hong Kong's renminbi product offering.

The HKMA's policy initiative to expand channels for cross-border renminbi fund flows and its joint efforts with the industry to enhance Hong Kong's renminbi financial platform continued to bear fruit. In June, the People's Bank of China (PBoC) announced that offshore renminbi business clearing banks and participating banks would be allowed to conduct repo transactions in the onshore interbank bond market and remit proceeds offshore, to facilitate renminbi liquidity management by banks in the offshore market. In September, the PBoC relaxed the rules on cross-border renminbi cash pooling, enabling more multinational corporations to conduct intra-group cash transfers under streamlined arrangements. The Mainland authorities also granted foreign central banks,

Chart 1 Renminbi customer deposits and certificates of deposit

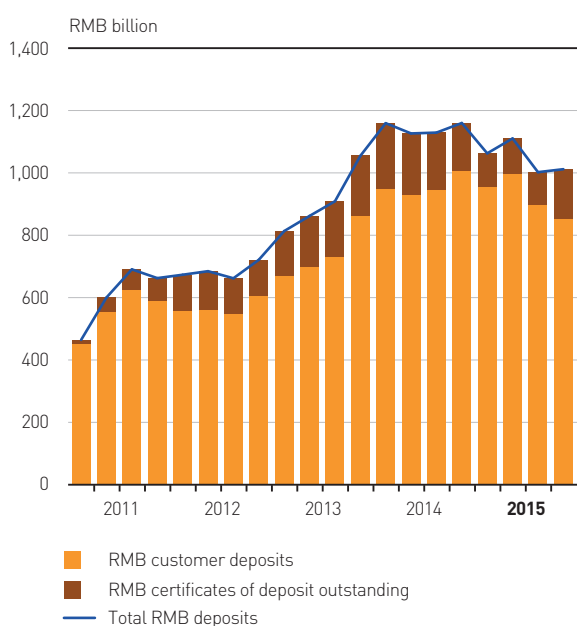
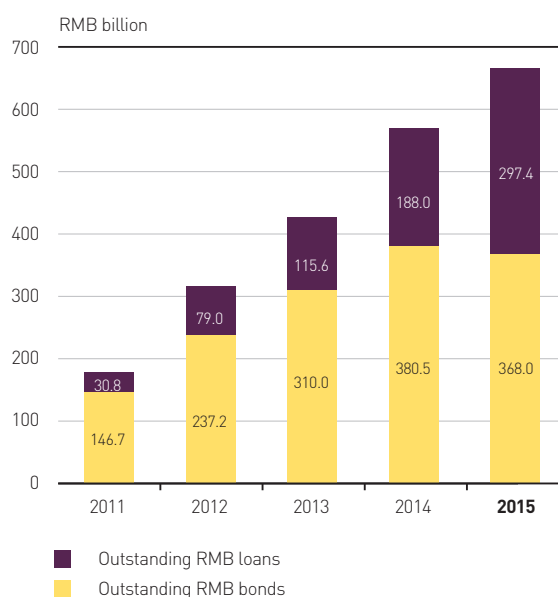


Chart 2 Renminbi financing activities



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international financial institutions and sovereign wealth funds wider access to the onshore interbank bond market in July. They further opened up the Mainland's foreign exchange market to these institutions in September.

On 30 November, the IMF announced its decision to include the renminbi in the SDR currency basket with effect from 1 October 2016. The decision affirms the renminbi's status as a freely usable currency, and further promotes confidence in the use of the renminbi for global transactions. As an international financial centre and the global offshore renminbi business hub, Hong Kong will benefit from new business opportunities arising from the further internationalisation of the renminbi and the Mainland's enhanced connection with the global economic and financial systems.

Hong Kong continued to reinforce its collaboration on renminbi business with other jurisdictions throughout the year. The HKMA co-hosted the third RMB Trade and Investment Dialogue with Australia and the fifth RMB Business Forum with London, and worked with Malaysia and Thailand for the second time in facilitating private sector discussions on renminbi business. Through these initiatives, banks in Hong Kong strengthened their renminbi business flows and linkages with other markets, which will bring more renminbi business to Hong Kong. The HKMA also stepped up its marketing efforts to promote the wider use of renminbi in trade, investment and financing among corporations and institutions through participation in industry events in Hong Kong and in overseas markets including Canada, Japan and Africa.



Deputy Chief Executive of the HKMA, Mr Eddie Yue, speaks at a seminar during the fifth meeting of Hong Kong-London RMB Forum on 11 December 2015.

CEPA

A new agreement to achieve basic liberalisation of trade in services between Mainland China and Hong Kong was signed in November under the framework of the Closer Economic Partnership Arrangement (CEPA). The agreement extends most of the pilot liberalisation measures introduced in Guangdong in 2014 nationwide. By according national treatment, in principle, to Hong Kong banks, the new agreement is expected to provide these banks with more policy certainty and greater flexibility when conducting business in Mainland China.

Training

The HKMA continued to provide training programmes for officials from the PBoC, the State Administration of Foreign Exchange and the China Banking Regulatory Commission. In addition to programmes dealing with central banking and general risk management, topics included consumer protection, credit reference, monetary and collateral management, financial soundness indicators analysis, and systemic risk monitoring. Ad hoc training sessions were also conducted for delegations from overseas banking and law enforcement agencies.

Government Bond Programme

During the year, the HKMA arranged eight tenders of institutional government bonds amounting to HK\$20.4 billion. By the end of 2015, the total amount of outstanding institutional bonds was HK\$68.9 billion.

Following the Government's 2015-16 Budget, the HKMA arranged in August the issuance of HK\$10 billion 3-year inflation-linked retail bonds (iBonds) to Hong Kong residents. It was the fifth consecutive series of iBonds since 2011. The latest issue attracted a record 597,000-plus applications with application monies exceeding HK\$35 billion. The amount of retail bonds outstanding at the end of the year was HK\$30 billion.

Development of Islamic finance

To stimulate further development of the Islamic bond (sukuk) market in Hong Kong, the HKMA, acting as the Government's representative, issued the second US\$1 billion 5-year Government sukuk in June 2015 under the Government Bond Programme.

The sukuk attracted orders of US\$2 billion from a diverse group of 49 international institutional investors. The offer was priced at 1.894%, which gave the Government a cheaper funding cost than the 2.005% for the inaugural sukuk issue in 2014. Demonstrating the flexibility of Hong Kong's issuance platform, the sukuk was in the Wakalah structure, making Hong Kong the first AAA-rated government sukuk issuer to adopt this structure.

Throughout the year, the HKMA continued to raise market awareness and knowledge of Islamic finance by organising and participating in Islamic finance conferences and seminars, and sharing its sukuk issuance experience with enterprises with funding needs.

Promotion of asset management business

To promote Hong Kong's asset management industry and bolster its position as a leading asset management centre, the HKMA continues to work with the Government and other regulators to improve the international competitiveness of Hong Kong's financial markets and provide a more favourable tax and regulatory environment for these businesses. In doing this, the HKMA maintained contact with the industry and relevant government agencies to assist in the formulation, review and implementation of policies to further develop Hong Kong's platform as an asset management hub. During the year, it assisted the Government in enacting the Inland Revenue (Amendment) (No. 2) Ordinance 2015, which extends the profits tax exemption for offshore funds to private equity funds, in order to attract private equity fund managers to expand their business in Hong Kong.

The HKMA visited asset owners, asset managers and service providers in major financial centres around the world to highlight the latest developments in Hong Kong and the region, and to learn more about their business plans for Asia. The feedback from these meetings

provides important insight into the development or further refinement of policies to enhance Hong Kong's financial services platform.

OTC derivatives market regulation

Following the passage of the Securities and Futures (Amendment) Ordinance 2014, the HKMA and the Securities and Futures Commission (SFC) have been developing the detailed rules for implementing the regulatory regime for the OTC derivatives market in Hong Kong. The regime aims to reduce systemic risk and enhance transparency in the OTC derivatives market. The first stage of the implementation took effect in July 2015 and covered the mandatory reporting and related record keeping obligations. Subsequently, a consultation paper was released in September on the detailed proposals for introducing mandatory clearing, and expanding the product scope of mandatory reporting.

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 closely monitoring international regulatory developments. Contact was maintained with overseas regulators, through both bilateral and multilateral channels, to discuss cross-border issues arising from the implementation of the OTC derivatives reforms.

Development of corporate treasury centres (CTCs)

To attract multinational and Mainland enterprises to establish CTCs in Hong Kong for their group companies, the Financial Secretary announced in the 2015-16 Budget that the Inland Revenue Ordinance would be amended to allow, under specified conditions, interest deductions under profits tax for CTCs, and reduce profits tax for specified treasury activities by 50%. To implement the initiative, the HKMA worked with the Financial Services and the Treasury Bureau and the Inland Revenue Department to prepare the draft legislation and consulted the industry, including the Corporate Treasury Development Working Group under the Treasury Markets Association. The Inland Revenue (Amendment) (No. 4) Bill 2015 was introduced into the Legislative Council in December.

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In addition to the legislative work, the HKMA has been actively promoting the benefits of Hong Kong as a regional location for CTCs to Mainland and global corporations, banks, and service providers. By the end of the year, it had met with over 170 corporations, financial institutions and industry associations.

Treasury Markets Association (TMA)

The HKMA collaborates and provides necessary strategic support to the TMA in developing Hong Kong's treasury markets. The TMA's aims are to raise market professionalism, facilitate market development, encourage the evolution of new markets and products, and strengthen Hong Kong's ties with Mainland China and with financial centres around the world. At the end of 2015, the Association had 1,521 Individual Members and 82 Institutional Members from banks, investment houses, asset managers, insurance companies, money brokers, financial information services providers, exchanges and large corporations. During the year, the TMA was involved in a number of important tasks including:

- **Reforming the determination mechanism for the Association's financial benchmarks** — In light of the latest international recommendations on financial benchmark reforms, the Association considered and consulted the market on developing a more transactions-based determination mechanism for Hong Kong's foreign exchange benchmarks. It also initiated work on studying the feasibility of reforming Hong Kong's major interest rate benchmarks along the lines of the latest international recommendations, having regard to local market conditions.
- **Strengthening the governance of existing financial benchmarks and developing new ones** — The TMA continuously refines the administration and control frameworks for its interest rate and foreign exchange benchmarks. During the year, it developed and issued additional policies on consultation, conflicts of interest, whistleblowing, and complaints. After consulting the industry, the TMA also launched the Renminbi Bond Indicative Quotes to replace the Renminbi Bond fixings, in an effort to promote the continuous price transparency of the market.

- **Enhancing the conduct and professionalism of market participants** — The TMA worked with foreign exchange committees of other major markets to develop new "Global Preamble: Codes of Best Practices and Shared Global Principles", featuring detailed and globally harmonised guidance on personal conduct, confidentiality and market conduct, and execution practices for market participants. The Global Preamble was issued in March 2015.
- **Co-organising the Treasury Markets Summit with the HKMA** — The Summit was held in September and focused on the evolution of the renminbi into an investment currency, the critical roles played by CTCs in the "Belt and Road" development, and the enhancement of market competence in the face of market and regulatory developments.



Deputy Chief Executive of the HKMA, Mr Peter Pang (middle), officiates at the Treasury Markets Summit 2015 on 16 September 2015.

Hong Kong's financial infrastructure

The HKMA plays a key role in developing Hong Kong's financial infrastructure to maintain our status as a regional hub for payment and settlement of funds and securities. Each year, significant effort and resources are devoted to building a robust and efficient multi-currency, multi-dimensional platform, with extensive domestic and overseas system linkages (Chart 3).

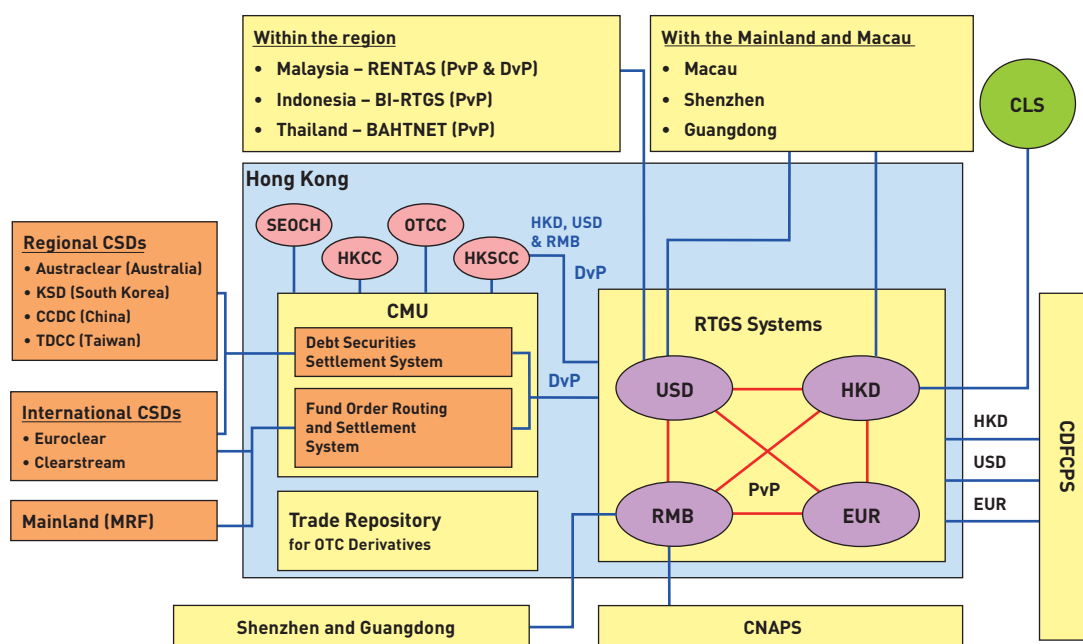
Development highlights over the years include the establishment of RTGS systems for the Hong Kong dollar, the US dollar, the euro and the renminbi, and the development of bilateral links between the local RTGS systems and overseas RTGS systems, and between the CMU and regional and international Central Securities Depositories (CSDs), such as Euroclear, Clearstream, and the depositories in Australia, South Korea, Mainland China and Taiwan.

In response to industry demands and international developments, new components have been added to broaden the scope and increase the depth of Hong Kong's financial infrastructure. For example, an order routing and settlement system for investment funds was introduced

in 2009, which was expanded in 2015 to support the MRF between Mainland China and Hong Kong. And, a trade repository for OTC derivatives was introduced in 2012.

The infrastructure has been implemented in compliance with relevant international standards and best practices. Disclosure reports for Hong Kong's RTGS systems, the CMU and the trade repository for OTC derivatives have been published since July 2014, October 2014 and September 2015 respectively, and updated periodically as appropriate, in accordance with the disclosure framework under the international principles on financial market infrastructures jointly issued by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO).

Chart 3 Hong Kong's multi-currency payment and settlement infrastructure



BAHTNET - Bank of Thailand Real Time Gross Settlement (Thailand's baht RTGS system)
 BI-RTGS - Bank Indonesia Real Time Gross Settlement (Indonesia's rupiah RTGS system)
 CCDC - China Central Depository & Clearing Co., Ltd. (settlement system for fixed income securities in China)
 CDFPCS - China's Domestic Foreign Currency Payment System (RTGS system for foreign currency payment in China)
 CLS - Continuous Linked Settlement (global multi-currency 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 and Co Ltd (operator of the clearing and settlement system for shares)
 KSD - Korean Securities Depository (Korea's central securities depository)
 MRF - Mutual Recognition of Funds
 OTCC - OTC Clearing Hong Kong Limited (central counterparty providing clearing and settlement for OTC derivatives)
 RENTAS - Real Time Electronic Transfer of Funds and Securities (Malaysia's ringgit RTGS system)
 SEOCH - SEHK Options Clearing House Ltd (central counterparty providing clearing and settlement for options)
 TDCC - Taiwan Depository and Clearing Corporation (Taiwan's securities settlement system)

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

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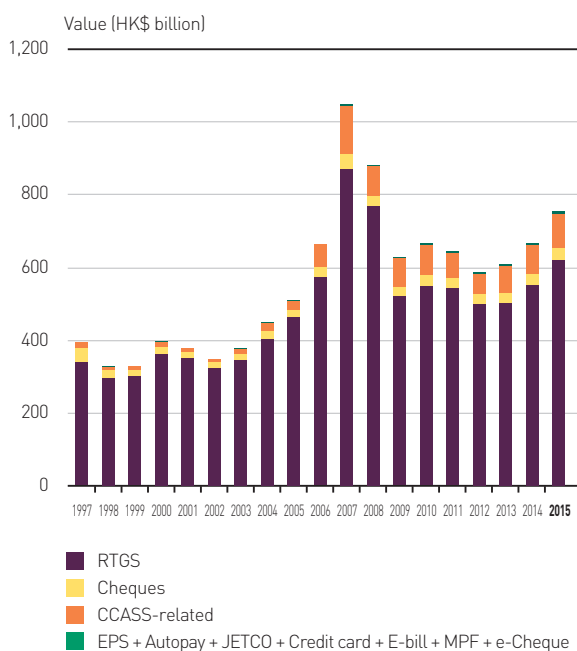
Hong Kong dollar RTGS system

The Hong Kong dollar Clearing House Automated Transfer System (CHATS), which operates on an RTGS basis, is responsible for clearing all Hong Kong dollar interbank payments. It continued to run smoothly and efficiently in 2015. It has a direct link with the CMU to provide delivery-versus-payment (DvP) settlement services. Hong Kong Interbank Clearing Limited (HKICL), the operator of the RTGS systems, was established in 1995 and is owned jointly by the HKMA and the Hong Kong Association of Banks (HKAB). In 2015, the HKICL processed a daily average of HK\$627 billion in CHATS transactions (28,125 items), compared with HK\$558 billion (26,134 items) in 2014.

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

Banks can use their Exchange Fund Bills and Notes (EFBN) to obtain interest-free intraday liquidity through intraday repo transactions with the HKMA to settle their interbank payments.

Chart 4 Hong Kong dollar RTGS system average daily turnover



Foreign currency RTGS systems in Hong Kong

The US dollar, euro and renminbi RTGS systems all operated smoothly. Amid the expansion of renminbi business in Hong Kong, the average daily turnover of the renminbi RTGS system hit record highs in 2015, rising to a daily average of RMB947 billion, up 29% from the 2014 daily average of RMB733 billion. Indeed, the momentum accelerated in the latter part of the year with the daily average reaching a high of RMB1,173 billion in September before settling at RMB963 billion in December.

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 in other parts of 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 the transactions processed during the extended window grew significantly from RMB22.3 billion in 2014 to RMB43.2 billion in 2015. This has come on the back of the development of renminbi business globally and the continuous momentum in the internationalisation of the renminbi.

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

Chart 5 US dollar RTGS system average daily turnover

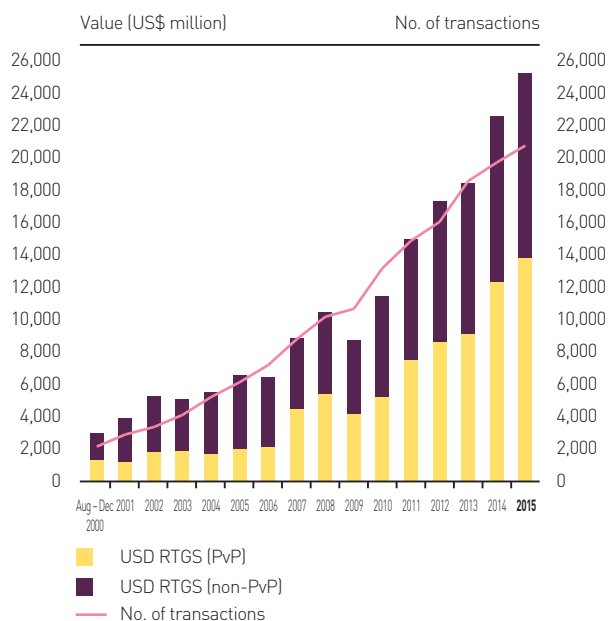


Chart 6 Euro RTGS system average daily turnover

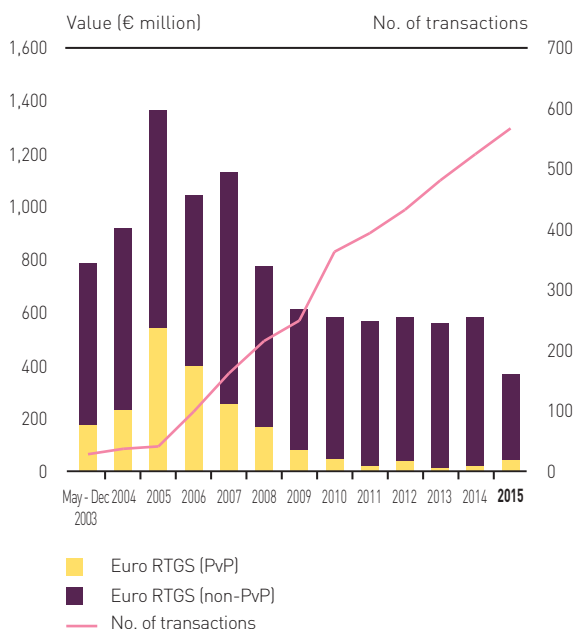


Chart 7 Renminbi RTGS system average daily turnover

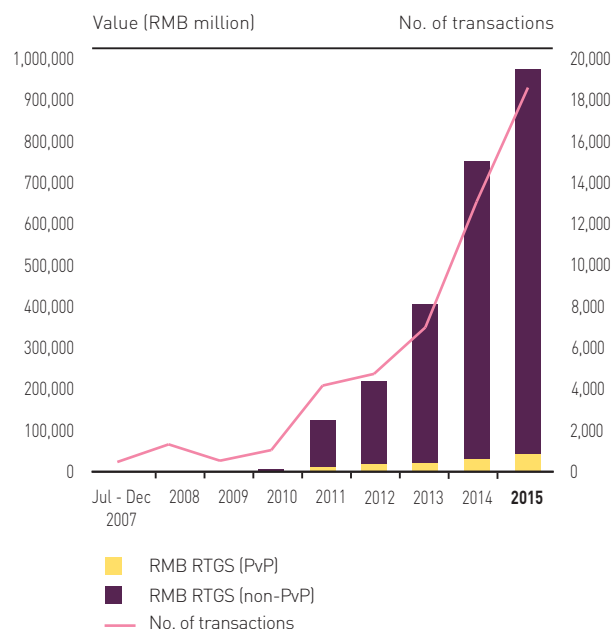


Table 1 Foreign currency RTGS systems

RTGS systems	Launch date	Settlement institution or Clearing Bank	Number of participants at the end of 2015	Average daily turnover in 2015	Average daily transactions in 2015
US dollar RTGS system	August 2000	The Hongkong and Shanghai Banking Corporation Limited	Direct: 100 Indirect: 119	US\$24.7 billion	20,372
Euro RTGS system	April 2003	Standard Chartered Bank (Hong Kong) Limited	Direct: 37 Indirect: 18	€371.0 million	572
Renminbi RTGS system	June 2007	Bank of China (Hong Kong) Limited	Direct: 219	RMB947.0 billion	18,091

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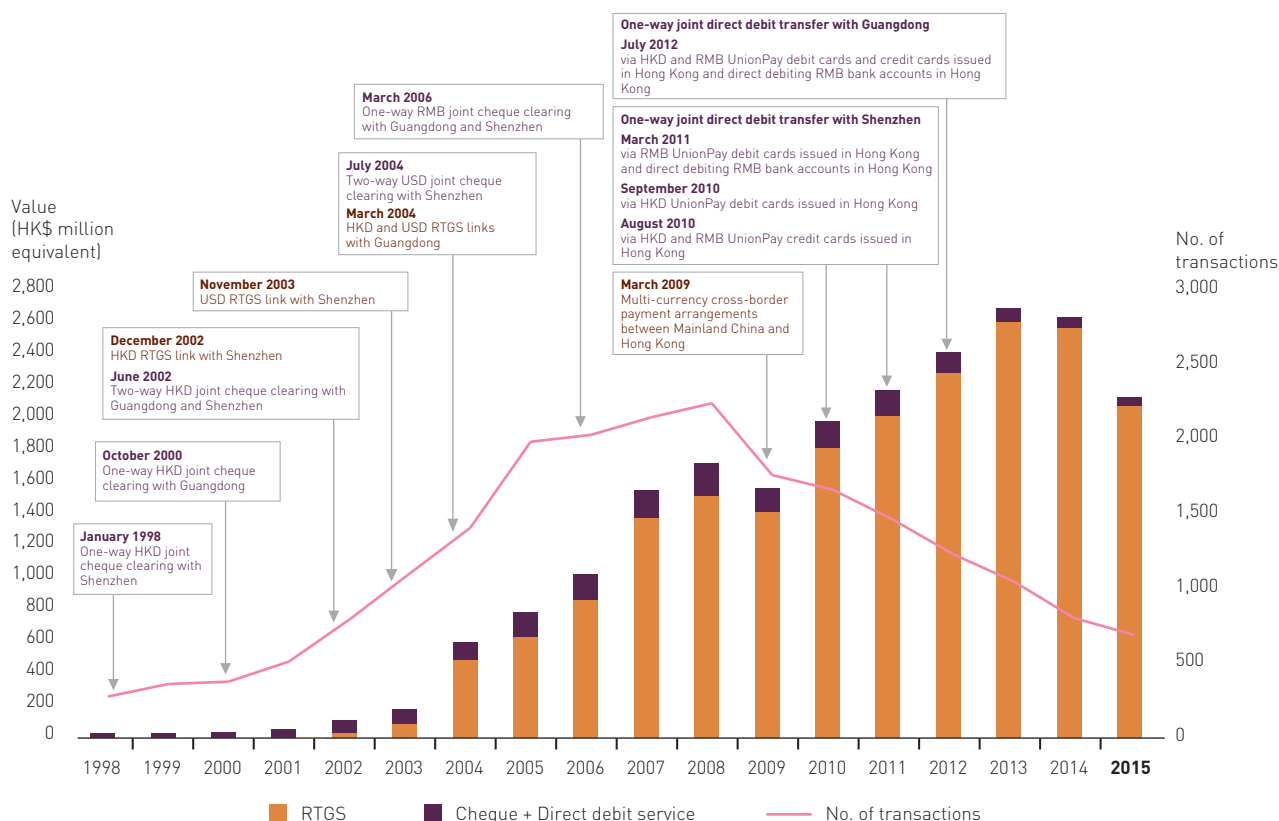
Payment-versus-payment (PvP)

PvP is a mechanism for settling a foreign exchange transaction to ensure that payments in the two currencies involved are settled simultaneously. Within 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 from time-zone differences (known as Herstatt risk). In 2015, the transaction value of Hong Kong dollar, US dollar, euro and renminbi-related PvP transactions amounted, respectively, to about HK\$5,105 billion, US\$3,203 billion, €9 billion and RMB9,756 billion.

Payment links with Mainland China

The HKMA continues to work closely with Mainland authorities in providing efficient cross-border payment links to meet the growing demands. In 2015, the average daily turnover handled by the various system links was equivalent to HK\$2.1 billion, including the RTGS cross-border links with the Mainland's Domestic Foreign Currency Payment Systems launched in 2009 (Chart 8). The RTGS system links with Shenzhen and Guangdong handled more than 17,000 transactions during the year, with a total value equivalent to HK\$481 billion. The links allow cross-border payments in Hong Kong dollars and US dollars to be settled efficiently and safely between banks in Hong Kong and their counterparts in Shenzhen and Guangdong.

Chart 8 Average daily turnover in cross-border arrangements with Mainland China



The two-way joint cheque-clearing facilities processed about 140,000 Hong Kong dollar and US dollar cheques in 2015, with a value equivalent to HK\$14 billion. The facilities shorten the clearing time for cheques drawn on banks in Hong Kong and presented in Shenzhen and Guangdong. Since March 2006, the joint cheque-clearing facilities have been expanded to cover renminbi cheques drawn on banks in Hong Kong, and presented in Shenzhen and Guangdong for consumer spending. In 2015, renminbi cheques with a total value equivalent to around HK\$4 million were cleared.

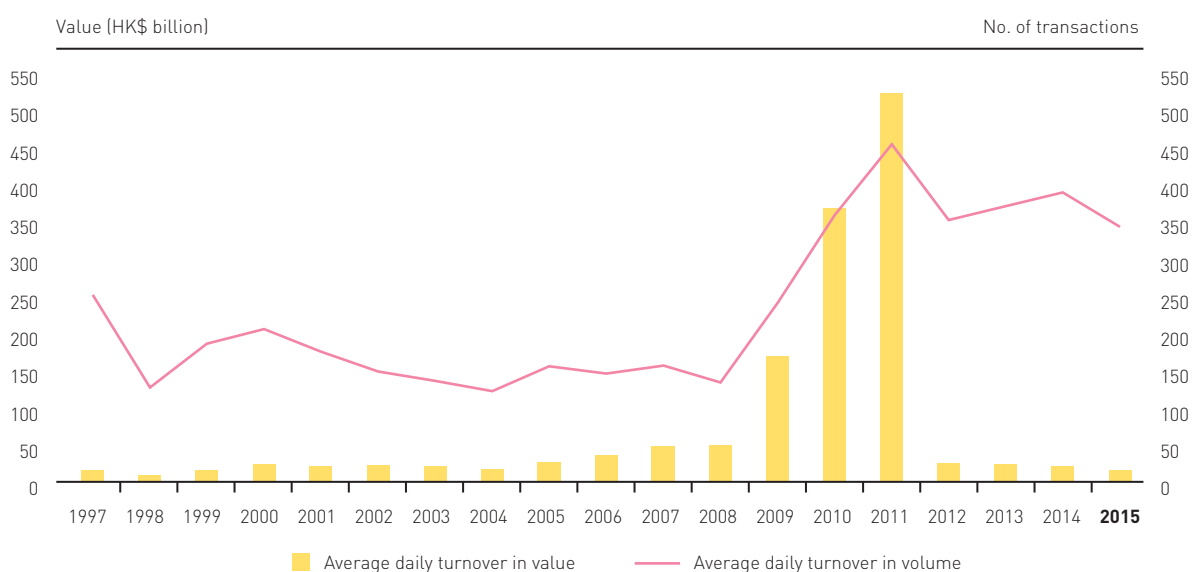
Payment links with Macau

The one-way joint clearing facility for Hong Kong dollar cheques between Hong Kong and Macau was launched in 2007 and a similar facility for US dollar cheques was launched the following year. The facilities have reduced the time required for clearing Hong Kong dollar and US dollar cheques issued by banks in Hong Kong and presented in Macau from four or five days to two days. In 2015, Hong Kong dollar cheques with a total value of about HK\$20 billion and US dollar cheques with a total value of about US\$31 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 and regional CSDs, investors outside Hong Kong can hold and settle securities lodged with the CMU, while Hong Kong investors are able to hold and settle foreign securities held with CSDs outside Hong Kong. In 2015, the CMU processed an average daily value of HK\$16 billion (349 transactions) in secondary market transactions (Chart 9). Among the debt securities lodged with the CMU at the end of the year, the outstanding amount of EFBNs was HK\$828 billion and the total amount of other debt securities was equivalent to HK\$1,040 billion, of which renminbi debt securities amounted to RMB354 billion.

Chart 9 CMU secondary market turnover



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Financial infrastructure development

The HKMA completed a number of projects in 2015 to improve the safety and efficiency of Hong Kong's financial infrastructure, and to capture new business opportunities.

New messaging service for Hong Kong's renminbi RTGS system

To reinforce Hong Kong's role as the global offshore renminbi business hub and to improve the efficiency of payments made by worldwide indirect bank users (Global Users) in Hong Kong's renminbi RTGS system, particularly during the extended operating hours from 6:30 p.m. to 5:00 a.m. the next day, a new messaging service was introduced in September to enable the Global Users to directly send payment instructions to the renminbi RTGS system without the need to go through their correspondent direct participants.

New support for renminbi repo transactions

Enhancements to the CMU system were implemented in late 2015 to further assist eligible CMU participants to perform renminbi intraday and overnight repo transactions with the HKMA and initiate such transactions through CMU member terminals.

Assisting cross-border investment fund transactions

The SFC and the China Securities Regulatory Commission (CSRC) signed the Memorandum of Regulatory Co-operation for the MRF between Mainland China and Hong Kong on 22 May 2015. The Memorandum provides a framework for mutual recognition of funds between the CSRC and the SFC to enable these recognised funds to be offered to the public in both markets. Leveraging on the existing financial infrastructure in Hong Kong and Mainland China, the HKMA, together with the relevant Mainland institutions, jointly developed the first cross-border infrastructure and network linkages to facilitate the processing of cross-border investment fund transactions under the MRF arrangement. The enhanced CMU fund service plays an important role in improving the efficient and effective implementation of the MRF arrangement and lays a foundation for the continued development of the MRF initiative. This, in turn, will enhance Hong Kong's role as a leading asset management centre in the region.

CMU Central Bank Placement Co-ordinating Window

The HKMA's CMU Central Bank Placement Co-ordinating Window was used twice by the Chinese Ministry of Finance in 2015, on 20 May and 26 November, for a placement of RMB2 billion offshore renminbi sovereign bonds on each issuance. Both placements were over-subscribed from overseas central banks and monetary authorities. The Ministry of Finance, also through the HKMA's CMU bond tendering platform, issued two batches of offshore renminbi sovereign bonds to institutional investors on 20 May and 26 November, worth RMB12 billion and RMB10 billion respectively. The HKMA's assistance in promoting the acceptance of renminbi sovereign bonds among a diverse group of investors for the offshore renminbi bond market further supported the role of Hong Kong as the global hub for offshore renminbi business.

Trade repository for OTC derivatives

The continuing system development of the trade repository for OTC derivatives is on schedule with the next phase, which completes the product coverage and copes with requirements of local and international regulatory authorities, targeted for launch in the first half of 2016. Technical training workshops, system testing sessions and regulation briefings were held during the year in support of those entities required to report their OTC derivatives transactions under the new OTC derivatives market regulatory regime introduced in July 2015. The HKMA also participated in international discussions and working groups on reporting standards for trade repositories to keep abreast of relevant developments and ensure the local trade repository will meet international standards and best practices.

Retail payment initiatives

Throughout the year, the HKMA continued its efforts to improve Hong Kong's retail payment infrastructure. The initiatives and their progress are summarised below.

Implementation of the electronic bill presentment and payment (EBPP) system

Banks have continued to recruit merchants to join the EBPP service. At the end of 2015, 19 banks and 148 merchants, including the Government's Water Supplies Department and Rating and Valuation Department, had enrolled in the service, and these numbers are expected to grow steadily. To enhance public awareness of the EBPP service, the HKMA collaborated with the HKAB to develop a new series of publicity materials, including TV and radio Announcements in the Public Interest (APIs), brochures and other electronic materials.

Implementation of e-Cheque

The e-Cheque service was launched on 7 December, and by the end of the year nine banks had started offering an e-Cheque issuance service to their customers through the Internet banking platform. In addition, all banks are capable of accepting e-Cheque deposits from their customers through Internet banking, the mobile banking platform, or the e-Cheque Drop Box service provided by the HKICL. So far, the operations of the e-Cheque infrastructure have been smooth and robust. To help the public better understand the new service, the HKMA and the HKAB jointly developed and distributed a range of educational materials, including TV and radio APIs, poster and electronic brochure.

International Financial Centre

Near Field Communication⁶ (NFC) mobile payment

By the end of 2015, six banks, one stored value card issuer and one mobile network operator had launched the NFC mobile payment service, taking into account the Best Practice for NFC Mobile Payment standards jointly developed by the HKMA and the HKAB.

New regulatory regime for stored value facilities (SVF) and retail payment systems (RPS)

The Clearing and Settlement Systems (Amendment) Ordinance 2015 commenced operation on 13 November. It amended the Clearing and Settlement Systems Ordinance (CSSO) and the Banking Ordinance to introduce a new regulatory framework for SVF and RPS in Hong Kong. Upon enactment of the amendment Ordinance, the CSSO was retitled PSSVFO, under which the HKMA is empowered to implement a mandatory licensing regime for multi-purpose SVF and perform relevant supervision and enforcement functions, among other things. A one-year transition period is provided for in the PSSVFO, after which all existing and new SVF issuers would have to obtain an SVF licence from the HKMA before they can continue to operate. To facilitate the licence application process, the HKMA issued an “Explanatory Note on Licensing for Stored Value Facilities” setting out its policies and approach in implementing the SVF licensing regime. Industry briefings and one-on-one meetings were held with prospective applicants to explain the licensing requirements and policy intent. In addition, the HKMA is empowered under the PSSVFO to designate important RPS in Hong Kong to ensure their operations are safe and efficient. An “Explanatory Note on Designation of Retail Payment Systems” setting out the HKMA’s policy towards key regulatory issues and

designation procedures applicable to RPS was provided to the industry for comment in November. The finalised document is expected to be available in the first half of 2016. Meanwhile, the retail payment industry continued to adopt a self-regulatory approach by issuing code of practice to promote the safety and efficiency of RPS. The Code of Practice for Payment Card Scheme Operators, issued by eight credit and debit card scheme operators and endorsed by the HKMA in 2006, sets out principles covering operational reliability, data and network security, and the efficiency and transparency of payment card operations in Hong Kong. The HKMA monitors the operators’ compliance with the Code, and operators are required to perform an annual self-assessment and report to the HKMA any incident which may have material and adverse impact on Hong Kong cardholders. In the annual self-assessment report covering activities in 2015, the eight card scheme operators reported full compliance with the Code. Since June 2010, the HKMA has published quarterly aggregate payment card data collected from the card operators to promote transparency of the payment card industry.

Cyber security programme for financial market infrastructure operators and banks

The resilience of financial market infrastructure and financial and banking systems to cyber attacks has become a high priority on the agendas of regulatory authorities and financial institutions in a number of major international financial centres. In tandem with this, the HKMA has been working with the banking industry and relevant government departments to develop a comprehensive cyber security programme to strengthen the overall cyber resilience of the financial market

⁶ NFC is a short-range wireless connectivity technology that provides intuitive, simple, and safe communication between electronic devices. Communication occurs when two NFC-compatible devices are brought within four centimetres of one another.

infrastructure and the financial and banking systems of Hong Kong. The programme comprises three components: (i) a cyber risk assessment model; (ii) a cyber intelligence sharing platform; and (iii) a certification scheme and training programme for cyber security professionals.

PLANS FOR 2016 AND BEYOND

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

International and regional co-operation

Monetary policies worldwide are expected to continue to diverge amid uneven economic growth. The global financial system is expected to undergo adjustments after years of unprecedented ultra-loose monetary conditions. Meanwhile, activity in emerging market economies (EMEs) is slowing. This, coupled with tightening global liquidity conditions, increases the risk of capital outflows from EMEs and financial market volatility. In the face of these challenges, there is a need for improved cross-border co-operation in market surveillance and a strengthening in the resilience of financial systems. To this end, the HKMA will continue to participate in international and regional forums to promote financial stability.

Development of Hong Kong as the global offshore renminbi business hub

The internationalisation of the renminbi, the Mainland's continued opening up of the capital account, and national policies including the "Belt and Road" initiative, are expected to provide substantial headroom for Hong Kong's offshore renminbi business to grow. The HKMA will work with the financial sector to seize the opportunities. We will continue to engage Mainland authorities to explore more avenues for cross-border renminbi fund flows and closer financial co-operation. The HKMA will consider further expansion of Hong Kong's renminbi business platform and will strengthen renminbi business links with other economies. We will also seek better synergy in our promotion efforts for renminbi and other businesses under the overarching theme of Hong Kong's status as an international financial centre.

Market development

The HKMA will continue to participate in developing the local debt market, and in implementing the Government Bond Programme to broaden its investor base and enhance its liquidity. It will maintain close relations with the private sector and industry associations to expand the range and sophistication of market products and services. Further steps will be taken to expand Islamic finance in Hong Kong by encouraging product development, raising market awareness and knowledge of Islamic finance, and forging closer ties with key Islamic financial centres and international Islamic financial organisations. The HKMA will also continue working with other agencies to explore ways to further enhance the competitiveness of Hong Kong's financial sector, particularly in the promotion of Hong Kong as an international asset management hub and regional destination for CTCs and as the global offshore renminbi business hub.

International Financial Centre

OTC derivatives market regulation

The HKMA will continue to work with the SFC towards developing the detailed rules for implementing other aspects of the regulatory regime for the OTC derivatives market. Subject to the legislative process, it is expected the first phase of mandatory clearing will commence in 2016 and the second phase of mandatory reporting in 2017. The HKMA will closely monitor and participate in regulatory developments in the international arena through its participation in various international forums, including the OTC Derivatives Working Group of the FSB and the OTC Derivatives Regulators' Forum.

Financial infrastructure

Interbank intraday liquidity facility for Hong Kong's RTGS systems

The RTGS systems are being upgraded to support the launch of a new interbank intraday liquidity facility in each system in early 2016. This will improve the liquidity management of direct participating banks in Hong Kong's RTGS systems. The liquidity facility will allow registered participating banks to provide intraday loans to other participants more efficiently.

Centralised corporate action platform

The development of a centralised corporate action platform in the CMU system progressed as planned. The platform supports corporate action announcements (for example, offer of call options) and the execution of custody instructions (such as voting) of debt securities lodged with the CMU. It helps both the issuers and investors to process corporate action events of CMU securities in a more effective and efficient manner. The platform is scheduled for completion in the second half of 2016.

Trade repository for OTC derivatives

The next phase of the trade repository system, covering derivatives products in the remaining asset classes, is targeted for launch in the first half of 2016. Other new features will also be added in light of local and international regulatory requirements, for example, to support the reporting of valuation information, and the sharing and aggregation of data.

Retail payment initiatives

Further steps will be taken to improve Hong Kong's retail payment infrastructure. Under the EBPP service, the HKMA will explore, with a system operator in Mainland China, measures to enable Hong Kong residents to pay bills issued by Mainland merchants. We will also explore ways of expanding the application of the e-Cheque service in two areas — cross-border transactions and the development of e-commerce. Both the HKMA and the HKAB will continue to support the educational campaign to enhance public awareness of the service.

New regulatory regime for SVF and RPS in Hong Kong

With the commencement of the PSSVFO in November 2015, the HKMA will focus on the implementation of the necessary regulatory regime in 2016. We are processing SVF licence applications and will facilitate a smooth transition upon the expiry of the one year transitional period on 12 November 2016. To facilitate licensees' compliance with the regulatory requirements, the HKMA will issue supervisory guidelines to explain how it will exercise its powers and functions in implementing the regime. For RPS, the HKMA will begin determining whether any existing operators should be designated, and developing relevant supervisory guidelines on the designation and regulatory requirements applicable to the RPS. A series of educational programmes will be launched to promote public awareness of the new regulatory regime. The programme will also inform the public about the mechanism for handling complaints and disputes in order to protect the interests of users.

Cyber security programme for financial market infrastructure operators and banks

The HKMA will continue working with the banking industry and relevant Government departments on the implementation of the cyber security programme to improve the resilience of Hong Kong's financial market infrastructure and financial and banking systems. The cyber risk assessment model and the cyber intelligence sharing platform are scheduled for completion in 2016. The first round of professional examinations for the certification scheme is expected to be held before the end of 2016.