Banking Stability

The Hong Kong banking system remained sound in 2018, notwithstanding increased uncertainties in the global economy and the financial markets. During the year, the HKMA continued to focus its supervisory efforts on reviewing the effectiveness of authorized institutions' liquidity and credit risk management systems. In view of growing cybersecurity threats and increasing adoption of fintech in the banking industry, the HKMA stepped up the supervision of authorized institutions' technology risk management and operational resilience. The HKMA also published a revised *Guideline on Authorization of Virtual Banks* in May, and began to process applications for authorization as virtual banks. On conduct supervision, the HKMA took further steps to enhance the supervision of authorized institutions' sales practices for investment and insurance products, facilitate access to barrier-free banking services to customers with disabilities, and promote a customer-centric corporate culture.

As financial crime has become more sophisticated and globalised, the HKMA continues to strengthen the resilience of Hong Kong's anti-money laundering and counter-financing of terrorism regime through harnessing new technology and risk-based approaches. Substantial progress was made on the local implementation of international regulatory standards, including capital adequacy standards, disclosure standards, liquidity standards and large exposure limits. The HKMA's interface with the banking industry was enhanced to ensure an appropriate balance between supervisory effectiveness and market development.

Meanwhile, the HKMA continued its work to ensure there is a credible resolution regime for authorized institutions, including introducing rules on minimum loss-absorbing capacity requirements to address a significant impediment to authorized institutions' resolvability.

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 banks in Hong Kong. It is tasked with the authorization of licensed banks, restricted licence banks and deposit-taking companies in Hong Kong, which are collectively known as authorized institutions (AIs). The Monetary Authority is also responsible for the designation and oversight of certain financial market infrastructures (FMIs).

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

REVIEW OF 2018

Overview of supervisory activities

In 2018, 187 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 well as their business strategies in response to fintech development. As part of the HKMA's continued efforts to promote stronger risk governance, 27 meetings were held with the boards of directors or board-level committees of AIs. The HKMA also followed up AIs' progress in adopting its guidance on corporate governance. Twenty-eight tripartite meetings among the HKMA, AIs and their external auditors were held.

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. A total of 392 on-site examinations and thematic reviews were conducted during the year. Credit risk management remained a key focus of these examinations and reviews. Other major focuses were technology risk and operational risk management, as well as anti-money laundering and counter-financing of terrorism (AML/CFT) controls. The HKMA also increased the number of on-site examinations and thematic reviews targeted at liquidity and market risk management and at the implementation of the Basel capital adequacy framework. 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 2018.

Table 1 Summary of supervisory activities

	2018	2017
1 Off-site reviews and prudential interviews	**187**	192
2 Meetings with boards of directors or board-level committees of AIs	**27**	30
3 Tripartite meetings	**28**	27
4 On-site examinations	**100**	121
Credit risk management and controls	0	8
Technology risk and operational risk management	23	21
AML/CFT controls	20	20
Liquidity risk management	2	12
Implementation of Basel capital adequacy framework	8	5
Capital planning	3	3
Market risk, counterparty credit risk and treasury activities	8	8
Securities, investment products, insurance and MPF-related businesses	18	18
Deposit Protection Scheme-related representation	12	12
Overseas examinations	6	14
5 Thematic reviews	**292**	280
Credit risk management and controls	91	84
Technology risk and operational risk management	70	61
AML/CFT controls	44	55
Implementation of Basel capital adequacy framework	5	5
Sale of investment products	9	3
Consumer protection	42	60
Liquidity risk	21	8
Market risk	10	4
Total	**634**	650

Supervision of credit risk

Credit growth and asset quality

Credit growth moderated in 2018. Total loans grew by 4.4% in 2018, compared with a growth of 16.1% in 2017 (Table 2). Trade finance recorded a decline of 7.6% in 2018. The slowdown in loan growth was mainly due to a reduction in credit demand given the increasingly uncertain global economic and trade environment.

Table 2 Growth in loans and advances

% change	2018	2017
Total loans and advances	**4.4**	16.1
Of which:		
– for use in Hong Kong	**6.5**	16.1
– trade finance	**-7.6**	8.7
– for use outside Hong Kong	**2.0**	17.5

Mainland-related lending grew by 1.4% to HK$4,249 billion at the end of 2018. The growth was slower than that in 2017 (Table 3).

Table 3 Growth in Mainland-related lending

% change	2018	2017
Total Mainland-related lending	**1.4**	17.5
Of which:		
– Mainland-related lending (excluding trade finance)	**2.7**	17.9
– trade finance	**-14.9**	13.5

The asset quality of AIs remained healthy in 2018. Retail banks' classified loan ratio edged down from 0.56% at the end of 2017 to 0.50% at the end of 2018, well below the long-run historical average of 2.1% since 2000. For the banking industry as a whole, the classified loan ratio decreased from 0.68% to 0.55%. As for Mainland-related lending, retail banks' classified loan ratio of such lending edged down to 0.63% in 2018 from 0.75%. For the banking industry as a whole, the ratio decreased to 0.54% from 0.67% a year ago.

Retail banks' classified loan ratio

All loans: **0.50%**

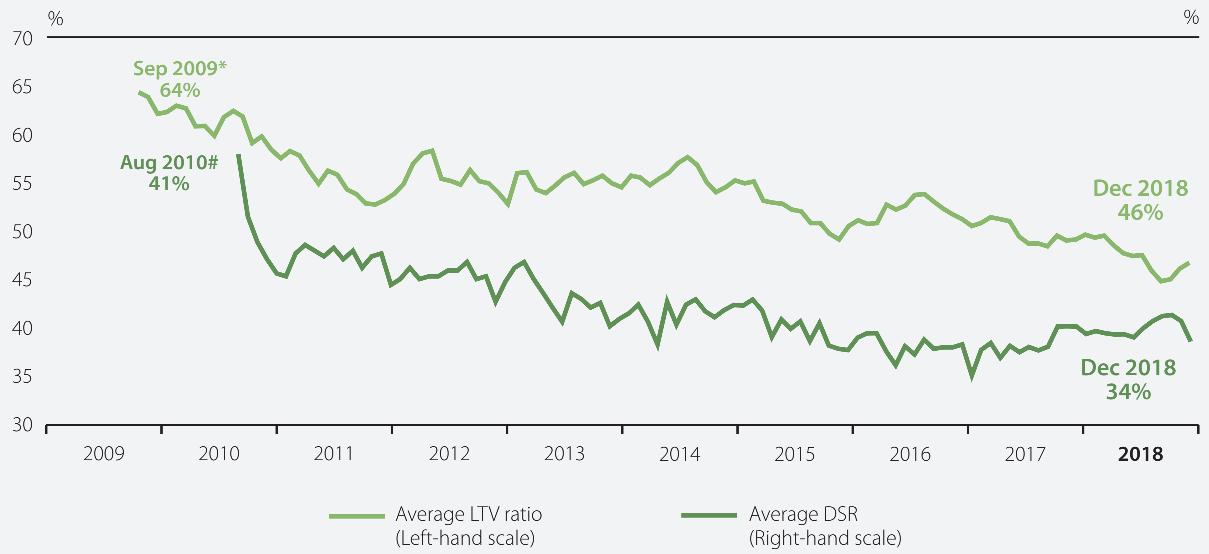
Mainland-related lending: **0.63%**

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 HKMA strengthened the surveillance framework for corporate credit risk by taking a more proactive approach in understanding the background and structure of large corporates. Targeted thematic examinations were conducted, focusing on key credit risk management controls such as new loan underwriting and risk management for lending to large corporates, the loan classification and provisioning system, the credit risk governance framework, risk management for lending to property developers, asset-backed financing, and insurance premium financing.

Property mortgage lending

Residential property prices reached a historical peak in July 2018, but showed signs of moderation in the second half of the year. The eight rounds of countercyclical macro-prudential measures, introduced by the HKMA since October 2009, have strengthened the resilience of the Hong Kong banking sector to cope with a possible downturn in the local property market. The average loan-to-value (LTV) ratio of new residential mortgage loans fell to 46% in December 2018 from 64% in September 2009, before the countercyclical measures were first introduced. The average debt servicing ratio (DSR) also decreased to 34% in December 2018 from 41% in August 2010, when a cap on DSR was first introduced (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

Banking Stability

Supervision of operational and technology risk

Technology risk in the banking industry remained elevated. The HKMA rolled out the Cyber Resilience Assessment Framework (C-RAF) in 2016. Thirty AIs covered in the first phase of the implementation, including all major banks, completed the three stages of the assessment, namely the Inherent Risk Assessment, the Maturity Assessment, and, where appropriate, the intelligence-led Cyber Attack Simulation Testing (iCAST). The exercise assisted AIs in identifying areas of operation that require enhancement and taking remediation actions to strengthen their cyber defence. Meanwhile, the HKMA formulated a timeline for the second and third phases of the implementation to cover the remaining AIs. During the year, the HKMA conducted on-site examinations focusing on AIs' cybersecurity controls, outsourcing arrangements, and information technology governance.

Smart Banking

The HKMA continued to work with the banking industry on the seven Smart Banking initiatives, unveiled in September 2017, to promote fintech development in Hong Kong. On the supervisory front, a revised *Guideline on Authorization of Virtual Banks* was published in May. Under the Banking Made Easy initiative, the HKMA streamlined regulatory requirements in relation to remote onboarding, online finance, and online wealth management. These enhancements have made it easier for banks to offer better user experience in the online banking environment. The scope of the Banking Made Easy initiative was expanded in September to facilitate the adoption of regulatory technology (Regtech) by banks. Three new workstreams focusing on surveillance technologies for AML/CFT, Regtech for prudential risk management and compliance, and machine-readable regulations were created.

HKMA Deputy Chief Executive, Mr Arthur Yuen, speaks at the HKIB Annual Banking Conference 2018 on Regtech in the Smart Banking Era.

Supervision of liquidity and market risks

Amid the continued normalisation of US monetary policy, the HKMA stepped up its supervisory efforts to ensure that AIs managed their liquidity risk prudently and effectively. A round of thematic reviews was conducted to assess AIs' preparedness for a possible tightening of US dollar liquidity and their internal liquidity stress testing capability. The HKMA also monitored AIs' compliance with the new Net Stable Funding Ratio (NSFR) requirement, which came into effect in January.

In addition, the HKMA reviewed AIs' market risk management for their debt securities portfolios. Thematic on-site examinations were undertaken to evaluate AIs' compliance with new international standards on treasury activities, including the Foreign Exchange Global Code, and the margining and risk mitigation standards on non-centrally cleared over-the-counter (OTC) derivatives.

Combating money laundering and terrorist financing (ML/TF)

Like other international financial centres, the banking sector of Hong Kong faces high ML threats that reflect the increased globalisation and sophistication of financial services, as highlighted in the *Hong Kong Money Laundering and Terrorist Financing Risk Assessment Report* published by the Government in April. Threats arise from domestic activities and, to a greater extent, external activities. These external activities include illicit funds from external corruption, fraud perpetrated by transnational syndicates, tax evasion, and sanctions-related risks arising from Hong Kong's status as a payment and trading hub. With the HKMA's contribution, the Government's AML/CFT policy statement sets out the response to these threats with the objective being to increase the resilience of the AML/CFT regime while also attracting and facilitating bona fide businesses.

The Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) (Amendment) Ordinance 2018 came into operation on 1 March. It introduced amendments for AIs, such as flexibility in measures permitted to verify a customer's identity, which are important in the light of technological development in the methods used by AIs for customer onboarding. The new legislation also extends AML/CFT obligations to solicitors, accountants, estate agents and trust or company service providers, which will strengthen the overall AML/CFT regime. These legislative amendments, together with amendments made to the Companies Ordinance to enhance transparency of corporate beneficial ownership, assist AIs in their AML/CFT work.

To consolidate and further enhance communication on the HKMA's overall policy and supervisory approach to AML/CFT, the HKMA published a Supervisory Policy Manual (SPM) "Supervisory Approach on Anti-Money Laundering and Counter-Financing of Terrorism" and an updated *Guideline on Anti-Money Laundering and Counter-Financing of Terrorism (for Authorized Institutions)* in October to align with changes made in the legislation, support better implementation of the risk-based approach and reduce barriers to the use of technology in AIs' AML/CFT systems.

Information sharing played an increasingly important role in the AML/CFT system through the active participation of the banking sector, supported by the HKMA and the Hong Kong Association of Banks (HKAB), in the Fraud and Money Laundering Intelligence Taskforce (FMLIT), which has already shown concrete results[2]. A review of the FMLIT pilot initiative commenced in late 2018 and will be concluded in early 2019.

During the year, the HKMA further stepped up its supervisory efforts over AIs' AML/CFT systems. In particular, the surveillance of AIs' ML/TF risks was enhanced through a crime data return introduced in April, which feeds into the overall assessment of AIs' ML/TF risks. In 2018, 20 on-site examinations and 44 off-site reviews were conducted. Among them, targeted thematic reviews were conducted on private banking, as well as sanctions screening using an international technology firm specialising in the testing of the effectiveness and efficiency of automated screening systems. The experience and observations drawn from the latter thematic review were shared with the industry through circulars and seminars in April.

Internationally, the HKMA continues to participate actively in AML/CFT forums. It has played a major role in working with relevant government bureaux and departments and law enforcement agencies in providing input to the assessment of the effectiveness of Hong Kong's AML/CFT regime by the Financial Action Task Force (FATF) and Asia/Pacific Group on Money Laundering (APG) as part of the fourth round of mutual evaluations, the field visit for which took place in November.

2 Since launch, up to end-August, FMLIT has delivered intelligence-led suspicious transaction reports, leading to 96 arrests, HK$22 million restrained and HK$33 million in losses prevented.

Banking Stability

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 other 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. During the year, the HKMA conducted 18 on-site examinations, nine thematic reviews and 13 analyses of surveys and returns of AIs, covering the sale of investment products, settlement of securities transactions, safe custody of client securities, and the sale of non-investment-linked long-term insurance (NLTI) products and MPF products.

To minimise regulatory friction in customers' digital experience under the Banking Made Easy initiative, the HKMA worked with the Securities and Futures Commission (SFC) to provide guidance to the industry on online and offline distribution and advisory platforms for investment products; remote investment account opening; and use of instant messaging applications to receive customers' investment instructions. The HKMA also introduced a half-yearly survey to collect information about online platforms for investment products provided by registered institutions (RIs) to facilitate its prioritisation of supervisory resources and focus.

With the increased market volatility in 2018, the HKMA continued to focus on complex and high-risk investment products. The HKMA shared with AIs key observations and good practices in relation to the distribution of fixed income and structured products with special features and risks, such as bonds listed under Chapter 37 of the Main Board Listing Rules and accumulators. The HKMA also provided guidance to AIs to enhance investor protection measures on the sale and distribution of debt instruments with loss-absorption features and related products, as such instruments and products are inherently complex and high-risk, and are generally not suitable for retail investors.

In respect of wealth management, the HKMA provided guidance to AIs to enhance disclosure of benefits received; to facilitate compliance with the suitability requirement; and to prevent and manage misconduct risks in selling of investment funds.

As part of the Balanced and Responsive Supervision initiative, the HKMA conducted a holistic review of the HKMA's investor protection measures and consulted the banking industry on the proposed refinements to streamline the investor protection measures. Guidance will be provided to the industry with an objective to enhance customers' experience while providing consumer protection.

Following discussion with the Insurance Authority (IA), the HKMA issued a circular in May to AIs to expand the types of life insurance products that are eligible for exemption from financial needs analysis under the digital distribution channel without recommendation. The HKMA also issued a circular in June requiring AIs to put in place additional customer protection measures in selling annuity insurance products at retail level. Meanwhile, the HKMA continued to co-operate closely with the IA on 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, and the formulation of rules, codes, and guidelines for supervision under the new regime.

The HKMA also instituted a mystery shopping programme (MSP) to check AIs' selling practices in respect of investment and insurance products. The HKMA will share the key observations and good practices with the industry.

During the year, the HKMA processed two RI applications. It granted consent to 147 executive officers responsible for supervising the securities activities of RIs, and conducted background checks on 10,839 individuals whose information was submitted by RIs for inclusion in the register maintained by the HKMA.

Banking Stability

Other supervisory activities

The Banking Supervision Review Committee considered five cases concerning the approval of money brokers and the capital position of an overseas-incorporated AI in 2018 (see Table 4 for details).

During the year, the HKMA commissioned 17 reports under section 59(2) of the Banking Ordinance (BO). The AIs were required to appoint external professional firms to report on the effectiveness of their controls over specified areas of operation. Eight of the reports covered credit risk management, another four covered AML/CFT controls, and the remaining reports were related to areas such as compliance with the BO and the distribution of financial products.

In 2018, no AIs breached the requirements of the BO relating to capital adequacy or liquidity ratio. There were 52 breaches of other provisions of the BO, mostly related to AIs' reporting obligations under the ordinance. These breaches had not affected the interests of depositors and were rectified by the AIs promptly.

During the year, the CAMEL Approval Committee completed a review of the CAMEL ratings of all the 187 AIs. No AIs appealed against the Committee's decision.

Table 4 Summary of other supervisory activities

		2018	2017
1	Cases considered by the Banking Supervision Review Committee	**5**	6
2	Reports commissioned under section 59(2) of the BO	**17**	9
3	Approval of applications to become controllers, directors, chief executives or alternate chief executives of AIs	**181**	203

International co-operation

Co-operation with overseas supervisors

The HKMA participated in 32 college-of-supervisors meetings organised by the home supervisors of 24 banking groups with significant operations in Hong Kong. The HKMA is also a member of 12 crisis management groups (CMGs) and other Resolution Colleges. 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.

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, South Africa, Switzerland, Taiwan, Thailand, the UK and the US. There were also regular exchanges with overseas authorities on institution-specific issues and developments in financial markets.

The HKMA organises and hosts a regional college-of-supervisors meeting in Hong Kong.

Banking Stability

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 on Banking Supervision ("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 Anti-Money Laundering Expert Group. The HKMA assumed the role of chair at the SIG in October. It is also a member of several sub-groups under (i) the PDG, including the Working Group on Capital, the Working Group on Liquidity, the Working Group on Disclosure, the Credit Risk Group, the Market Risk Group, the Operational Resilience Working Group and the Large Exposures Group; and (ii) the SIG, including the Stress Testing Network, the Task Force on Financial Technology and the Colleges Monitoring Network. In addition, the HKMA chairs the Risk Data Network under the SIG to monitor the implementation progress of the Basel Committee's *Principles for Effective Risk Data Aggregation and Risk Reporting* by global systemically important banks (G-SIBs). The HKMA also participates in the joint Working Group on Margin 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 OTC Derivatives Working Group, the Compensation Monitoring Contact Group, the Official Sector Steering Group on Financial Benchmarks, and the Working Group on Non-Bank Financial Intermediation. 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 (ReSG) 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)[3], the South East Asia, New Zealand and Australia Forum of Banking Supervisors, and the South-East Asian Central Banks group. As part of its work in the EMEAP Working Group on Banking Supervision (WGBS), the HKMA is the champion of the Interest Group on Liquidity (IGL). During the year, the IGL exchanged views and shared experiences regarding the implementation of Basel III liquidity standards in the EMEAP jurisdictions. The HKMA is also the chair and serves as the secretariat of the newly established Focused Meeting on Resolution (FMR) under the WGBS. The establishment of the FMR reflects agreement by EMEAP that a dedicated forum for bank resolution would bring the appropriate strategic focus to bank resolution. See "*The HKMA's engagement with the industry and regional authorities*" on page 88 for more details.

[3] EMEAP is a co-operative organisation of central banks and monetary authorities in the East Asia and Pacific region.

Implementation of Basel Standards in Hong Kong

Exposure limits

The Banking (Amendment) Ordinance 2018 was enacted by the Legislative Council (LegCo) in January to, among other things, repeal obsolete provisions pertaining to exposure limits in Part XV of the BO, and empower the Monetary Authority to make rules to prescribe limits on the exposures of AIs. In this connection, a set of Banking (Exposure Limits) Rules (BELR) took effect on 13 July 2018 to modernise the equity exposure limit in section 87 of the BO so as to keep pace with market developments and contemporary risk management practices. This was followed by a set of new BELR scheduled for implementation from 1 July 2019 to replace the former set of BELR, update the rest of the exposure limits in the BO, and implement the 2014 Basel Committee standard on the *Supervisory Framework for Measuring and Controlling Large Exposures* ("Large Exposure Framework").

Capital standards

On 10 January 2018, the HKMA announced an increase in the jurisdictional Countercyclical Capital Buffer rate for Hong Kong from 1.875% to 2.5% (reflecting the Basel III phase-in provisions), effective 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 2019 and their corresponding higher loss absorbency capital requirements.

The Banking (Capital) (Amendment) Rules 2018 (BCAR 2018) were made to implement (a) the 2016 Basel Committee's standard on *TLAC Holdings*; (b) a capital treatment on sovereign concentration risk designed to complement the implementation of the Basel Committee's Large Exposure Framework; and (c) the "internal assessment approach" as part of the securitisation framework set out in Basel Committee's 2014 Basel III Document on *Revisions to the Securitisation Framework*. The BCAR 2018 also specified the HKMC Insurance Limited and the HKMC Annuity Limited as domestic public sector entities for preferential capital treatment under the Banking (Capital) Rules (BCR) to cater for the business restructuring of the Hong Kong Mortgage Corporation Limited. The amendments contained in BCAR 2018 took effect on 11 January 2019, except for those in relation to TLAC holdings and sovereign concentration risk, which would take effect from 1 April and 1 July 2019 respectively.

Furthermore, the Banking (Specification of Multilateral Development Bank) (Amendment) Notice 2018 took effect on 30 June 2018 to implement the Basel Committee's decision in October 2017 to allow banks to apply a 0% risk-weight to claims on the Asian Infrastructure Investment Bank as a multilateral development bank under the standardised approach for credit risk.

In the meantime, the HKMA continued its preparatory work for the implementation of three capital standards of the Basel Committee, viz. *The Standardised Approach for Measuring Counterparty Credit Risk Exposures* ("SA-CCR"), *Capital Requirements for Bank Exposures to Central Counterparties* ("CCP standard") and *Capital Requirements for Banks' Equity Investments in Funds*. The local implementation of these capital standards has been deferred from the original target date of 1 January 2017 to follow more closely the implementation schedules of other major markets. The current plan of the HKMA is to implement these standards within 2020. In this connection, the HKMA issued in August a set of proposed provisions for implementing the SA-CCR and the CCP standard for industry consultation. The consultation closed on 9 November.

Interest rate risk in the banking book (IRRBB)

In December, the HKMA issued its updated local framework on IRRBB, providing for a more sophisticated and comprehensive set of measures to identify banks with significant IRRBB exposures. Issued in the form of an SPM module "Interest Rate Risk in the Banking Book", the framework implements the corresponding Basel Committee's standards by specifying a standardised approach for quantifying IRRBB while continuing to follow the concept of an outlier-based Pillar 2 approach, i.e. only AIs with high levels of IRRBB exposure will be subject to additional capital requirements. The standards will be implemented on 1 July 2019.

Banking Stability

Disclosure standards

Further to the implementation in 2017 of the first phase of revised Pillar 3 disclosure requirements, which were promulgated by the Basel Committee in 2015, the Banking (Disclosure) (Amendment) Rules 2018 took effect from 30 June 2018 to implement the second phase of the revised requirements as set out in the *Pillar 3 Disclosure Requirements – Consolidated and Enhanced Framework*, promulgated by the Basel Committee in March 2017. These revised requirements were designed to promote market discipline through enhanced disclosure of banks in terms of user relevance, consistency and comparability of disclosed information.

Liquidity standards

Following the implementation of the Liquidity Coverage Ratio (LCR) under the Basel III framework from 1 January 2015, the other Basel III liquidity standard, viz. the NSFR, came into operation from 1 January 2018. AIs designated as "category 1 institutions" under the Banking (Liquidity) Rules are required to observe the LCR and NSFR requirements. All other AIs are regarded as "category 2 institutions" and are required to observe a Liquidity Maintenance Ratio (LMR), which consists of similar elements as the LCR but with a less granular structure. Some category 2 institutions are designated further as "category 2A institutions" and are required to observe a local Core Funding Ratio (CFR), which is a modified version of the NSFR.

Improving Supervisory Policy Framework

Regulation of over-the-counter derivatives transactions

The HKMA introduced the global margin and risk mitigation standards in 2017 for AIs involved in non-centrally cleared OTC derivatives transactions. Phases 1 and 2 initial margin requirements were implemented on 1 March 2017 and 1 September 2017 respectively. The Phase 3 initial margin requirements commenced on 1 September 2018, expanding the scope of covered entities. The HKMA will continue to assess industry readiness for implementation of the remaining phases and co-ordinate with other member jurisdictions of the Basel Committee and IOSCO Working Group on Margin Requirements on the implementation and market developments.

Revised securitisation framework

To assist locally incorporated AIs in complying with the revised securitisation framework set out in the BCR, which came into operation on 1 January 2018 through the Banking (Capital) (Amendment) Rules 2017, the HKMA issued in March a set of Q&As to provide supplementary guidance on how certain provisions of the BCR should be applied, particularly in relation to those relevant in the determination of significant credit risk transfer in securitisation transactions under the framework.

Updating other supervisory policies and risk management guidelines

The HKMA issued in May a revised SPM module on "Validating Risk Rating Systems under the IRB Approach" to reflect the prevailing regulatory capital requirements applicable to the use of the internal ratings-based (IRB) approach for credit risk under the BCR.

Furthermore, the HKMA finalised and issued the revised SPM module on "Counterparty Credit Risk Management" in July. The revision primarily aims to bring the SPM module in line with the prevailing capital treatment of, and the best practices in managing, counterparty credit risk arising from derivatives contracts and securities financing transactions.

In response to the local implementation of the IRRBB framework in July 2019, the SPM module on the subject was updated and retitled "Interest Rate Risk in the Banking Book" in December 2018.

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

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

Balanced and responsive supervision

The HKMA launched the Balanced and Responsive Supervision Programme in September 2017 to collect feedback from the banking industry regularly to optimise supervisory policies and processes. In 2018, the HKMA reached out to banks through constructive dialogue at roundtable meetings. The discussions focused on addressing challenges that banks faced in the implementation of regulatory requirements and guidance under a risk-based approach, with due consideration given to emerging risks, market trends and customer experience.

The industry feedback provided useful input for the HKMA's reviews of investor protection measures and AML/CFT guidance. In addition, the HKMA improved the supervisory workflow and communication process, enabling banks to achieve higher compliance efficiency. The HKMA is also exploring a better use of technology to streamline regulatory compliance.

Accounting standards

In response to the implementation of International Financial Reporting Standard 9 (IFRS 9) *Financial Instruments* in 2018, the HKMA issued, after consulting the industry, the interim regulatory capital treatment of IFRS 9 provisions in the first quarter of 2018. The interim treatment sets out the approach by which expected credit loss provisions made by AIs under IFRS 9 are to be categorised as general or specific provisions for the purposes of adhering to the regulatory capital framework, and the circumstances under which AIs are required to continue to maintain a regulatory reserve on top of the provisions they have made in accordance with the accounting standards.

The HKMA carried out follow-up surveys during the year to assess AIs' progress in adopting the new IFRS 9 requirements as well as the impact of IFRS 9 on AIs' key financial figures and regulatory capital ratios. Discussions were also held with auditors on AIs' implementation of IFRS 9. Based on the survey results as well as the feedback from AIs' auditors, the application of the interim regulatory capital treatment of IFRS 9 accounting provisions should not result in any significant impact on AIs' regulatory capital positions.

Meanwhile, the HKMA also 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.

Banking Stability

Resolution

In 2018, significant progress was made by the HKMA in advancing its objectives on resolution policy, resolution planning and resolution execution capability. Table 5 below provides a high-level overview of the progress to date in establishing and operationalising the resolution regime for AIs in Hong Kong.

Table 5 HKMA's progress in developing an operational resolution regime for AIs[1]

	2016 & before	2017	2018	2019 & beyond
Resolution Framework	Conducted consultation and stakeholder engagement on establishing resolution regime	• FIRO came into effect • Protected Arrangements Regulation came into effect • Published CoP chapter RA-1 • Designated lead resolution authority for cross-sectoral G-SIB groups in Hong Kong		Review and update of FIRO as appropriate
Resolution Standards for AIs	Consulted on CoP chapter CI-1 and involved in FSB resolution policy development	• Published CoP chapters RA-2 and CI-1 • Contributed to FSB resolution policy development through membership at the FSB ReSG and CBCM group for banks; as well as chairing the FSB Legal Experts Group and co-chairing the FSB CBCM Internal Total Loss-Absorbing Capacity Workstream	• Developed and finalised LAC Rules • Developed and consulted on CoP chapter LAC-1 • Updated CHATS scheme rules to support continuity of access to FMI for AIs in resolution • Continued contribution to FSB resolution work, including chairing FSB thematic peer review on bank resolution planning	Ensure standards are in place to address impediments to resolvability
Resolution Planning	Carried out resolution planning for priority D-SIBs and cross-border work at CMGs	• Undertook bilateral resolution planning programmes for priority D-SIBs • Led regional resolution planning • Carried out cross-border resolution planning at 12 CMGs and other resolution colleges	• Established and advanced programmes for all D-SIBs • Determined preferred resolution strategies and indicative LAC requirements for D-SIBs • Worked with an AI to set up new clean holding company and service company in Hong Kong • Promoted and adopted a coordinated approach to cross-border LAC pre-positioning	Ensure priority AIs are resolvable by their compliance with resolution standards
HKMA's Execution Capability		• Established new HKMA Resolution Office • Developed Watchlist Framework • Conducted drills and simulations • Developed cross-departmental bank crisis coordination framework	• Established CMCG • Advanced setup of resolution advisory framework • Conducted crisis simulation exercises • Promoted the setup, and appointed as Chair, of EMEAP's new FMR	Establish operational capability to execute an orderly resolution

1. See https://www.hkma.gov.hk/eng/key-functions/banking-stability/resolution/ for details of the FIRO CoP chapters mentioned in the table.

AIs — Authorized Institutions
CBCM — Cross-Border Crisis Management
CHATS — Clearing House Automated Transfer System
CMGs — Crisis management groups
CMCG — Crisis Management Coordination Group
CoP — Code of Practice
D-SIBs — Domestic systemically important banks
EMEAP — Executives' Meeting of East Asia-Pacific Central Banks
FIRO — Financial Institutions (Resolution) Ordinance
FMR — Focused Meeting on Resolution
FSB — Financial Stability Board
G-SIBs — Global systemically important banks
LAC — Loss-absorbing capacity
LAC Rules — Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements — Banking Sector) Rules
ReSG — Resolution Steering Group

Banking Stability

Resolution standards, policy and guidance

The HKMA continued to develop resolution standards for AIs to address impediments to resolvability in line with international policy development. In the FSB's *2018 Resolution Report: "Keeping the Pressure Up"*, its seventh report on the implementation of resolution reforms, the FSB emphasises that authorities and banks must do more to ensure bank failure can be managed in an orderly manner. This report provides an update on the progress to date made by member jurisdictions in implementing the agreed FSB resolution standards, and acknowledges the good progress made by Hong Kong, including in the development and implementation of loss-absorbing capacity (LAC) policy locally.

Insufficient LAC resources is an important potential impediment to the resolvability of AIs. Therefore, a major policy focus of the HKMA in 2018 was the making of rules prescribing minimum LAC requirements for AIs ("LAC Rules"). Following a process of extensive engagement with industry, including two rounds of consultation, draft LAC Rules were tabled at LegCo on 24 October 2018 for negative vetting. Subsequent to the active engagement of LegCo members, the LAC Rules came into operation on 14 December 2018.

The HKMA has also published a Code of Practice (CoP) chapter under the Financial Institutions (Resolution) Ordinance (FIRO) in relation to the LAC Rules (LAC-1), which provides guidance on how the Monetary Authority, as the resolution authority for banking sector entities including all AIs, intends to exercise certain discretionary powers under the LAC Rules and on the operation of certain provisions of the LAC Rules. The LAC-1 was issued on 20 March 2019[4]. See *"Which Authorized Institutions will be Subject to Loss-absorbing Capacity Requirements under the LAC Rules?"* on page 84 for more details on the HKMA's LAC policy.

[4] https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/resolutions/LAC-1_Resolution_Planning-LAC_Requirements_ENG.pdf

Banking Stability

Which Authorized Institutions will be Subject to Loss-absorbing Capacity Requirements under the LAC Rules?

Under the FIRO, the Monetary Authority is the resolution authority for banking sector entities, which include all AIs. The Monetary Authority can initiate resolution in respect of a failing AI only where the non-viability of the AI would pose risks to the stability and effective working of the financial system of Hong Kong.

Where the Monetary Authority does initiate resolution, it is likely that additional financial resources will be required to facilitate an orderly resolution that meets the resolution objectives set out in the FIRO, which include protecting public money. The primary purpose of imposing LAC requirements on an AI is to ensure that, should the AI become non-viable, it has sufficient financial resources to allow its failure to be managed in an orderly way.

It follows from the above that it is only where the failure of an AI is likely to pose risks to the financial stability and effective working of the financial system that the AI should be considered for the imposition of LAC requirements.

The Monetary Authority's view is that, should a locally incorporated AI with total consolidated assets above HK$150 billion reach the point of non-viability, it is unlikely that its failure could be managed through insolvency without posing risks to the stability and effective working of the financial system of Hong Kong. But it does not follow that all AIs above this threshold should necessarily be subject to LAC requirements. In considering which AIs should be so subject, the HKMA has taken into account a range of factors, including the resolution objectives under the FIRO and the cost implications for AIs. The HKMA's planning assumption is that any locally incorporated AI with total consolidated assets above HK$300 billion should be subject to LAC requirements, and that any locally incorporated AI with total consolidated assets between HK$150 billion and HK$300 billion should be prioritised for resolution planning, but without the imposition of LAC requirements.

The HKMA intends to adopt a phased approach to resolution planning and the imposition of LAC requirements, starting with D-SIBs. Under this approach, the intention is that D-SIBs will be subject to LAC requirements no earlier than 1 January 2022,[5] and that non-D-SIBs above the HK$300 billion threshold will be subject to LAC requirements no earlier than 1 January 2023.

This approach is summarised in the table below and set out in more detail in LAC-1.

Nature of AI	Monetary Authority's approach to LAC requirements and resolution planning
Locally incorporated AIs with total consolidated assets above HK$300 billion (including all D-SIBs)	Prioritised for resolution planning; will be subject to LAC requirements no earlier than 1 January 2022 for D-SIBs (subject to footnote 5), and no earlier than 1 January 2023 for non-D-SIBs
Locally incorporated AIs with total consolidated assets between HK$150 billion and HK$300 billion	Resolution planning will be required; will not be subject to LAC requirements
All other AIs	Not prioritised for resolution planning; will not be subject to LAC requirements

5 Note, however, that in accordance with international standards developed by the FSB, D-SIBs that are part of G-SIBs which are not headquartered in emerging market economies will need to start meeting LAC requirements from 2019.

With respect to other impediments to resolvability, the HKMA has taken further steps to ensure the orderly management of an AI's failure. For example, consistent with the *FSB Guidance on Continuity of Access to Financial Market Infrastructures for a Firm in Resolution*, the HKMA worked with relevant stakeholders during 2018 to update scheme rules for Hong Kong dollar, US dollar, euro and renminbi Clearing House Automated Transfer System (CHATS) to reflect the restrictions imposed by the FIRO on the termination or suspension of access to clearing and settlement services in respect of an AI that enters resolution.

At an international level, the HKMA has also been actively involved in the formulation of many of the international resolution standards through its membership at the FSB – see *"HKMA's Contribution to International Resolution Policy Work in 2018"* below for more details.

HKMA's Contribution to International Resolution Policy Work in 2018

At an international level, effective resolution requires internationally harmonised resolution policies and standards, given the cross-border nature of many large financial institutions. This is particularly important for Hong Kong as a major host of all G-SIBs and some regionally active banking groups.

To ensure that Hong Kong's unique position is reflected, both as a key host jurisdiction of G-SIBs and internationally active banking groups and as the home of the resolution entities of some of these banking groups, the HKMA participates actively in the formulation and implementation of international resolution policy standards. The HKMA has been contributing through its membership at the FSB ReSG and the FSB CBCM Group for Banks.

The HKMA was a member of the CBCM workstreams on Bail-in Execution and Funding in Resolution. These workstreams were responsible respectively for finalising the *FSB Principles on Bail-in Execution* and *FSB Guidance on Funding Strategy Elements of an Implementable Resolution Plan*, which were both published in June 2018. The HKMA is also a member of the CBCM workstream on Public Disclosure on Resolution Planning and Resolvability.

As the focus of the FSB's work moves from policy design to implementation, one important aspect is to promote implementation consistency through monitoring and peer review assessments. To this end, the HKMA chairs the FSB's thematic peer review on bank resolution planning.

The HKMA participated in ten international meetings and workshops for the aforesaid FSB groups in 2018, with some of these events organised by the HKMA in Hong Kong.

Banking Stability

Resolution planning for authorized institutions

A range of milestones were achieved in resolution planning in 2018, with structured bilateral resolution planning programmes established and advanced for each of the six D-SIBs. These programmes focus on identifying and working with AIs on the changes required to remove impediments to resolvability, including AIs' LAC issuance strategies. The HKMA collected the first submissions of core information for resolution planning from all the D-SIBs and determined the preferred resolution strategies for them. Resolvability assessments for the D-SIBs were conducted to identify impediments to their resolvability, and the indicative LAC requirements were communicated to these AIs to facilitate their planning and necessary actions on LAC resources.

In order to lead the regional resolution planning efforts for a G-SIB which has its Asia Pacific headquarters in Hong Kong, the HKMA organised the annual Asia CMG meeting for the relevant home and host authorities, and oversaw a number of major steps in enhancing resolvability. These include the replacement of a chain of overseas holding companies with a clean holding company in Hong Kong, and the establishment of a dedicated Hong Kong service company to support operational continuity in resolution.

The HKMA participated actively in the cross-border resolution planning of 12 G-SIBs through its membership at CMGs, critically assessing the progress made by the G-SIBs in addressing impediments to resolvability and ensuring key local specificities were taken into account. A key focus in 2018 was discussions with overseas resolution authorities on the scaling of internal LAC pre-positioning requirements, to which the HKMA promoted and adopted a co-ordinated approach, with a view to maximising opportunities for home-host co-operation, which is a necessary precondition to the orderly resolution of cross-border banking groups.

HKMA's operational capability as a resolution authority

Considerable progress has been made in different areas to strengthen the operational capability of the HKMA as a resolution authority.

To strengthen the institutional framework and arrangements, a new HKMA-wide Crisis Management Framework (CMF) and Crisis Management Coordination Group (CMCG) were established in 2018, providing the basis for enhanced co-operation and co-ordination across relevant departments involved in bank crisis preparedness and management. See *"HKMA Crisis Management Framework and Crisis Management Coordination Group"* on page 89 for more details on the CMF and the CMCG.

The design of liquidity facilities needed to operationalise the resolution funding arrangements under the FIRO was taken further as part of wider work on the HKMA's liquidity facilities framework. See *"Resolution and Backstop Liquidity Support"* on page 87 for more details.

Resolution and Backstop Liquidity Support

An important element of orderly resolution is to ensure that, should a bank get into financial difficulties and become non-viable, it has sufficient financial resources of its own to absorb losses and be recapitalised, thereby restoring itself to viability. In this way, creditors, not the public purse, bear the cost involved. The recently introduced LAC Rules are designed to ensure a relevant AI has resources in place such that, should it become non-viable, its failure can be managed by the HKMA in an orderly manner, while minimising risk to public money.

However, recapitalisation of a bank alone may not be sufficient to ensure an orderly resolution. A bank in resolution may be temporarily unable to refinance its liabilities as they become due. In the period following the commencement of a resolution process, even a recapitalised bank is likely to experience heightened liquidity needs generated by market volatility and by an asymmetry of information regarding the bank's viability. In such a scenario, the bank will be expected to first turn to all its private sources of funding. However, if access to private markets is not possible, credible public-sector backstop mechanisms must be in place to enable the temporary funding needs of the bank to be met to the extent necessary to maintain the continuity of its critical functions during the resolution process. In the context of liquidity support, this means that credible public-sector sources of temporary collateralised lending must be available.

The HKMA is the backstop provider of liquidity to solvent banks in Hong Kong. The HKMA's liquidity assistance framework comprises short-term liquidity assistance facilities to address banks' settlement needs, and longer-term facilities that are designed to respond to idiosyncratic or market-wide stress.

Following the commencement of operation of the FIRO, which sets out specific arrangements for funding in resolution, the HKMA began an internal review in 2018 to identify changes that might need to be made to its existing framework in order to effectively deliver liquidity support in a resolution context.

While it is expected that new facilities will be introduced to the framework to support resolution in Hong Kong, the rest of the framework remains relevant. For this reason, the current review encompasses the whole framework with a view to ensuring that this important toolkit continues to evolve as required to reflect domestic and international policy developments and the demands of responding to a systemic banking crisis.

Banking Stability

The HKMA conducted secrecy provisions assessments on overseas resolution authorities. These assessments are important in terms of the HKMA's decision making on sharing information for the purpose of facilitating cross-border resolution planning with overseas resolution authorities.

In addition, the HKMA continued to conduct drills and simulation exercises in 2018 to further strengthen its operational readiness for the orderly management of the failure of an AI.

The HKMA's engagement with the industry and regional authorities

For a resolution regime to be credible, it is important that its impact on AIs, their counterparties and investors, as well as the wider market is understood. In this regard, the HKMA continued to engage actively with the industry and the public through meetings with the management of AIs, rating agencies, law firms and LegCo members, as well as via joint workshops with industry associations. The HKMA also took part in and spoke at conferences and seminars, including those organised by RiskMinds Asia, the Asian Development Bank, Institute of International Finance & Bank Policy Institute and Global Financial Markets Intelligence, events which involved various central banks, regional authorities and a wide range of market participants.

At the regional level, the HKMA has been initiating and participating actively in knowledge-sharing and discussions with regional authorities in relation to resolution. The HKMA has also been appointed Chair and Secretariat of a new EMEAP forum, the FMR. The FMR is designed to support EMEAP work on bank resolution and to improve bank resolution co-operation and co-ordination amongst EMEAP members (please refer to page 78 for further information on EMEAP work).


Risk

Hosting the world: HKMA on cross-border bank resolution

Hong Kong regulator supports 75% internal TLAC to boost international co-operation

Blake Evans-Pritchard

@blakeng

When it comes to global banking regulation, Hong Kong is in a unique position: 29 of the world's 30 global systemically important banks (G-Sibs) have operations there, the exception being Nordea, but all of them are headquartered elsewhere. This is why the Hong Kong Monetary Authority, the principal regulator of banks in the territory, has placed cross-border co-operation at the centre of its new framework on bank resolution.

But with regulators around the world diverging on key issues, how successful will the HKMA be in developing a common framework?

Take the question of total loss-absorbing capacity (TLAC) – the bail-in debt that can be converted into equity to recapitalise a bank that fails and is put into resolution.

Interview by Risk.net with the Commissioner of Resolution Office, in which the crucial role of international co-operation for effective cross-border resolution planning is emphasised.

HKMA Crisis Management Framework and Crisis Management Coordination Group

Developed in 2017 and formally established in 2018, the HKMA's new CMF and CMCG provide the basis for co-operation and co-ordination across relevant departments with different responsibilities for bank crisis preparedness and management.

The CMF provides an overview of the statutory powers available to the Monetary Authority in handling a crisis involving a failing AI and how these powers might be exercised at different stages of an AI's life cycle, from business-as-usual to non-viability. The CMF also sets out the roles and responsibilities of individual departments in facilitating the execution of those powers as well as the decision making processes and preferred approach in managing at-risk AIs experiencing liquidity and/or solvency stress.

The CMCG is a senior management body with two key roles. First, it is responsible for overseeing the development of cross-departmental crisis management capabilities in business-as-usual times. Second, where an at-risk AI is identified and its status escalated, it ensures that a comprehensive analysis of co-ordinated options is provided to the Monetary Authority to support the effective handling of the AI and the exercise of statutory powers as needed. The inter-departmental role performed by the CMCG is designed to both maximise the AI's chances of recovery and ensure that the HKMA can manage the orderly failure of the AI if its recovery plan does not succeed.

The standing members of the CMCG include the two Deputy Chief Executives responsible for banking function and monetary management function, the Commissioner of Resolution Office and the General Counsel. The CMCG meets regularly with participation from the Executive Director for Banking Supervision and the Executive Director for Monetary Management to consider matters in relation to preparedness for bank crises in business-as-usual times, such as (i) the development of institutional capabilities and readiness across the key HKMA functions (namely banking supervision, resolution and monetary management) which are responsible for crisis management; (ii) the setting of preferred resolution strategies and removal of barriers to resolvability for AIs; and (iii) the development of policy related to crisis management.

High-level summary of the HKMA Crisis Management Framework

Stylised example of the life-cycle of an AI:

		Entry into Watchlist		Likely to become non-viable	
	Business-as-usual		**At risk of failure** (Watchlist Stages 1 and 2)		**Resolution or Liquidation**
Banking Supervision	Ongoing supervision		Intensified supervision Supervisory intervention AI recovery plan implementation		Supervisory intervention Support orderly resolution
Resolution	Resolution planning		Contingency planning for resolution execution		Resolution execution
Monetary Management			Provision of collateralised liquidity to solvent AIs as appropriate		
Other departments (examples)			Payments team: facilitate continuity of access to FMIs Licensing team: facilitate authorization of AI post resolution		
Deposit Protection			Preparation for possible payout of non-systemic AI which is a member of the Deposit Protection Scheme		

* For illustrative purpose only. All actions are to be considered on an as-needed basis based on the facts and circumstances at the time.

Banking Stability

Crisis Simulation Exercise (CSE)

A full-scale interactive CSE was conducted in November for the departments concerned within the HKMA to practise communication and co-ordination, the execution of contingency measures and the use of statutory powers under the BO, FIRO and other applicable ordinances in dealing with a banking crisis. More than 60 staff members participated in the CSE, including the senior executives and the relevant staff members of seven departments. The objectives of the CSE were accomplished within the planned timeframe. The exercise provided an opportunity for the participants not only to interact actively and apply their knowledge and skills in dealing with the simulated crisis situations, but also to identify potential areas for enhancement in the existing CMF.

As a prelude to the full-scale CSE, a "table-top" simulation exercise was conducted earlier in June for participants at the management level to articulate and evaluate potential responses to specific crisis scenarios.

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 1 January to 31 December 2017, which was the second 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, all AIs as well as their subsidiaries and affiliated companies reported full or nearly full compliance[6], while a few AIs have taken prompt remedial action to rectify areas of non-compliance.

On 19 October, the Competition Commission (CC) published its decision on the banking industry's application submitted in December 2017 in relation to the Code. While the CC decided that the Code was not excluded from the application of the First Conduct Rule by or as a result of "legal requirements exclusion" under the Competition Ordinance, the CC confirmed that it recognised the consumer protection objectives of the Code and the benefits to consumers, and it had no current intention to investigate or pursue enforcement action. On the same day of the issuance of the CC's decision, the HKMA issued a circular, which had been agreed with the CC, to clarify and reiterate that, as part of the Monetary Authority's requirements under the BO concerning proper standards of conduct and sound and prudent business practices, all AIs were required to comply fully with all provisions in the Code. Hence, compliance with the Code actually stems from the Monetary Authority's requirements. As a result, the protection measures for consumers under the Code will remain intact.

To enhance the handling of the mis-transfer of funds to wrong recipients by bank customers and their requests for assistance to their AIs to recover the mis-transferred funds, HKAB, in consultation with the HKMA, has worked out a set of standardised procedures. In relation to this, the HKMA issued a circular in January 2019 to remind AIs to set up a proper process that will ensure the aforementioned procedures are duly adopted, and to conduct customer education.

6 With five or fewer instances of non-compliance.

Banking Stability

Financial inclusion

The HKMA has been promoting financial inclusion and encouraging retail banks to pay special attention to customers in need. The HKMA worked with the industry to further enhance the accessibility of banking services to customers with disabilities, and facilitated HKAB's issuance of the *Practical Guideline on Barrier-free Banking Services* ("Practical Guideline") in March in consultation with the disabled community. The Practical Guideline sets out the good practices recommended for the industry with respect to all service channels, including bank branches, ATMs, online banking and telephone banking, to facilitate access by customers with physical disabilities, visual impairment or hearing impairment. The HKMA issued a circular stating its supervisory expectation for all banks to implement the measures in the Practical Guideline and to provide proper training and guidance to frontline staff members to address the needs of customers with disabilities. The industry was committed to implementing the recommendations of the Practical Guideline, and the number of voice navigation ATMs, which allow customers with visual impairment to access ATM services more easily and independently, increased by more than 10 times to over 700 by the end of the year.

During the year, the industry worked with EPS Company to introduce a cash withdrawal service for the elderly that dispenses with the need to make purchases to enhance their access to the service. A pilot scheme was launched in March at 34 outlets of a convenience store chain and the service was further expanded to over 300 outlets across Hong Kong in July. Since April, the Hongkong Post has also launched a similar service in seven Post Offices, mainly on outlying islands and in the New Territories.

HKMA Chief Executive, Mr Norman Chan, tries out the voice navigation ATM.

- Voice navigation ATMs: **over 700**
- Cash withdrawal service for the elderly
  - outlets of convenience store chain: **over 300**
  - Hongkong Post Offices: **7**
- Mobile branch locations served by three retail banks: **24**

Banking Stability

Opening and Maintaining Bank Accounts

In recent years, as a result of the progressive tightening of international standards to combat ML/TF, financial institutions round the world, including banks in Hong Kong, have generally strengthened the related controls, including undertaking more comprehensive due diligence and on-going monitoring of customers. It is important that banks' AML/CFT controls operate effectively and efficiently, and do not pose an unreasonable barrier to bona fide businesses and ordinary residents who are seeking access to banking services.

Against this backdrop, the HKMA continued to work closely with the banking industry and the business community on the important issue of account opening and maintenance. As part of its efforts to foster communication among banks, the business community and other stakeholders, the HKMA organised sharing sessions in June and September, targeting the communities of technology business and money service operators. These sessions provided a useful platform for business sectors and banks to share perspectives and exchange views on account opening and maintenance. Through the HKMA's dedicated email account and hotline, useful feedback and comments from the public, business community as well as other stakeholders were also collected and followed up by a dedicated team of the HKMA.

The HKMA engaged a service provider to undertake a MSP during the year, focusing on the customer interface aspect of the account opening processes of AIs for small and medium-sized enterprises (SMEs) and ethnic minority customers, to complement its supervisory activities in assessing the effectiveness of AIs' improvement measures and practices on the ground. The fieldwork of the MSP has been completed. The HKMA has started following up with the concerned AIs on the issues observed in the MSP while working on a circular to share the MSP observations with the industry in 2019. Besides, the HKMA has also conducted a round of thematic reviews on AIs' application of AML/CFT requirements during the customer onboarding process of the SME segment. Issues identified and good practices noted from the reviews will be shared with the industry in 2019.

The HKMA continued to encourage the banking industry to utilise technologies to enhance account opening efficiency and improve customer experience. To this end, relevant amendments were made to the *Guideline on Anti-Money Laundering and Counter-Financing of Terrorism (for Authorized Institutions)* and put into effect in March and November. Some banks are using technologies to facilitate remote customer onboarding on mobile devices. The HKMA continued to maintain close dialogue with banks and financial technology companies on new initiatives through the Fintech Supervisory Sandbox and Chatroom. The HKMA also worked closely with HKAB to explore the use of know-your-customer utilities with a view to further enhancing the efficiency of the customer due diligence (CDD) process and reducing any unnecessary compliance burden, thereby assisting banks in managing risks and improving customer experience.

With the joint effort of the HKMA and the banking industry, improvements in account opening processes and customer experience have been made.

The retail banking sector opens on average about **10,000** new business accounts per month, of which some **60% to 70%** are for 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 depend on the complexity of individual cases and the availability of the necessary information required of the applicants.

The average unsuccessful rate of account opening applications for the year is around **5%**, representing a substantive improvement from around 10% in early 2016.

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 bona fide businesses and ordinary residents to basic banking services.

Bank Culture

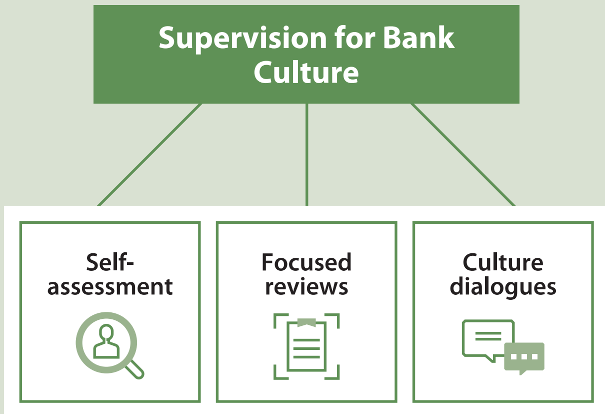
The HKMA announced its supervisory measures for bank culture in December to gauge the progress of bank culture reform in Hong Kong, following consultation with the banking industry and drawing upon the experience of overseas practices.

First, AIs will be required to conduct self-assessment, reviewing and reporting on their governance arrangements as well as policies and procedures in relation to corporate culture and the implementation of enhancement measures in fostering a sound bank culture with respect to the bank culture reform circular issued by the HKMA in March 2017. Apart from specific questions posed in the review of governance arrangements and policies and procedures, the self-assessment will include "Culture Questions to the Board", which are a set of high-level questions aiming to serve as an opportunity for the AIs' board to reflect on any insights, lessons learnt and issues encountered in the implementation of enhancement measures, instead of a check-box type of compliance exercise.

Secondly, the HKMA is planning to conduct focused reviews to assess and benchmark AIs' practices with respect to key areas of bank culture.

Thirdly, the HKMA will conduct culture dialogues with senior management and/or board members of AIs responsible for bank culture to gather insights and lessons learnt.

Furthermore, in pursuing the culture initiative, the HKMA aims to draw on the valuable and relevant experience of overseas practices and has reminded AIs of the importance of keeping an eye on any major conduct incidents that occur in different parts of the world and considering the relevance of the findings in the context of Hong Kong, in particular assessing whether there are any potential similar issues in their own AIs.



Banking Stability

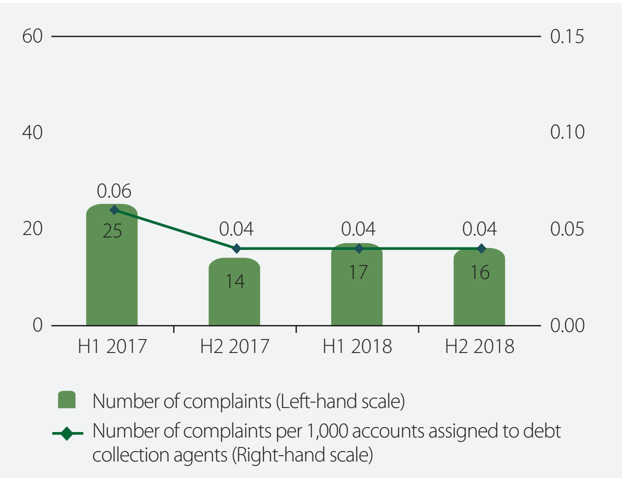
Engagement of intermediaries by authorized institutions

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 3,400 to 4,300 enquiries received each quarter.

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 33 from 39 in 2017 (Chart 2). The HKMA will continue to monitor AIs' engagement with debt collection agents.

Chart 2 Complaints received by AIs about their debt collection agents



Credit data sharing

TransUnion, an organisation providing consumer credit reference services, notified the Office of the Privacy Commissioner for Personal Data (PCPD) on 28 November of a suspected data breach due to possible security loopholes in the application procedures for credit reports maintained by the company, with some personal data on the TransUnion database allegedly accessed by an unauthorised party. Given that the incident involved the security of personal credit information provided to TransUnion by AIs for credit reference purposes, the HKMA together with HKAB liaised closely with TransUnion following the incident. Specifically, TransUnion has been requested to conduct a full and immediate investigation into the incident and to suspend online enquiry services on personal credit reports until the completion of the investigation, a comprehensive upgrading of the information security system and an independent review on the enhanced security controls. At the same time, the HKMA also liaised closely with the PCPD.

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 two-year payout system modernisation project, which improved the resilience and efficiency of the payout system and reduced maintenance cost, was completed by the Hong Kong Deposit Protection Board. A study was conducted to confirm the feasibility of developing electronic payment channels to supplement paper cheques in paying out DPS compensation. To reinforce public awareness and understanding of DPS protection, a multimedia publicity campaign and various community education activities were launched. The role of the DPS as the "Guardian of Deposits" was promoted through an announcement of survey results on Hong Kong people's saving habits and sense of security in savings.

Licensing

At the end of 2018, Hong Kong had 152 licensed banks, 18 restricted licence banks, 16 deposit-taking companies and 24 AMBs. During the year, the HKMA granted money broker approvals to six foreign and two local inter-dealer brokers and trading platform operators, as well as approval for the transfer of a banking licence. Three licensed banks, one restricted licence bank and one deposit-taking company had their authorizations revoked.

Following the announcement of the virtual banking initiative in September 2017 and with the revision of the *Guideline on Authorization of Virtual Banks* after public consultation in May 2018, the HKMA met with a large number of parties which were interested in establishing virtual banks in Hong Kong to explain the authorization criteria. The HKMA had received 33 applications for virtual bank licences by August. About one-third of these applicants were found not to have submitted sufficient information on certain critical aspects of the authorization criteria after careful scrutiny of the completeness of these applications, and therefore they were not further processed. As for the remaining applications, the HKMA has shortlisted eight of them for the next stage of assessment following a rigorous process. The HKMA is continuing the intensive due diligence process for the shortlisted applications to assess whether they can fully meet the authorization requirements.

Enforcement

Banking complaints

The HKMA received 1,948 complaints against AIs and their staff members in 2018, a 9% increase from the previous year. Notwithstanding the rising complaint trend, the HKMA completed the handling of 1,990 cases in 2018, a 6% increase year on year. As a result, the total number of outstanding cases declined by 9% over a year ago to 414 as at end-2018 (Table 6).

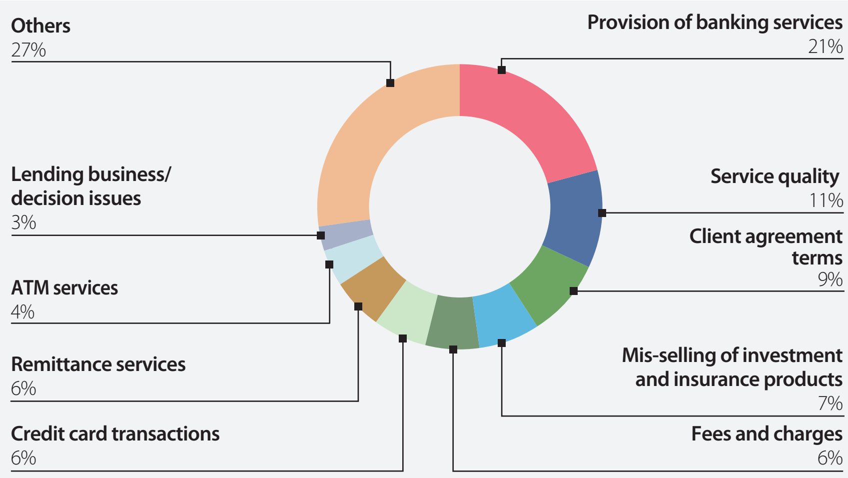
Table 6 Banking complaints received by the HKMA

	2018			2017
	Conduct-related issues	General banking services	Total	Total
In progress on 1 January	**100**	**356**	**456**	555
Received during the year	**213**	**1,735**	**1,948**	1,786
Completed during the year	**(216)**	**(1,774)**	**(1,990)**	(1,885)
In progress on 31 December	**97**	**317**	**414**	456

Complaints concerning the provision of banking services increased by 39% over the year to 417 cases in 2018. The majority of complaints, comprising 88% in this category, concerned the freezing and closure of accounts, and the facts of these cases indicated that relevant CDD information or documents were not provided for the banks to obtain a reasonable understanding of customer background and account transactions involved, and that suspicious transactions were identified during banks' ongoing CDD process. There were also cases where the accounts were subsequently maintained after relevant information was provided by customers to address banks' risk concerns (Chart 3).

Banking Stability

Chart 3 Types of services and products involved in banking complaints received by the HKMA in 2018



Enforcement

Following consultation with the industry, the HKMA issued the *Guideline on Exercising Power to Order a Pecuniary Penalty* in April to set out the manner in which the power to order a pecuniary penalty under the Payment Systems and Stored Value Facilities Ordinance (PSSVFO) is to be exercised. The *Guideline on Exercising Power to Impose Pecuniary Penalty*[7] was also revised in April to reflect the latest amendments to the Anti-Money Laundering and Counter-Terrorist Financing Ordinance (AMLO).

In August, the HKMA issued the *Guidance Note on Cooperation with the HKMA in Investigations and Enforcement Proceedings* to provide an overview of how the HKMA considers and recognises co-operation in its investigations and enforcement proceedings, as well as to highlight the benefits of co-operation. The HKMA encourages and recognises co-operation because it facilitates the early detection, efficient investigation and prompt rectification of statutory and regulatory breaches and misconduct and fosters a culture of responsibility and self-improvement in the industry. Co-operation will generally also result in significant savings in time, costs and resources for both the HKMA and the institution or individual concerned.

The HKMA continued to enforce CDD and record keeping requirements under the AMLO and to take disciplinary action in respect of material contraventions. In August, the HKMA issued a public reprimand and imposed a pecuniary penalty of HK$5 million on a bank after an investigation which found deficiencies in the bank's AML/CFT systems and controls for continuously monitoring business relationships and failures when carrying out CDD measures in respect of certain customers. In December, the HKMA issued a public reprimand and imposed a pecuniary penalty of HK$12.5 million on another bank. The disciplinary action followed an investigation which found deficiencies in the bank's AML/CFT systems and controls across several key control areas, including CDD, continuous monitoring of business relationships and wire transfers. Both banks were also ordered to submit a report by an independent external adviser regarding the sufficiency and effectiveness of the remedial measures implemented by them.

---

[7] This guideline was first published by the HKMA on 29 June 2012 under section 23(1) of the AMLO. It sets out the factors that the Monetary Authority will consider, where applicable, in determining whether to impose a pecuniary penalty and the amount of the pecuniary penalty if there has been a contravention of a specified provision as defined by section 5(11) of the AMLO. The revised version of the guideline was published on 27 April 2018.

Banking Stability

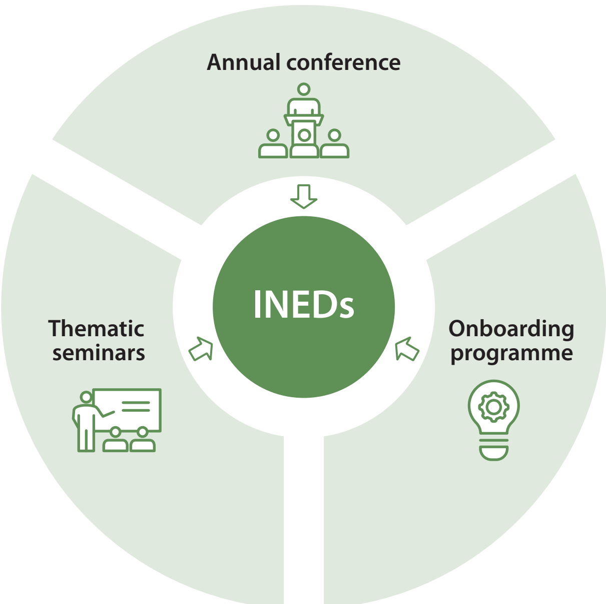
The HKMA also continued to collaborate closely with other financial regulators to investigate or otherwise follow up on issues arising from banks' self-reporting, banking complaints or supervisory examinations that raised possible concerns regarding whether the issue complied with laws and regulations and was fit and proper. After referrals of relevant information by the HKMA, the SFC imposed disciplinary sanctions, ranging from suspension to a life ban, on three former relevant individuals concerning the transfer of clients' data and assets. Moreover, the HKMA's enforcement work resulted in the referral of 22 cases during the year to the relevant financial regulators for appropriate action. The HKMA also issued 84 compliance advice letters to AIs and their staff members who were found not to have acted in full compliance with the relevant regulatory requirements.

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 2018, drawing AIs' attention to trends in banking complaints and emerging topical issues. The topics included frequent subscription and redemption of investment funds, annuity insurance products, suitability assessment for joint accounts, and double charging on credit and debit cards.

Capacity building in the banking sector

Director empowerment



In April, the HKMA published a knowledge kit on essential banking and regulatory knowledge to help newly appointed independent non-executive directors (INEDs) take up their roles and responsibilities.

Riding on the success of the inaugural conference in 2017, the HKMA hosted the second conference for INEDs in October. Nearly 80% of INEDs in the banking industry attended the conference. Distinguished supervisors and market experts shared their insights on the implementation and assessment of bank culture, short-termism, and the impact of fintech on financial services.

HKMA Deputy Chief Executive, Mr Arthur Yuen (right), and Member of the Board of Directors of Dubai Financial Services Authority and former Superintendent of the Office of the Superintendent of Financial Institutions of Canada, Ms Julie Dickson, talk at the second conference for INEDs.

The HKMA organised thematic seminars 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. Topics discussed during the seminars included the use of behavioural science and artificial intelligence technology in risk management, green finance, regulations, and the resolution regime.

Banking Stability

Talent development for banking practitioners

During the year, the HKMA continued to work closely with the banking industry and relevant professional bodies to develop new modules under the Enhanced Competency Framework (ECF) for capacity building and talent development purposes. Further to the launch of the core-level module of the ECF on AML/CFT in 2016 targeting entry-level practitioners, the HKMA rolled out the professional-level module in March for more experienced practitioners. The HKMA also conducted an industry consultation in October on a new ECF module on credit risk management.

Since the launch of the ECF modules, about 10,000 banking practitioners have obtained recognised certifications to meet ECF benchmarks in various professional areas by end-December 2018. This could help raise capacity in the banking industry and meet the growing demand for qualified banking practitioners.

In 2018, the HKMA conducted Regulator's Dialogue sessions to keep banking practitioners at all levels updated on supervisory requirements, key risk areas of AIs and the resolution regime.

This year also saw the graduation of the first batch of apprentices under an apprenticeship programme for private wealth management. The programme was a joint initiative of the HKMA and the Private Wealth Management Association to develop future talent for the industry. Following two rounds of successful intakes in 2017, another round of recruitment was conducted in November 2018.

Enhanced Competency Framework

2016	☑ Anti-Money Laundering and Counter-Financing of Terrorism (core level) ☑ Cybersecurity
2017	☑ Treasury management ☑ Retail wealth management
2018	☑ Anti-Money Laundering and Counter-Financing of Terrorism (professional level)
Upcoming	☐ Credit risk management ☐ Risk management and compliance

Academy of Finance (AoF)

The HKMA was tasked by the Financial Secretary (FS) to study the idea of establishing an AoF in Hong Kong as announced in his 2018-19 Budget. Based on the advice of an Experts Group comprising Messrs Anthony Neoh, Carlson Tong, Moses Cheng and David Eldon, the HKMA made a recommendation to the FS to proceed with the establishment of the AoF. The AoF will serve as (i) a centre of excellence for promoting financial leadership development through the promotion of the global and inter-disciplinary perspectives of top-notch talents in the industry; and (ii) a centre for monetary and financial research, especially applied research in cross-sectoral areas. A Preparatory Committee was formed to work on the implementation details and to launch the AoF around mid-2019. The Preparatory Committee comprises representatives from all the financial regulators in Hong Kong, the Financial Services Development Council, the University Grants Committee, the Hong Kong Institute for Monetary Research, and the Experts Group.

Consumer education

In 2018, the HKMA continued its Consumer Education Programme to educate the public to be smart and responsible financial consumers. Tied in with the launch of the Faster Payment System (FPS) in September, the HKMA arranged cross-media promotion on TV, radio, print, mobile applications, social media, and other digital and out-of-home platforms to highlight the key features and benefits of the FPS.

Cross-media promotion for the launch of the FPS.

In view of the overwhelming advertising on personal credit products in recent years, the HKMA rolled out an educational campaign on personal credit commencing in the third quarter of 2018. A feature series of three two-minute episodes, embedded in a popular infotainment TV programme, marked the prelude, followed by a collection of comics and infographics developed by a local popular illustrator, and an online video to advocate the appropriate attitude and highlight the implications of the improper use of personal credit products.

Noticing the surge in reported cases from banks on phishing emails and fraudulent website scams, the HKMA deployed an animation video on a dummy phishing email and sharing by an industry expert in a TV programme to demystify the common tricks used in this sort of scams and disseminate related security tips.

Video and comics with messages on personal credit are promoted.

An animation video demystifying the common tricks of phishing emails purportedly from banks.

Banking Stability

During the year, multimedia seasonal promotion was arranged to provide smart tips on various banking and financial services. The smart tips covered credit card chargeback protection, the use of credit cards and ATM cards during festive seasons, and the reliance on personal loans to settle tax payments.

The HKMA collaborated with an education institution to organise a cross-generation outreach educational programme targeting kindergarten pupils, parents, teachers and young adults. In the pilot programme, pupils from 20 kindergartens joined a kid's bank simulation game to experience working to earn money, spending, and using simple banking services such as opening an account, saving and withdrawing money at a bank mock-up, while parents attended talks to acquire updated knowledge about banking and financial services. Kindergarten teachers received training and a comprehensive education package to assist them in incorporating basic money management into the school curriculum. The programme reached out to over 2,500 people.

Comprehensive education packages are provided to kindergarten teachers to assist them in incorporating basic money management into the school curriculum.

Parents attend talks to acquire updated knowledge about banking and financial services.

To enhance secondary school students' knowledge of financial services and personal data protection in the digital era, the HKMA co-organised the "Hong Kong Liberal Studies Financial Literacy Championship" with various stakeholders again in 2018, attracting over 6,000 participants. Separately, the HKMA organised talks to promote responsible spending and the smart use of banking and related services among senior secondary school and university students.

Live competition and award ceremony of the Hong Kong Liberal Studies Financial Literacy Championship 2018.

The HKMA also continued to support the Investor Education Centre, renamed Investor and Financial Education Council on 17 January 2019, in promoting financial literacy in Hong Kong.

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 and financial stability of Hong Kong, and to the functioning of Hong Kong as an international financial centre. The purposes of the PSSVFO include promoting the general safety and efficiency of the designated clearing and settlement systems: the Central Moneymarkets Unit (CMU), the Hong Kong dollar CHATS, the US dollar CHATS, the Euro CHATS, the renminbi CHATS, and the Continuous Linked Settlement (CLS) System.

The FPS was launched in September as an extension of the Hong Kong dollar CHATS and renminbi CHATS. Similar to the Hong Kong dollar CHATS and renminbi CHATS, the Hong Kong dollar FPS and renminbi FPS are subject to the HKMA's oversight under the PSSVFO. The PSSVFO also provides statutory backing to the finality of settlement for transactions made through the Hong Kong dollar FPS and renminbi FPS by protecting the settlement finality from insolvency laws or any other laws.

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 is 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 to apply, 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, including the FPS. 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 requirements under the PFMI are incorporated in the relevant guidelines on designated clearing and settlement systems and trade repositories issued by the HKMA.

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

In the light of heightened cybersecurity risks, the CPMI has published guidance on cyber resilience requirements in 2016 and a strategy to mitigate the risk of wholesale payments fraud related to endpoint security in 2018. The HKMA has been working closely with the FMIs with a view to complying with the relevant international standards and further strengthening their cybersecurity.

The HKMA oversees local FMIs under its purview through off-site reviews, continuous monitoring, on-site examinations, and meetings with management. Given the FPS' role as an important piece of FMI serving the retail segment with unique system features, the HKMA formulated a new framework in 2018 to oversee the FPS, comprising oversight requirements currently applied to CHATS, applicable international standards including the PFMI, and oversight measures drawing reference from relevant overseas experiences in overseeing faster payment systems. All the FMIs continued to comply with the relevant requirements.

Banking Stability

International participation

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

In addition to participating in the monitoring and assessment of other jurisdictions in terms of implementation of the PFMI, the HKMA is also one of the parties being assessed. The assessment reports published by the CPMI-IOSCO confirmed that the HKMA had completed the process of adopting the legislation and other policies related to implementing the PFMI, and that the adopted measures were complete and consistent with the principles and responsibilities.

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, commonly used SWIFT's services, 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 ("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 conducted a site visit to the Hong Kong Interbank Clearing Limited, held two meetings, and reviewed four regular reports and 36 accompanying oversight activities management reports in 2018. 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 FS, and the report is available on the HKMA website.

Banking Stability

PLANS FOR 2019 AND BEYOND

Supervisory focus

Supervision of operational and technology risk

The HKMA will continue to step up its supervision of technology risk management in response to the increasingly challenging cyber threat landscape and the growing adoption of new technology by the banking industry. It will monitor the implementation of the C-RAF assessment by AIs covered in the second and third phases of implementation.

Smart Banking

The HKMA will process applications for authorization as a virtual bank, and observe the operations of virtual banks to be authorized and their impact on the workings and stability of the local banking system.

It is expected that some of the newly authorized virtual banks will commence business in the second half of 2019 or early 2020. The HKMA will subject these banks to the same supervisory standards as for conventional banks. The HKMA will continue to facilitate the adoption of Regtech by banks under the Banking Made Easy initiative. As banks implement the Open Application Programming Interface framework by phases in 2019, the HKMA will develop and implement suitable supervisory responses to ensure that the associated risks are managed properly.

Supervision of credit risk

In view of the challenges arising from the uncertain external economic and trade environment, the HKMA will continue to undertake thematic reviews and examinations focusing on the credit risk management of AIs, such as lending to large corporates, debt securities investments, interbank lending and loan classification and provisioning systems.

Supervision of liquidity and market risks

The HKMA will continue to focus on the supervision of liquidity and market risks in 2019. The financial markets and global fund flows may become increasingly volatile due to uncertainties connected with the pace of US interest rate normalisation and other geopolitical events. The HKMA will assess AIs' capability to cope with possible liquidity shocks by reviewing their internal liquidity stress testing programmes and contingency funding management.

As algorithmic trading is gaining popularity in the banking industry, the HKMA plans to conduct a round of thematic reviews to evaluate AIs' risk management practices in this area. The HKMA will also assess AIs' counterparty credit risk management for their derivatives trading activities against the new supervisory requirements promulgated in 2018.

Combating money laundering and terrorist financing

The fourth round of mutual evaluation by the FATF and APG will be completed with a report being published in mid-2019, in which there will be recommendations to enhance the effectiveness of Hong Kong's AML/CFT regime. The HKMA will work closely with the relevant government bureaux and departments and law enforcement agencies and contribute to initiatives to respond to the recommendations, including those on information sharing.

The HKMA will continue to place emphasis on the application of new technologies by the banking sector to enhance the effectiveness and efficiency of ML/TF risk management while improving customer experience during the CDD processes. Working closely with the banking industry, including both brick-and-mortar banks and virtual banks, the HKMA will build on the supervisory experience gained from the use cases of customer remote-onboarding initiatives to further explore and promote the greater use of technologies by banks.

The HKMA will further encourage and facilitate discussion with AIs, technology experts and other stakeholders on innovative regulatory technology solutions, including through its dedicated Fintech Supervisory Sandbox and Chatroom. It will also examine ways to enhance AML/CFT surveillance at the sectoral level by making greater use of existing and new data and information through the application of analytical tools such as artificial intelligence and machine learning in areas including transaction monitoring and screening.

Banking Stability

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, and work with the industry to formulate regulatory requirements on conduct standards for trust services. Moreover, the HKMA will collaborate with the SFC on the supervision of financial groups consisting of RIs and licensed corporations, and co-operate with the IA on the implementation of the new statutory regime for regulating insurance intermediaries.

The HKMA will carry out on-site examinations and off-site surveillance of AIs' conduct in the sale of securities, MPF and other investment and insurance products, including equity-linked products, accumulators, debt securities, investment funds and NLTI products, as well as AIs' compliance with new regulatory requirements.

Implementation of Basel Standards in Hong Kong

Capital standards

Following industry consultation in 2018, the HKMA will proceed to finalise the proposed provisions for implementing the SA-CCR and CCP standard into draft amendments to the BCR for statutory consultation as required under the BO in the second half of 2019. Regarding the implementation of the Basel Committee's standard on *Capital Requirements for Banks' Equity Investments in Funds*, the HKMA has also started conducting industry consultation on the proposed requirements by phases from early 2019.

To inform policy formulation for the implementation of the "*Basel III: Finalising Post-crisis Reforms*" published by the Basel Committee in December 2017 as the Final Basel III package, a local quantitative impact study (QIS) is currently being conducted. The first phase of the QIS covers the revised IRB approach, the revised standardised approach for credit risk, the revised operational risk framework and the output floor. This will be followed by a subsequent phase of the exercise covering other capital standards associated with the Final Basel III package.

On 14 January 2019, the Basel Committee issued a revised version of its minimum capital requirements for market risk, often referred to as the "FRTB" as they resulted from a "fundamental review of the trading book". The HKMA expects to consult the industry on its implementation proposal for Hong Kong in the second quarter of 2019. The local implementation of the new minimum capital requirements for market risk is planned for 1 January 2022, in accordance with the timeline set by the Basel Committee.

Leverage ratio

For the purpose of implementing the revised leverage ratio framework within the Final Basel III package, the Basel Committee has conducted public consultations on further policy proposals in respect of certain specific areas of the framework, viz. the treatment of client cleared derivatives for the purpose of leverage ratio calculation as well as revised disclosures to address potential window dressing behaviours of banks to elevate disclosed leverage ratios through temporary reductions of the volumes of certain short-term transactions. Pending finalisation of the policies by the Basel Committee, the HKMA will develop the relevant policy proposals for their implementation in consultation with the industry.

Disclosure standards

The HKMA will, in consultation with the industry, revise the SPM module on "Guideline on the Application of the Banking (Disclosure) Rules" as well as the standard disclosure templates and tables to reflect the latest disclosure framework set out in the Banking (Disclosure) Rules, having regard to the relevant guidance from the Basel Committee.

In December 2018, the Basel Committee released the *Pillar 3 Disclosure Requirements – Updated Framework* ("2018 package") to incorporate revisions to the Pillar 3 framework, mainly to reflect requirements arising from the Final Basel III package. These requirements constitute the third and final phase of the revised Pillar 3 disclosure framework. The HKMA will consider these requirements, taking into account local circumstances, and consult the industry on its proposed implementation approach in due course.

Liquidity standards

The HKMA is preparing to amend the Banking (Liquidity) Rules in order to include Basel III compliant triple-B rated debt securities and listed common equities as "level 2B" high quality liquid assets under the LCR. Taking this opportunity, a required stable funding charge of 5% on an AI's total derivative liabilities will be introduced under the NSFR in order to implement the Basel Committee's current guidance in this aspect. These amendments are targeted to take effect from 1 January 2020. Similar amendments will also be made for the LMR and CFR.

Exposure limits

A set of new BELR is scheduled to come into operation on 1 July 2019. The HKMA will issue a Banking (Exposure Limits) Code to provide technical clarifications to the rules. The HKMA is also updating the related SPM modules, including those on "Large Exposures and Risk Concentrations", "Exposures to Connected Parties", "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". The industry will be consulted in the second quarter of 2019 on proposed revisions of these SPM modules and proposed changes to the reporting requirements of large exposures and connected party exposures incidental to the implementation of the BELR.

Banking Stability

Development of Supervisory Policies

Other supervisory policies and risk management guidelines

To reflect developments in related regulatory requirements and international standards, the HKMA plans to update certain SPM modules, including those on "Recovery Planning", "Foreign Exchange Risk Management", "Supervisory Review Process", "Overview of Capital Adequacy Regime for Locally Incorporated Authorized Institutions", "Guideline on a Sound Remuneration System", and "Systemically Important Banks".

Compliance with regulatory regime for over-the-counter 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

Based on the discussions with the industry on topics pivotal to technological developments and bank culture reform, the HKMA will take a proportionate approach in formulating and refining supervisory policies. The HKMA will also continue to collect feedback from the industry regularly on other issues with significant supervisory or business impact on the banking sector.

Accounting standards

In respect of IFRS 9, the Basel Committee continues to assess the longer-term implications of the required expected credit losses under the accounting standard on the regulatory capital framework. The HKMA will update its prudential framework for AIs as appropriate, taking into account the related standards and guidance issued by the Basel Committee. Meanwhile, 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 on the existing prudential requirements on AIs.

Resolution Office

Whilst the HKMA has made substantial progress in 2018, the task of ensuring there is an operational resolution regime for AIs is a multi-year programme. For 2019, the HKMA will prioritise the following topics within its three core purposes (Table 7).

Table 7 HKMA's forward priorities on resolution in 2019

I. Resolution Standards	II. Resolution Planning	III. Resolution Authority Functions
■ Formulate LAC disclosure templates and reporting returns, and begin the design of a non-pre-positioned LAC resources management policy framework ■ Consult on and finalise the CoP chapter on operational continuity in resolution ■ Consult on policy proposals for imposing contractual requirements regarding stays on early termination rights in financial contracts ■ Continue to contribute to international and FSB policy formulation ■ Publish arrangements on an AI resolution levy	■ Advance bilateral resolution planning programmes with D-SIBs, assessing resolvability and working with banks to address impediments to an orderly resolution ■ Implement LAC requirements under the LAC Rules for D-SIBs ■ Lead regional resolution planning for a G-SIB and participate in cross-border resolution planning via 12 CMGs and resolution colleges, including hosting meetings in Hong Kong ■ Roll out core information requirements to locally incorporated AIs other than D-SIBs with total consolidated assets above HK$300 billion	■ Continue the development of the HKMA's resolution liquidity facilities framework ■ Develop an inter-agency CMF with other Hong Kong authorities ■ Chair and provide a secretariat function for the new EMEAP FMR ■ Continue to organise and refine the CMF and CMCG ■ Take forward the development of the HKMA's resolution mechanics, such as bail-in ■ Establish a resolution advisory panel for the appointment of external professional advisers

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. In particular, in the light of the increasing trend of digitalisation of financial services, the HKMA will review the requirements related to consumer protection, including provisions in the Code, and consider whether any revisions or new requirements are needed. It will continue to monitor AIs' compliance with the Code through various means, including via AIs' self-assessment and the handling of relevant complaints against AIs.

The HKMA will monitor the industry's implementation of measures recommended in the *Practical Guideline on Barrier-free Banking Services*.

On the supervision of bank culture, the HKMA will gather from AIs insights, lessons learnt and issues encountered through the supervisory measures announced in December and monitor the development of bank culture while exploring other supervisory measures, taking into account overseas experience.

Banking Stability

The HKMA will continue to work closely with HKAB in following up with TransUnion on the full investigation and enhancement to security controls being undertaken by TransUnion. Drawing insights from the incident, the HKMA will continue to discuss with the banking industry how to enhance credit referencing arrangements, including the benefits of having more than one credit reference agency for the banking industry in Hong Kong.

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 observations from the MSP in respect of account opening by AIs in considering further follow-up actions, and will continue to monitor the effectiveness of measures adopted by AIs related to customer interfacing aspect of account opening processes. The HKMA will also continue to work closely with the banking industry to build on the feedback gleaned from the implementation of remote onboarding initiatives for customers, to explore further enhancement of the efficiency and effectiveness of CDD processes through greater use of technology.

Deposit protection

A payout rehearsal will be conducted to test the capability of the Hong Kong Deposit Protection Board and its network of service providers in using the new payout system and infrastructure to ensure payout readiness. Continued efforts will be made to improve payout efficiency, including the development of different payment channels. The compliance programme for monitoring DPS member banks' 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 member banks make appropriate representations to depositors in respect of the protection status of deposits. New "DPS Piggy Bank"-themed advertising and segment-focused consumer campaigns will be launched to deepen public understanding of the DPS.

Enforcement

The HKMA will continue to enforce requirements under various statutory regimes relevant to AIs and stored value facility licensees, including investigations under the AMLO, as well as conduct issues that prejudice customer interests. At the same time, the HKMA will also collaborate closely with the IA, which will become fully operational within 2019, in relation to the implementation and enforcement of requirements under the Insurance Ordinance and the exercise of such powers as may be delegated to the Monetary Authority under the Insurance Companies (Amendment) Ordinance 2015.

Capacity building in the banking sector

Director empowerment

With positive feedback received on the activities held so far to equip directors in the discharge of their roles and responsibilities, the HKMA will continue such activities to further empower directors. The HKMA will continue its long-term co-operation with the China Banking and Insurance Regulatory Commission and organise a high-level seminar for INEDs in 2019, giving them insights into the developments of Mainland China in areas such as the economy, financial regulations, technologies, and international relations.

The HKMA will also continue to foster dialogue with INEDs through the launch of a chatroom which will provide them with a direct line of communication with the HKMA.

Talent development for banking practitioners

The HKMA will maintain close collaboration with the banking industry to review the effectiveness of the ECF in enhancing the professional development of banking practitioners. In the coming year, the HKMA will work with the banking industry and relevant professional bodies to launch the credit risk management module and develop a new module on risk management and compliance. Going forward, the HKMA will also continue with an ongoing review and enhancement of the ECF modules and explore other potential areas of talent development, having regard to the evolving needs of the banking industry.

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.

Academy of Finance

In consultation with the Preparatory Committee, the HKMA will continue with the work for establishing the AoF by mid-2019.

Consumer education

Further publicity initiatives, including videos and other publicity materials, will be carried out to promote smart and responsible use of banking and other financial services under the HKMA's supervision. In the light of the positive feedback from the pilot programme, the HKMA plans to launch the second phase of the cross-generation outreach educational programme in 2019-20 to reach 30 kindergartens. In addition, the HKMA will explore further collaboration with different 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. In particular, the HKMA will keep in view the suitability and adequacy of the FPS oversight framework on an ongoing basis, taking into account system behaviours, feedback from stakeholders and overseas developments, and refine the framework as appropriate.

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. In particular, the HKMA will focus on the cyber resilience of FMIs under its purview. The HKMA will also continue to work with relevant authorities to further strengthen co-operative oversight arrangements where appropriate.