Committee on
Payments and Market
Infrastructures

Board of the International
Organization of Securities
Commissions

Implementation monitoring of PFMI: Level 2 assessment report for Hong Kong SAR

May 2017

BANK FOR INTERNATIONAL SETTLEMENTS

OICU-IOSCO

This publication is available on the BIS website (www.bis.org) and the IOSCO website (www.iosco.org).

ISBN 978-92-9259-052-9 (online)

Contents

1. Executive summary

In April 2012, the Committee on Payments and Market Infrastructures (CPMI[1]) and the International Organization of Securities Commissions (IOSCO) issued the *Principles for financial market infrastructures* (PFMI).[2] The principles within the PFMI (the Principles) set expectations for the design and operation of key financial market infrastructures (FMIs) to enhance their safety and efficiency and, more broadly, to limit systemic risk and foster transparency and financial stability. The Principles apply to all systemically important payment systems (PSs), central securities depositories (CSDs), securities settlement systems (SSSs), central counterparties (CCPs) and trade repositories (TRs) (collectively FMIs). These FMIs collectively clear, settle and record transactions in financial markets. In line with the G20's expectations, CPMI and IOSCO members have committed to implement and apply the PFMI in their respective jurisdictions.

Following the publication of the PFMI, the CPMI and IOSCO agreed to monitor the implementation of the PFMI in 28 jurisdictions that are members of the Financial Stability Board (FSB), the CPMI or IOSCO.[3] To this end, the CPMI-IOSCO Steering Group[4] established a standing working-level group (the Implementation Monitoring Standing Group (IMSG)) to design, organise and carry out the implementation monitoring assessments.[5]

The implementation monitoring programme is proceeding at three levels: a Level 1 assessment of the status of the implementation process; a Level 2 assessment of the completeness of the implemented framework and its consistency with the PFMI; and a Level 3 assessment of the consistency in outcomes of such frameworks.[6] While, in the case of the Principles, Level 2 and Level 3 assessments have proceeded separately, in the case of the Responsibilities the IMSG considered it more appropriate and more efficient to carry out a combined Level 2 and Level 3 assessment.[7]

[1] The Committee on Payment and Settlement Systems (CPSS) changed its name to the Committee on Payments and Market Infrastructures (CPMI) on 1 September 2014. Please note that references to reports published before that date use the Committee's old name.

[2] The CPSS-IOSCO *Principles for financial market infrastructures* (April 2012) can be found on the websites of the BIS at www.bis.org/cpmi/publ/d101.htm and IOSCO at www.iosco.org/library/pubdocs/pdf/IOSCOPD377.pdf.

[3] The 28 jurisdictions participating in the PFMI implementation monitoring exercise are Argentina, Australia, Belgium, Brazil, Canada, Chile, China, the European Union, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

[4] The Steering Group comprises a subset of the members of the CPMI and the IOSCO Board, and is responsible for providing operational guidance on behalf of the parent committees on joint CPMI-IOSCO work.

[5] The IMSG comprises representatives from a subset of the Steering Group member jurisdictions that reflect a balance of CPMI and IOSCO members and geographical dispersion, as well as a range of supervisors/overseers of domestic and global FMIs.

[6] To date, the IMSG has completed Level 1 assessments of all 28 jurisdictions' implementation of both the Principles and the responsibilities for authorities (the Responsibilities), across all FMI types, as well as Level 2 assessments of the implementation of the Principles in respect of CCPs and TRs in the European Union, Japan and the United States, and in respect of all FMI types in Australia. The CPMI and IOSCO have also conducted the first Level 3 assessment of the implementation of the Principles; this review focused on a subset of Principles in the PFMI that relate to financial risk management and recovery practices by CCPs, including certain practices related to governance of risk management, credit risk management, liquidity risk management, margin, collateral policy and investments and default management and recovery planning. This first review considered outcomes achieved in this area by examining a number of globally and locally active CCPs that clear derivative products (both exchange-traded and over-the-counter (OTC)). More information is available at www.bis.org/cpmi/info_mios.htm?m=3%7C16%7C599.

[7] CPMI-IOSCO, *Assessment and review of application of Responsibilities for authorities*, November 2015, www.bis.org/cpmi/publ/d139.htm.

This report presents the CPMI and IOSCO conclusions of a Level 2 assessment of whether, and to what degree, the content of the legal, regulatory and oversight frameworks, including rules and regulations, any relevant policy statements, or other forms of implementation applied to systemically important payment systems, CSDs/SSSs, CCPs and TRs in Hong Kong, are complete and consistent with the Principles. It is concluded that the legal, regulatory and oversight frameworks in Hong Kong are complete and consistent with the Principles. However, it should be noted that Level 2 assessments do not evaluate whether FMIs are in observance with these measures, nor does it assess the effectiveness of the application of the legal and regulatory or oversight framework to FMIs by authorities (for example, through supervisory practices).

The work on the Level 2 assessment was carried out as a peer review from August 2016 to March 2017. The assessment reflects the status of Hong Kong's legal, regulatory and oversight framework as of 15 July 2016. Accordingly, assessment ratings reflect the implementation measures in place as of 15 July; other measures that were introduced after this date, or other material developments, are noted where relevant but were not considered in assigning ratings of consistency.

1.1 Legal and regulatory framework

The authorities responsible for regulation, supervision and oversight of FMIs in Hong Kong are the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC).

CSDs/SSSs for securities and future contracts and all CCPs are regulated exclusively by the SFC. The HKMA has exclusive regulatory and oversight authority over CSDs/SSSs for debt securities, PSs and TRs. There is no overlap in supervisory/regulatory authority across the HKMA and the SFC.

In Hong Kong, FMIs are subject to regulation, supervision and oversight based on the respective legal framework and policy mandate of the two regulators. The SFC is responsible for supervising, monitoring, and regulating the activities of Recognized Clearing Houses (RCHs) under the Securities and Futures Ordinance (SFO).[8] The HKMA is empowered under the Payment Systems and Stored Value Facilities Ordinance (PSSVFO)[9] to designate and oversee designated clearing and settlement systems (CSSs) that are material to the monetary or financial stability of Hong Kong, or to the functioning of Hong Kong as an international financial centre. The responsibilities of the HKMA for overseeing the Hong Kong Trade Repository (HKTR) are derived from the Exchange Fund Ordinance (EFO).[10]

To implement the requirements under the PFMI, the HKMA and the SFC jointly issued a statement on 28 March 2013 (HKMA and SFC Joint Statement) with regard to the adoption of the PFMI for systemically important FMIs in Hong Kong.[11] The policy statement on oversight of financial market

8 Securities and Futures Ordinance – www.elegislation.gov.hk/hk/cap571!en@2017-02-13T00:00:00.

9 Payment Systems and Stored Value Facilities Ordinance – www.elegislation.gov.hk/hk/cap584!en@2017-02-13T00:00:00.

10 Exchange Fund Ordinance – www.elegislation.gov.hk/hk/cap66!en@1997-07-01T00:00:00.

11 HKMA and SFC Joint Statement – www.hkma.gov.hk/eng/key-information/press-releases/2013/20130328-6.shtml ; or www.sfc.hk/edistributionWeb/gateway/EN/news-and-announcements/news/doc?refNo=13PR28.

infrastructures issued by the HKMA (HKMA Policy Statement)[12] also sets out the oversight framework it adopts in respect of FMIs under its purview.

In addition to the above-mentioned policy statements, the HKMA issued (i) the "Guideline on the Oversight Framework for Designated Clearing and Settlement Systems" (PSSVFO Guideline)[13] which explains the HKMA's interpretation of the oversight requirements, including the safety and efficiency requirements under Sections 7 and 8 of the PSSVFO and the process that HKMA intends to follow in the oversight of the CSSs designated under the PSSVFO; (ii) the "Guideline on Application of Principles for Financial Market Infrastructures to Designated Clearing and Settlement Systems" (HKMA PFMI Guideline)[14] which adopts the relevant requirements specified in the PFMI and the additional note "Application of Principles for Financial Market Infrastructures to central bank FMIs" issued by CPMI-IOSCO (CPMI-IOSCO CBFMI guidance)[15] and (iii) the "Guideline on the Oversight Framework for the Hong Kong Trade Repository" (TR Guideline),[16] which explains the general requirements of the HKMA in overseeing the HKTR. The SFC issued and updated the "Guidelines on the application of the CPMI-IOSCO Principles for Financial Market Infrastructures" (SFC PFMI Guidelines) in August 2013 and May 2016 respectively.[17]

1.2 Key findings of the assessment

Payment systems

The Assessment Team (AT) concluded that the Principles have been implemented in a complete and consistent manner through the HKMA Policy Statement and the two guidelines issued by HKMA under Section 54(1)(a) of the PSSVFO covering the oversight of CSSs: the PSSVFO Guideline and the HKMA PFMI Guideline. The designated PSs are required to observe the requirements in both guidelines, which are to be read in conjunction with each other.

Central counterparties and central securities depositories / securities settlement systems

The AT concluded that the Principles have been implemented in a complete and consistent manner through the HKMA and SFC Joint Statement and the guidelines issued by both authorities.

Trade repositories

The AT concluded that the Principles have been implemented in a complete and consistent manner through the HKMA Policy Statement taken together with the TR Guideline.

[12] HKMA Policy Statement – www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/FMI_oversight.pdf.

[13] PSSVFO Guideline – www.gld.gov.hk/egazette/pdf/20162020/egn201620202777.pdf.

[14] HKMA PFMI Guideline – www.gld.gov.hk/egazette/pdf/20162020/egn201620202778.pdf.

[15] CPMI-IOSCO CBFMI guidance – www.bis.org/cpmi/publ/d130.pdf.

[16] TR Guideline – www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/TR_guideline.pdf.

[17] SFC PFMI Guidelines – www.sfc.hk/web/EN/assets/components/codes/files-current/web/guidelines/guidelines-on-the-application-of-the-cpss-iosco-principles-for-financial-market-infrastructures/Guidelines%20on%20the%20Application%20of%20the%20CPMI-IOSCO%20Principles%20for%20Financial%20Market%20Infrastructures%20May%202016%20onwards.pdf. The original name of this guideline – "Guidelines on the application of the CPSS-IOSCO Principles for Financial Market Infrastructures" – was changed to "Guidelines on the application of the CPMI-IOSCO Principles for Financial Market Infrastructures" to reflect the name change of "CPSS" to "CPMI".

FMIs owned and operated by the HKMA

In Hong Kong, three FMIs are owned and operated by the HKMA, namely the Hong Kong Dollar Clearing House Automated Transfer System (HKD CHATS) (PS), Central Moneymarkets Unit (CMU), (CSD/SSS), and the HKTR (TR).

Following the publication of the CPMI-IOSCO CBFMI guidance,[18] HKMA updated the HKMA PFMI Guideline (which covers SSSs and PSs) and the TR Guideline[19] in May 2016 (before the cut-off-date of this assessment), which incorporated all the issues mentioned in the CPMI-IOSCO CBFMI guidance. With the HKMA PFMI Guideline and the TR Guideline, the HKMA incorporated all the relevant key considerations (KCs) into its regulatory requirements, with provisions allowing for flexibility in applying to central bank-operated systems the KCs that may be applied differently[20] or that are not intended to constrain central bank policies,[21] as stated in the CPMI-IOSCO CBFMI guidance.

The principles applied to central bank-owned and operated FMIs in Hong Kong, within the context of this Report, have been evaluated to be consistent with the PFMI, noting that the approach taken by the HKMA regarding the FMIs it operates is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO CBFMI guidance.

1.3 Summary response from the assessed jurisdiction's authorities

The Hong Kong authorities (the HKMA and SFC) welcome the result of the PFMI Implementation Monitoring Level 2 assessment conducted by the CPMI-IOSCO Implementation Monitoring Standing Group, which concluded that the legal, regulatory and oversight frameworks implemented by the Hong Kong authorities are complete and consistent with the PFMI principles, with no issues identified.

The Hong Kong authorities would like to express their appreciation of the time, efforts and professionalism of the assessment team.

The Hong Kong authorities considered the Level 2 assessment a useful exercise, and are supportive of its goals to promote completeness and consistency of PFMI implementation, and thereby contribute to the safety, efficiency and resilience of the financial infrastructure supporting global financial markets.

18 The CBFMI guidance explains how the PFMI applies to FMIs that are owned and operated by central banks, expanding on paragraph 1.23 of the PFMI, and further clarifies the interaction between the PFMI and central bank policies.

19 The TR Guideline was updated on 13 July 2016 – www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/TR_guideline.pdf.

20 The principles that may be applied differently are Principle 2 KC 3 and 4, Principle 3 KC 4 and Principle 15 KCs 2–5.

21 The principles that are not intended to constrain central bank policies are: Principles 4, 5, 13, 16 and 18.

2. Introduction

This report presents the CPMI and IOSCO conclusions of the Level 2 assessment of the Principles across all FMI types in Hong Kong. The assessment reflects the status of the Hong Kong legal, regulatory and oversight framework as of 15 July 2016. This assessment was conducted as a peer review from August 2016 to March 2017.[22] Accordingly, assessment ratings reflect the implementation measures in place as of 15 July 2016; other measures that were introduced after this date, or other material developments, are noted where relevant but were not considered in assigning ratings of consistency.

This assessment is part of the effort to conduct Level 2 assessments of the legal, regulatory and oversight frameworks implementing the Principles for all FMI types in the 28 jurisdictions participating in the PFMI implementation monitoring exercise. For practical reasons, the Level 2 assessments are being carried out sequentially for groups of jurisdictions that have reported that final implementation measures for the Principles are in force, corresponding to the maximum rating in the Level 1 assessments.[23]

The counterparts for the assessment were the HKMA and the SFC, as these are the two authorities responsible for the regulation, supervision and oversight of FMIs in Hong Kong.

2.1 Broader context of the Level 2 assessment

In line with the G20's expectations, CPMI and IOSCO members have undertaken to incorporate the Principles and the Responsibilities included in the PFMI in their legal and regulatory frameworks. The CPMI and IOSCO regard full, timely and consistent implementation of the PFMI as fundamental to ensuring the safety and soundness of FMIs, avoiding regulatory arbitrage, and supporting the resilience of the global financial system.

To that end, the CPMI and IOSCO have been actively monitoring the implementation of the PFMI based on a monitoring framework that involves assessment at three levels:

(1) Level 1, to assess whether jurisdictions have completed the process of adopting the legislation, regulations and other policies that will enable them to implement the Principles and Responsibilities;

(2) Level 2, to assess whether the content of legislation, regulations and policies (the regulatory framework) is complete and consistent with the Principles and the Responsibilities; and

(3) Level 3, to assess whether there is consistency in the outcomes of implementation of the Principles and Responsibilities.

The Level 1 exercise covered jurisdictions' adoption of both the Principles and Responsibilities, across all FMI types, and was based on a self-assessment by the jurisdictions. The Level 2 and Level 3 assessments of the Principles and the Responsibilities, by contrast, have been conducted as peer reviews across jurisdictions and in much greater detail.

[22] The CPMI and IOSCO thank the Assessment Team, which was led by Nalan Sahin Urkan (Capital Markets Board of Turkey) with the participation of, Samira Bourahla (Bank of France), Alexandra Merle-Huet (Federal Reserve Bank of New York, until November 2016), Alan Basmajian (Federal Reserve Bank of New York, since November 2016), Radoslav Raykov (Bank of Canada), Tom Kokkola (European Central Bank), Sarah Parkinson (Bank of England) and Stephanie Kim Park (US Securities and Exchange Commission) as well as Manabu Kishimoto (IOSCO Secretariat) and Philippe Troussard (CPMI Secretariat) as supporting members. The CPMI and IOSCO would also like to thank those who provided support to the Assessment Team, including Edip Acat (Bundesanstalt für Finanzdienstleistungsaufsicht (Bafin)) and Nurseda Sayin (Capital Markets Board of Turkey).

[23] CPMI-IOSCO, *Implementation monitoring of PFMI: Third update to Level 1 assessment report*, June 2016, www.bis.org/cpmi/publ/d145.htm.

The Principles assessments are ongoing, and are being considered separately at Level 2 and Level 3. For the Responsibilities, the IMSG combined the Level 2 and Level 3 assessments into a single exercise. The IMSG focused therefore on both the measures taken by the relevant authority to fulfil the Responsibilities, including its powers and the framework and processes in place to meet the requirements under the Responsibilities (Level 2), and how these measures translated into observed outcomes (Level 3).

The CPMI and IOSCO have conducted four Level 1 assessments since the publication of the PFMI. The initial assessment was published in August 2013[24] and the first update was published in May 2014,[25] followed by the second update in June 2015[26] and the third update in June 2016.[27] Overall, the third update shows that further progress has been made by the 28 participating jurisdictions since the previous update in completing the process of adopting legislation, regulations and/or policies to support implementation of the PFMI. The Level 1 assessments also showed that jurisdictions have implemented, or are in the process of implementing, the PFMI in different ways. Depending on the national legal and regulatory or oversight framework, some jurisdictions use a policy-based approach (ie rely on a policy statement as the primary tool for adopting the PFMI), some use a rules-based approach (ie rely on rules and/or regulations corresponding to the PFMI) and others combine these two approaches.

In this respect, both the HKMA and the SFC can be described as having adopted a mixture of policy-based and/or rules-based approaches for implementing the Principles for the different FMI types.[28] In the Level 1 assessments, Hong Kong reported that the final implementation measures are in force for all FMI types, for both the Principles and the Responsibilities. In the Level 2 and Level 3 assessments of the Responsibilities, Hong Kong was assessed to observe all the responsibilities for all FMI types.

The CPMI and IOSCO will continue to monitor jurisdictions' progress in implementing the Principles and Responsibilities in future assessments.

2.2 Objective and rating

The aim of the Level 2 assessment is to determine whether, and to what degree, the content of the legal and regulatory or oversight framework, including any relevant policy statements or other forms of implementation, applied in Hong Kong is complete and consistent with the Principles. The focus of the Level 2 assessment is on the relevant framework itself, not on the application of this framework by authorities, nor on the FMIs' observance.

In conducting the assessment, the CPMI and IOSCO assessed whether there are gaps or shortcomings between implementation measures and the Principles and, if so, evaluated the materiality of the potential impact of those gaps. Ratings were then assigned based on these determinations to

[24] CPSS-IOSCO, *Implementation monitoring of PFMIs – Level 1 assessment report*, August 2013, www.bis.org/cpmi/publ/d111.htm.

[25] CPSS-IOSCO, *Implementation monitoring of PFMIs: first update to Level 1 assessment report*, May 2014, www.bis.org/cpmi/publ/d117.htm.

[26] CPMI-IOSCO, *Implementation monitoring of PFMIs: Second update to Level 1 assessment report*, June 2015, www.bis.org/cpmi/publ/d129.htm.

[27] *CPMI-IOSCO, Implementation monitoring of PFMI: Third update to Level 1 assessment report*, June 2016, www.bis.org/cpmi/publ/d145.htm.

[28] Refer to Section 3 for the overview of the regulatory, supervisory and oversight framework in Hong Kong.

reflect the degree of completeness and consistency between an implementation measure and a particular Principle.

The rating framework used in Level 2 assessments (Table 1) is an adaptation of the approach described in the PFMI Assessment Methodology (AM).[29] In order to reflect the fact that the purpose of the Level 2 assessment is to evaluate the completeness and consistency of a jurisdiction's implementation measures, rather than whether FMIs in the jurisdiction are in observance of the Principles, the rating levels are: "Consistent", "Broadly consistent", "Partly consistent", "Not consistent" and "Not applicable".

Status rating of the Level 2 assessment — Table 1

Consistent	The jurisdiction's regulatory framework is consistent with the Principle. The assessment has identified no gaps or shortcomings, or only a few gaps and/or shortcomings that have no material impact on completeness and/or consistency.
Broadly consistent	The jurisdiction's regulatory framework is broadly consistent with the Principle. The assessment has identified gaps and/or shortcomings that have a minor impact on completeness and/or consistency.
Partly consistent	The jurisdiction's regulatory framework is partly consistent with the Principle. The assessment has identified gaps and/or shortcomings that have a significant impact on completeness and/or consistency.
Not consistent	The jurisdiction's regulatory framework is not consistent with the Principle. The assessment has identified gaps and/or shortcomings that have a major impact on completeness and/or consistency.
NA – No implementation measures needed (ie not applicable)	This status corresponds to the case where no relevant FMI exists that is within the scope of the Principles. A rating of "NA" will be indicated only if no relevant regulatory measures are being taken and no such FMI is expected to develop within the jurisdiction.

2.3 Scope

This report covers implementation measures in Hong Kong for CCPs, PSs, CSDs/SSSs, and TRs. The main implementation measures assessed for Hong Kong comprise: Payment Systems and Stored Value Facilities Ordinance of Hong Kong (PSSVFO), Securities and Futures Ordinance of Hong Kong (SFO), Exchange Fund Ordinance (EFO), Guideline on the Application of Principles for FMIs to Designated Clearing and Settlement Systems (HKMA PFMI Guideline), Guidelines on the application of the CPMI-IOSCO Principles for Financial Market Infrastructures (SFC PFMI Guidelines), Guideline on the Oversight Framework for Designated Clearing and Settlement Systems (PSSVFO Guideline), Guideline on the Oversight Framework for the Hong Kong Trade Repository (TR Guideline), Policy Statement of HKMA on Oversight of Financial Market Infrastructures by the HKMA (HKMA Policy Statement) and the HKMA and SFC Joint Statement dated 28 March 2013 on the adoption of the PFMI for systemically important FMIs in Hong Kong (HKMA and SFC Joint Statement).

The assessed legal, regulatory and oversight frameworks are further described in Section 3.

2.4 Process

This Level 2 assessment was carried out in three stages over the course of seven months, and the methodology used was the same as the one used for previous Level 2 assessments. In developing its

[29] CPSS-IOSCO, *Principles for financial market infrastructures: Disclosure framework and assessment methodology*, December 2012, www.bis.org/cpmi/publ/d106.htm.

methodology, the IMSG drew heavily on the AM, published in December 2012. The assessment proceeded as follows:

(i) Collection of information based on the Hong Kong authorities' responses to questionnaires;

(ii) Off-site review and follow-up exchange of information and discussions with the Hong Kong authorities and other members of the IMSG; and

(iii) Review of ratings by and response from the Hong Kong authorities.

The aim was to gain insight into the regulatory, supervisory and oversight framework as well as the content of existing legislation, regulations and policies used in the implementation of the Principles for all FMI types established in Hong Kong.

The AT conducted a peer review based on the information provided by the relevant authorities as noted above. Interactions between the AT members and Hong Kong authorities helped ensure that the AT understood the content and intent of the Hong Kong framework and gave the assessed jurisdiction an opportunity to provide feedback to the AT. In addition, discussions with other members of the IMSG helped ensure that a consistent approach was applied across all assessed FMI types and that the approach was consistent with that of previous assessments.

The report also reflects input from the Hong Kong authorities who reviewed the findings and recommendations and provided a jurisdictional response. A concise summary of the views of the Hong Kong authorities is included in the executive summary section of the report.

3. Overview of the regulatory, supervisory and oversight framework

The authorities responsible for regulation, supervision and oversight of FMIs in Hong Kong are the HKMA and the SFC.

CSDs/SSSs for securities and future contracts and all CCPs are regulated exclusively by the SFC. The HKMA has exclusive regulatory and oversight authority over CSDs/SSSs for debt securities, PSs and TRs. There is no overlap in supervisory/regulatory authority across the HKMA and the SFC.

To avoid the possibility of introducing any incompatible regulatory requirements, the HKMA and the SFC have entered into a memorandum of understanding[30] to set out the cooperative oversight arrangements between the two regulators, including the arrangements for mutual consultation.

3.1 Payment systems

In Hong Kong, payment systems, including systemically important payment systems, are overseen and regulated by the HKMA. The HKMA is empowered under the PSSVFO, among other things, to designate and oversee CSSs (including payment systems) that are material to the monetary or financial stability of Hong Kong, or to the functioning of Hong Kong as an international financial centre. The purpose of designation under the PSSVFO is to promote the general safety and efficiency of the designated CSSs.

To implement the requirements under the PFMI, the HKMA and the SFC jointly issued a policy statement (the HKMA and SFC Joint Statement) in March 2013 on the adoption of PFMI for the systemically important FMIs in Hong Kong. The HKMA has also issued the HKMA Policy Statement setting out the oversight framework it adopts in respect of FMIs (including PSs) under its purview.

[30] The memorandum of understanding is available at www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/CSSO_MoU.pdf.

The PSSVFO empowers the HKMA to issue guidelines to explain its role, policies and requirements in relation to the designation and oversight of designated CSSs. In this context, the HKMA has issued two guidelines under Section 54(1)(a) of the PSSVFO covering the oversight of CSSs (including PSs and CSD/SSS): (i) the PSSVFO Guideline, which explains the HKMA's interpretation of the oversight requirements, including the safety and efficiency requirements under Sections 7 and 8 of the PSSVFO and the process that the HKMA intends to follow in its oversight of the CSSs designated under the PSSVFO; and (ii) the HKMA PFMI Guideline, which adopts the relevant requirements specified in the PFMI and the additional note on CPMI-IOSCO CBFMI guidance. The designated PSs are required to observe the requirements in both Guidelines, which are to be read in conjunction with each other. The HKMA will take into account the observance of the PFMI requirements in determining whether the settlement institution and/or system operator of a designated CSS has complied with the statutory obligations under the PSSVFO.

The HKMA Policy Statement sets out, among other things, that the HKMA conducts annual assessments of the compliance of each FMI under its purview. If a designated CSS fails to observe any part of the two guidelines, the HKMA has the power, under PSSVFO, to give directions under Section 13 or impose operating rules under Section 14 to address such failure.

As of the information cut-off date, the Hong Kong Dollar Clearing House Automated Transfer System (HKD CHATS) that is owned and operated by the HKMA, USD CHATS, EUR CHATS and RMB CHATS (which are the RTGS systems respectively for the Hong Kong dollar, US dollar, euro and renminbi) and the Continuous Linked Settlement System (CLS) are systemically important payment systems that are designated (and granted a certificate of finality) under the PSSVFO.

Regarding the CLS system, CLS Bank is regulated and supervised by the US Federal Reserve as an Edge corporation. The HKMA participates in the cooperative oversight arrangements of CLS and is a member of the CLS Oversight Committee (OC). The cooperative oversight arrangement is specified in the Protocol for the Cooperative Oversight Arrangement of CLS[31] signed by the central banks/monetary authorities overseeing the CLS, including the HKMA. The HKMA will use the information obtained from the OC, among other things, to consider whether the CLS continues to meet the requirements under the PSSVFO.

3.2 Central counterparties

The SFC supervises, monitors and regulates activities carried out by RCHs under the SFO. The term "clearing house" is defined in Section 1 Part 1 of Schedule 1 to the SFO and includes SSSs and CCPs.

The recognition process under Section 37(1) of the SFO, which is mandatory for a CCP based in Hong Kong, makes an RCH subject to the regulation, supervision and oversight of the SFC in accordance with the provisions of Part III of the SFO. The SFC considers that all RCHs are systemically important FMIs in Hong Kong. From the information provided by Hong Kong authorities as of 15 July 2016, the following RCHs are subject to the oversight of the SFC: Hong Kong Securities Clearing Company Ltd. (HKSCC), HKFE Clearing Corporation Ltd. (HKCC), the SEHK Options Clearing House Ltd. (SEOCH), and the OTC Clearing Hong Kong Limited.

To avoid regulatory overlap between the HKMA and the SFC, Section 4(2) of the PSSVFO stipulates that the HKMA's power to designate and oversee FMIs does not cover a CSS that is, or is operated by, a company recognised as a clearing house under Section 37(1) of the SFO.

[31] The Protocol for the Cooperative Oversight Arrangement of CLS – www.federalreserve.gov/paymentsystems/cls_protocol.htm.

Pursuant to the powers under Section 399(1) of the SFO, the SFC published the SFC PFMI Guidelines in August 2013, and the SFC PFMI Guidelines were recently updated in May 2016 to set out the KCs that the SFC considered relevant in meeting the standards set by the PFMI[32] and to clarify that RCHs are not expected to observe Principle 24 of the PFMI.

The statutory obligations of a RCH can be found under Section 38 of the SFO. The main duties of a RCH are to ensure:

- that an RCH will provide orderly, fair and expeditious clearing and settlement arrangements for transactions in securities, futures contracts or OTC derivative contracts that are cleared or settled through its facilities;
- that an RCH will prudently manage risks associated with an RCH's business and operations;
- that an RCH will discharge its duties in the interests of the public, having particular regard to the interests of the investing public and will ensure that the interests of the public prevail where they conflict with the interest of an RCH;
- that an RCH will operate its facilities in accordance with the rules made under Section 40 and approved by the SFC under Section 41 of the SFO;
- that an RCH will formulate and implement appropriate procedures for ensuring that its clearing participants comply with the rules; and
- that an RCH will at all times provide and maintain: (i) adequate and properly equipped premises; (ii) competent personnel; and (iii) automated systems with adequate capacity, facilities to meet contingencies or emergencies, security arrangements and technical support, for the conduct of its business.

3.3 Central securities depositories and securities settlement systems

The HKMA and the SFC are both empowered to supervise CSDs and SSSs. The HKMA has exclusive regulatory and oversight authority over CSDs and SSSs for debt securities, whereas the SFC regulates CSD and SSS for the stock market (HKSCC). There is no overlap in supervisory/regulatory authority across the HKMA and SFC.

The HKMA's regulatory role regarding CSDs and SSSs is set out in the PSSVFO. The PSSVFO empowers the HKMA to designate and oversee CSSs (including CSDs/SSSs) that are material to the monetary or financial stability of Hong Kong, or to the functioning of Hong Kong international financial centre. The designation process under the PSSVFO allows the HKMA to encourage the general safety and efficiency of the designated CSD/SSS. The Central Moneymarkets Unit (CMU), which is the CSD/SSS for debt securities, is designated under the PSSVFO and is owned and operated by the HKMA.

The HKMA published two guidelines under Section 54(1)(a) of the PSSVFO to cover the oversight of CSDs/SSSs: the PSSVFO Guideline and the HKMA PFMI Guideline of May 2016. The designated CSDs/SSSs are required to observe the requirements in both Guidelines, which are to be interpreted in conjunction with each other.

The HKMA has also issued the HKMA Policy Statement setting out the oversight framework adopted in respect of FMIs under its purview.

[32] SFC PFMI Guidelines – www.sfc.hk/web/EN/assets/components/codes/files-current/web/guidelines/guidelines-on-the-application-of-the-cpss-iosco-principles-for-financial-market-infrastructures/Guidelines%20on%20the%20Application%20of%20the%20CPMI-IOSCO%20Principles%20for%20Financial%20Market%20Infrastructures%20May%202016%20onwards.pdf.

The SFC supervises, monitors and regulates activities carried out by RCHs under the SFO. The term "clearing house" is defined in Section 1 in Part 1 of Schedule 1 to the SFO and includes SSSs and CCPs. Any undertaking wishing to become a RCH must seek recognition under Section 37(1) of the SFO and be subject to the regulation, supervision and oversight of the SFC in accordance with the provisions of Part III of the SFO. The statutory obligations of a RCH can be found under Section 38 of the SFO.

The SFC published the SFC PFMI Guidelines in August 2013 and the SFC PFMI Guidelines were updated in May 2016 to set out the key considerations that the SFC considered relevant in meeting the standards set by the PFMI and to clarify that RCHs are not expected to observe Principle 24 of the PFMI.

3.4 Trade repositories

In Hong Kong, the HKMA-owned and operated trade repository is also overseen and regulated by the HKMA. The powers of the HKMA for overseeing the OTC Derivatives Trade Repository (HKTR) are derived from the EFO. Section 3(1A) of the EFO provides that, in addition to the primary purpose of the Exchange Fund, "the Financial Secretary may, with a view to maintaining Hong Kong as an international financial centre, use the Exchange Fund as he thinks fit to maintain the stability and integrity of the monetary and financial systems of Hong Kong".

Taking into account the important role performed by a trade repository in supporting regulatory authorities in carrying out their market surveillance responsibilities, which contributes to maintaining monetary and financial stability, the HKMA considers that the proper functioning of the HKTR is systemically important to Hong Kong's monetary and financial stability and therefore oversees the HKTR with reference to the relevant principles in the CPMI-IOSCO PFMI. To implement the requirements under the PFMI, the HKMA and the SFC jointly issued a statement in March 2013 on the adoption of PFMI for the systemically important FMIs in Hong Kong. The HKMA has also issued the HKMA Policy Statement setting out the oversight framework it adopts in respect of FMIs (including TR) under its purview.

Moreover, the HKMA has issued the TR Guideline which explains the general requirements of the HKMA in overseeing HKTR. The TR Guideline adopts the relevant requirements specified in the PFMI and the additional CPMI-IOSCO CBFMI guidance.

4. Assessment and recommendations

4.1 Summary assessment of completeness and consistency with the Principles

This section provides a high-level summary of how consistent and complete the PS, CCP, CSD/SSS and TR regimes in Hong Kong are with regard to the Principles. A more detailed assessment, as well as notes or comments to the assigned ratings, is provided in tabular form in Section 4.2.

4.1.1 Overview

The Assessment Team (AT) found that Hong Kong has consistently adopted the Principles for all FMI types through guidelines that mirror the language and the structure of the Principles. As reflected in the HKMA and SFC Joint Statement, the SFC and the HKMA took similar approaches to the adoption of the PFMI.

For PSs, the HKMA's adoption of the Principles through both a policy statement and the issuance of a guideline was assessed to be consistent and complete.

For CCPs and CSDs/SSSs, the HKMA and the SFC have adopted the Principles completely and consistently.

For the TR, the HKMA's adoption of the Principles through both a policy statement and the issuance of a guideline was assessed to be consistent and complete.

4.1.2 Implementation measures

In conducting the assessment, the AT considered all of the HKMA's and the SFC's implementation measures. The codes and guidelines of the SFC have been considered in the assessment because, although they are not subsidiary legislation[33] and failure to comply with them does not by itself render a person liable to any judicial or other proceedings, the SFC has mechanisms to induce change or enforce corrective actions by an FMI. This conclusion is based on the fact that the codes and guidelines can be admissible in evidence in any proceedings under the SFO before any court. In addition, it is stated in the SFC PFMI Guidelines, that the SFC expects RCHs to observe the PFMI (including any related supplemental guidance on observance of the PFMI issued by CPMI-IOSCO from time to time) on an on-going basis and that the SFC will take such observance into account in assessing if RCHs have discharged their duties under the SFO.

On the basis of the HKMA and SFC Joint Statement, the SFC's expectation that RCHs will comply with the PFMI, monitoring on an ongoing basis, as well as its commitment to take such observance into account, it is seen that the SFC PFMI Guidelines create a self-binding effect on the SFC and provide the SFC with a mechanism to induce change or enforce corrective actions by an FMI. Therefore, the SFC PFMI Guidelines have been taken into account in the assessment with regard to Responsibility B, KC 1[34] and further explained by paragraph 4.2.3 of the PFMI.

The PSSVFO Guideline and the HKMA PFMI Guideline have been considered in the assessment because the HKMA has the power to give directions under Section 13 or impose operating rules under Section 14 of PSSVFO to address failures of clearing and settlement systems to observe any part of the two oversight guidelines by the HKMA, both issued under Section 54(1)(a) of the PSSVFO.

[33] www.sfc.hk/web/EN/rule-book/codes-and-guidelines/.

[34] "Authorities should have powers or other authority consistent with their relevant responsibilities, including the ability to obtain timely information and to induce change or enforce corrective action."

The TR Guideline has also been considered in the assessment. On the basis of its owner and operator roles, the HKMA has the power to give HKTR directions or impose operating rules to address failures of reporting and to observe any part of the TR Guideline.

4.1.3 Payment systems

Ratings summary[35] for PSs	Table 2
Assessment category	Principle
Consistent	*Principles 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23*
Broadly consistent	*None*
Partly consistent	*None*
Not consistent	*None*
Not applicable	*None*

The AT concluded that the Principles relevant for PSs have been implemented in a complete and consistent manner through the HKMA Policy Statement and the two guidelines issued by the HKMA under Section 54(1)(a) of the PSSVFO.

4.1.4 Central counterparties

Ratings summary[36] for CCPs	Table 3
Assessment category	Principle
Consistent	*Principles 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23*
Broadly consistent	*None*
Partly consistent	*None*
Not consistent	*None*
Not applicable	*None*

The AT concluded that the Principles relevant for CCPs have been implemented in a complete and consistent manner through the SFC PFMI Guidelines.

4.1.5 Central securities depositories/securities settlement systems

Ratings summary[37] for CSDs/SSSs	Table 4
Assessment category	Principle
Consistent	*Principles 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23*
Broadly consistent	*None*
Partly consistent	*None*
Not consistent	*None*

[35] The rating summary only lists those Principles that are applicable to the given type as defined in paragraphs 1.10–1.14 and shown in Table 1 of the PFMI.

[36] The ratings summary only lists those Principles that are applicable to the given type of FMI as defined in paragraphs 1.10–1.14 and shown in Table 1 of the PFMI.

[37] The ratings summary only lists those Principles that are applicable to the given type of FMI as defined in paragraphs 1.10–1.14 and shown in Table 1 of the PFMI.

Not applicable	*None*

The AT concluded that the Principles relevant for CSDs and SSSs have been implemented in a complete and consistent manner through the HKMA and SFC Joint Statement and the guidelines issued by the two authorities.

4.1.6 Trade repositories

Ratings summary[38] for TRs — Table 5

Assessment category	Principle
Consistent	*Principles 1, 2, 3, 15, 17, 18, 19, 20, 21, 22, 23, 24*
Broadly consistent	*None*
Partly consistent	*None*
Not consistent	*None*
Not applicable	*None*

The AT concluded that the Principles relevant for TRs have been implemented in a complete and consistent manner through the HKMA Policy Statement taken together with the TR Guideline, which explains the general requirements of the HKMA in overseeing HKTR.

4.1.7 FMIs owned and operated by the HKMA

In Hong Kong, several FMIs are owned and operated by the HKMA. These are the TR (HKTR), one PS (HKD CHATS) and one CSD/SSS (CMU).

Following the publication of the CPMI-IOSCO CBFMI guidance, HKMA issued the HKMA PFMI Guideline (which covers SSSs and PSs) in May 2016 and updated the TR Guideline in July 2016 (before the cut-off-date of this assessment) that incorporated all the issues mentioned in the CPMI-IOSCO CBFMI guidance. With the HKMA PFMI Guideline and the TR Guideline, the HKMA incorporated all the relevant KCs into its regulatory requirements except for the KCs that may be applied differently[39] or are not intended to constrain central bank policies,[40] in accordance with the CPMI-IOSCO CBFMI guidance.

Consistent with the CPMI-IOSCO CBFMI guidance, the TR Guideline states that some of the principles and KCs in the PFMI do not apply to the HKTR, which is owned and operated by the HKMA, given the FMI type and that certain areas of the PFMI are applied differently to HKTR due to requirements in relevant law, regulation or policy.

Regarding the CMU and HKD CHATS, the HKMA PFMI Guideline specifies that certain KCs (ie Principle 3 KC 4 and Principle 15 KCs 2–5) are not applicable to the central bank-owned and operated CMU and HKD CHATS and that certain other Principles and KCs are not intended to constrain central bank policies.

These statements and the above mentioned guidance are found to be consistent with the CPMI-IOSCO CBFMI guidance.

[38] The ratings summary only lists those Principles that are applicable to the given type of FMI as defined in paragraphs 1.10–1.14 and shown in Table 1 of the PFMI.

[39] The principles that may be applied differently are Principle 2 KC 3 and 4, Principle 3 KC 4 and Principle 15 KCs 2–5.

[40] The principles that are not intended to constrain central bank policies are: Principles 4, 5, 13, 16 and 18.

Therefore, the principles applied to central bank-owned and operated FMIs in Hong Kong, within the context of this Report, have been evaluated to be consistent with the PFMI, noting that the approach taken by HKMA regarding the FMIs it operates is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO CBFMI guidance.

4.2 Hong Kong's completeness and consistency with the Principles – Review and recommendations

4.2.1 Payment systems

Implementation of the principles			
1. Text of applicable Principles and Key Considerations (KCs)[41]	**2. Implementation measures of the jurisdiction**	**3. Key conclusions for principle**	**4. Recommendations and comments**
Principle 1: Legal basis **An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.**	HKMA PFMI Guideline paragraph 6.1	**Consistent**	
1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	HKMA PFMI Guideline paragraph 6.1.1		
2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	HKMA PFMI Guideline paragraph 6.1.2		
3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.	HKMA PFMI Guideline paragraph 6.1.3		
4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	HKMA PFMI Guideline paragraph 6.1.4		

[41] Only the relevant principles for PSs (as set forth in the annex E of the PFMI) are included.

5. An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.	HKMA PFMI Guideline paragraph 6.1.5		

Principle 2: Governance **An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.**	HKMA PFMI Guideline paragraph 6.2	**Consistent**	
1. An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.	HKMA PFMI Guideline paragraph 6.2.1		
2. An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.	HKMA PFMI Guideline paragraph 6.2.2		
3. The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.	HKMA PFMI Guideline paragraph 6.2.3	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).	HKMA PFMI Guideline paragraph 6.2.4	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
5. The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.	HKMA PFMI Guideline paragraph 6.2.5		
6. The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.	HKMA PFMI Guideline paragraph 6.2.6		
7. The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.	HKMA PFMI Guideline paragraph 6.2.7		

Principle 3: Framework for the comprehensive management of risks **An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.**	HKMA PFMI Guideline paragraph 6.3	**Consistent**	
1. An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.	HKMA PFMI Guideline paragraph 6.3.1		
2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	HKMA PFMI Guideline paragraph 6.3.2		
3. An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.	HKMA PFMI Guideline paragraph 6.3.3		
4. An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.	HKMA PFMI Guideline paragraph 6.3.4	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 4: Credit risk **An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.**	HKMA PFMI Guideline paragraph 6.4	**Consistent**	
1. An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.	HKMA PFMI Guideline paragraph 6.4.1	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

2. *An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.*	HKMA PFMI Guideline paragraph 6.4.2	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.*	HKMA PFMI Guideline paragraph 6.4.3	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
7. *An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.*	HKMA PFMI Guideline paragraph 6.4.4	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 5: Collateral **An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.**	HKMA PFMI Guideline paragraph 6.5	**Consistent**	
1. *An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.*	HKMA PFMI Guideline paragraph 6.5.1	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. *An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.*	HKMA PFMI Guideline paragraph 6.5.2	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.*	HKMA PFMI Guideline paragraph 6.5.3	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. *An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.*	HKMA PFMI Guideline paragraph 6.5.4	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
5. *An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.*	HKMA PFMI Guideline paragraph 6.5.5	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
6. *An FMI should use a collateral management system that is well-designed and operationally flexible.*	HKMA PFMI Guideline paragraph 6.5.6	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 7: Liquidity risk **An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.**	HKMA PFMI Guideline paragraph 6.6	**Consistent**	
1. *An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.*	HKMA PFMI Guideline paragraph 6.6.1		
2. *An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.*	HKMA PFMI Guideline paragraph 6.6.2		
3. *A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.*	HKMA PFMI Guideline paragraph 6.6.3		

5. *For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.*	HKMA PFMI Guideline paragraph 6.6.4		
6. *An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.*	HKMA PFMI Guideline paragraph 6.6.5		

7. An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.	HKMA PFMI Guideline paragraph 6.6.6		
8. An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.	HKMA PFMI Guideline paragraph 6.6.7		

9. An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.	HKMA PFMI Guideline paragraph 6.6.8		

10. *An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.*	HKMA PFMI Guideline paragraph 6.6.9		

Principle 8: Settlement finality **An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.**	HKMA PFMI Guideline paragraph 6.7	**Consistent**	
1. *An FMI's rules and procedures should clearly define the point at which settlement is final.*	HKMA PFMI Guideline paragraph 6.7.1		
2. *An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.*	HKMA PFMI Guideline paragraph 6.7.2		

3. An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.	HKMA PFMI Guideline paragraph 6.7.3		
Principle 9: Money settlements **An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.**	HKMA PFMI Guideline paragraph 6.8	**Consistent**	
1. An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.	HKMA PFMI Guideline paragraph 6.8.1		
2. If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.	HKMA PFMI Guideline paragraph 6.8.2		
3. If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.	HKMA PFMI Guideline paragraph 6.8.3		

4. *If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.*	HKMA PFMI Guideline paragraph 6.8.4		
5. *An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.*	HKMA PFMI Guideline paragraph 6.8.5		

Principle 12: Exchange-of-value settlement systems **If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.**	HKMA PFMI Guideline paragraph 6.11	**Consistent**	
1. *An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.*	HKMA PFMI Guideline paragraph 6.11.1		

Principle 13: Participant-default rules and procedures **An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.**	HKMA PFMI Guideline paragraph 6.12	**Consistent**	
1. *An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.*	HKMA PFMI Guideline paragraph 6.12.1	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. *An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.*	HKMA PFMI Guideline paragraph 6.12.2	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *An FMI should publicly disclose key aspects of its default rules and procedures.*	HKMA PFMI Guideline paragraph 6.12.3	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. *An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.*	HKMA PFMI Guideline paragraph 6.12.4	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 15: General business risk **An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.**	HKMA PFMI Guideline paragraph 6.13	**Consistent**	
1. *An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.*	HKMA PFMI Guideline paragraph 6.13.1		

2. *An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.*	HKMA PFMI Guideline paragraph 6.13.2	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.*	HKMA PFMI Guideline paragraph 6.13.3	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
4. *Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.*	HKMA PFMI Guideline paragraph 6.13.4	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

5. *An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.*	HKMA PFMI Guideline paragraph 6.13.5	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 16: Custody and investment risks **An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.**	HKMA PFMI Guideline paragraph 6.14	**Consistent**	
1. *An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.*	HKMA PFMI Guideline paragraph 6.14.1	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. *An FMI should have prompt access to its assets and the assets provided by participants, when required.*	HKMA PFMI Guideline paragraph 6.14.2	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

3. *An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.*	HKMA PFMI Guideline paragraph 6.14.3	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
4. *An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.*	HKMA PFMI Guideline paragraph 6.14.4	HKD CHATS: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 17: Operational risk **An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.**	HKMA PFMI Guideline paragraph 6.15	**Consistent**	
1. *An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.*	HKMA PFMI Guideline paragraph 6.15.1		

2. An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.	HKMA PFMI Guideline paragraph 6.15.2		
3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	HKMA PFMI Guideline paragraph 6.15.3		
4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	HKMA PFMI Guideline paragraph 6.15.4		
5. *An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.*	HKMA PFMI Guideline paragraph 6.15.5		
6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	HKMA PFMI Guideline paragraph 6.15.6		

7. *An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.*	HKMA PFMI Guideline paragraph 6.15.7		

Principle 18: Access and participation requirements **An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.**	HKMA PFMI Guideline paragraph 6.16	**Consistent**	
1. *An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.*	HKMA PFMI Guideline paragraph 6.16.1	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. *An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.*	HKMA PFMI Guideline paragraph 6.16.2	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

3. *An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.*	HKMA PFMI Guideline paragraph 6.16.3	<u>HKD CHATS</u>: The approach taken by the HKMA for the central bank-operated RTGS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 19: Tiered participation arrangements **An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.**	HKMA PFMI Guideline paragraph 6.17	**Consistent**	
1. *An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.*	HKMA PFMI Guideline paragraph 6.17.1		
2. *An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.*	HKMA PFMI Guideline paragraph 6.17.2		
3. *An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.*	HKMA PFMI Guideline paragraph 6.17.3		

4. An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.	HKMA PFMI Guideline paragraph 6.17.4		

Principle 21: Efficiency and effectiveness **An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.**	HKMA PFMI Guideline paragraph 6.19	**Consistent**	
1. An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.	HKMA PFMI Guideline paragraph 6.19.1		
2. An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.	HKMA PFMI Guideline paragraph 6.19.2		
3. An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.	HKMA PFMI Guideline paragraph 6.19.3		

Principle 22: Communication procedures and standards **An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.**	HKMA PFMI Guideline paragraph 6.20	**Consistent**	
1. An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.	HKMA PFMI Guideline paragraph 6.20.1		

Principle 23: Disclosure of rules, key procedures, and market data **An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.**	HKMA PFMI Guideline paragraph 6.21	**Consistent**	
1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	HKMA PFMI Guideline paragraph 6.21.1		
2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	HKMA PFMI Guideline paragraph 6.21.2		

3. *An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.*	HKMA PFMI Guideline paragraph 6.21.3		
4. *An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.*	HKMA PFMI Guideline paragraph 6.21.4		
5. *An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO* Disclosure *framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.*	HKMA PFMI Guideline paragraph 6.21.5		

4.2.2 Central counterparties

Implementation of the principles			
1. Text of applicable Principles and Key Considerations (KCs)[42]	**2. Implementation measures of the jurisdiction**	**3. Key conclusions for principle**	**4. Recommendations and comments**
Principle 1: Legal basis **An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.**	SFC PFMI Guidelines – Principle 1: Legal basis	**Consistent**	
1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	SFC PFMI Guidelines – paragraph 1.1		
2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	SFC PFMI Guidelines – paragraph 1.2		.
3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.	SFC PFMI Guidelines – paragraph 1.3		
4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	SFC PFMI Guidelines – paragraph 1.4		
5. An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.	SFC PFMI Guidelines – paragraph 1.5		

[42] Only the relevant principles for CCPs (as set forth in the annex E of the PFMI) are included.

Principle 2: Governance **An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.**	SFC PFMI Guidelines – Principle 2: Governance	**Consistent**	
1. *An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.*	SFC PFMI Guidelines – paragraph 2.1		
2. *An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.*	SFC PFMI Guidelines – paragraph 2.2		
3. *The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.*	SFC PFMI Guidelines – paragraph 2.3		
4. *The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*	SFC PFMI Guidelines – paragraph 2.4		
5. *The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.*	SFC PFMI Guidelines – paragraph 2.5		

6. The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.	SFC PFMI Guidelines – paragraph 2.6		
7. The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.	SFC PFMI Guidelines – paragraph 2.7		

Principle 3: Framework for the comprehensive management of risks **An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.**	SFC PFMI Guidelines – Principle 3: Framework for the comprehensive management of risks	**Consistent**	
1. An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.	SFC PFMI Guidelines – paragraph 3.1		
2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	SFC PFMI Guidelines – paragraph 3.2		

3. *An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.*	SFC PFMI Guidelines – paragraph 3.3		
4. *An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.*	SFC PFMI Guidelines – paragraph 3.4		

Principle 4: Credit risk **An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.**	SFC PFMI Guidelines – Principle 4: Credit risk	**Consistent**	
1. *An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.*	SFC PFMI Guidelines – paragraph 4.1		
2. *An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks~~.~~*	SFC PFMI Guidelines – paragraph 4.2		

4. *A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.*	SFC PFMI Guidelines – paragraph 4.4		

5. A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.	SFC PFMI Guidelines – paragraph 4.5		
6. In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.	SFC PFMI Guidelines – paragraph 4.6		

7. *An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.*	SFC PFMI Guidelines – paragraph 4.7		

Principle 5: Collateral **An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.**	SFC PFMI Guidelines – Principle 5: Collateral	**Consistent**	
1. *An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.*	SFC PFMI Guidelines – paragraph 5.1		
2. *An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.*	SFC PFMI Guidelines – paragraph 5.2		
3. *In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.*	SFC PFMI Guidelines – paragraph 5.3		

4. *An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.*	SFC PFMI Guidelines – paragraph 5.4		
5. *An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.*	SFC PFMI Guidelines – paragraph 5.5		
6. *An FMI should use a collateral management system that is well-designed and operationally flexible.*	SFC PFMI Guidelines – paragraph 5.6		

Principle 6: Margin **A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.**	SFC PFMI Guidelines – Principle 6: Margin	**Consistent**	
1. *A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.*	SFC PFMI Guidelines – paragraph 6.1		
2. *A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.*	SFC PFMI Guidelines – paragraph 6.2		

3. *A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.*	SFC PFMI Guidelines – paragraph 6.3		
4. *A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.*	SFC PFMI Guidelines – paragraph 6.4		
5. *In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.*	SFC PFMI Guidelines – paragraph 6.5		

6. A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.	SFC PFMI Guidelines – paragraph 6.6		
7. *A CCP should regularly review and validate its margin system.*	SFC PFMI Guidelines – paragraph 6.7		

Principle 7: Liquidity risk **An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.**	SFC PFMI Guidelines – Principle 7: Liquidity risk	**Consistent**	
1. An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.	SFC PFMI Guidelines – paragraph 7.1		

2. An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.	SFC PFMI Guidelines – paragraph 7.2		
4. A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.	SFC PFMI Guidelines – paragraph 7.4		

5. *For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.*	SFC PFMI Guidelines – paragraph 7.5		
6. *An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.*	SFC PFMI Guidelines – paragraph 7.6		

7. An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.	SFC PFMI Guidelines – paragraph 7.7		
8. An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.	SFC PFMI Guidelines – paragraph 7.8		

9. An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.	SFC PFMI Guidelines – paragraph 7.9		
10. An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.	SFC PFMI Guidelines – paragraph 7.10		

Principle 8: Settlement finality **An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.**	SFC PFMI Guidelines – Principle 8: Settlement finality	**Consistent**	
1. *An FMI's rules and procedures should clearly define the point at which settlement is final.*	SFC PFMI Guidelines – paragraph 8.1		
2. *An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.*	SFC PFMI Guidelines – paragraph 8.2		
3. *An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.*	SFC PFMI Guidelines – paragraph 8.3		

Principle 9: Money settlements **An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.**	SFC PFMI Guidelines – Principle 9: Money settlements	**Consistent**	
1. *An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.*	SFC PFMI Guidelines – paragraph 9.1		
2. *If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.*	SFC PFMI Guidelines – paragraph 9.2		

3. *If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.*	SFC PFMI Guidelines – paragraph 9.3		
4. *If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.*	SFC PFMI Guidelines – paragraph 9.4		
5. *An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.*	SFC PFMI Guidelines – paragraph 9.5		

Principle 10: Physical deliveries **An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.**	SFC PFMI Guidelines – Principle 10: Physical deliveries	**Consistent**	
1. *An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.*	SFC PFMI Guidelines – paragraph 10.1		

2. An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.	SFC PFMI Guidelines – paragraph 10.2		

Principle 12: Exchange-of-value settlement systems **If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.**	SFC PFMI Guidelines – Principle 12: Exchange-of-value settlement systems	**Consistent**	
1. An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.	SFC PFMI Guidelines – paragraph 12.1		

Principle 13: Participant-default rules and procedures **An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.**	SFC PFMI Guidelines – Principle 13: Participant-default rules and procedures	**Consistent**	
1. An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.	SFC PFMI Guidelines – paragraph 13.1		

2. *An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.*	SFC PFMI Guidelines – paragraph 13.2		
3. *An FMI should publicly disclose key aspects of its default rules and procedures.*	SFC PFMI Guidelines – paragraph 13.3		
4. *An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.*	SFC PFMI Guidelines – paragraph 13.4		

Principle 14: Segregation and portability **A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.**	SFC PFMI Guidelines – Principle 14: Segregation and portability	**Consistent**	
1. *A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.*	SFC PFMI Guidelines – paragraph 14.1		

2. *A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.*	SFC PFMI Guidelines – paragraph 14.2		
3. *A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.*	SFC PFMI Guidelines – paragraph 14.3		
4. *A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.*	SFC PFMI Guidelines – paragraph 14.4		

Principle 15: General business risk **An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.**	SFC PFMI Guidelines – Principle 15: General business risk	**Consistent**	
1. *An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.*	SFC PFMI Guidelines – paragraph 15.1		

2. An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.	SFC PFMI Guidelines – paragraph 15.2		
3. An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.	SFC PFMI Guidelines – paragraph 15.3		
4. Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.	SFC PFMI Guidelines – paragraph 15.4		
5. An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.	SFC PFMI Guidelines – paragraph 15.5	.	

Principle 16: Custody and investment risks **An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.**	SFC PFMI Guidelines – Principle 16: Custody and investment risks	**Consistent**	
1. An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.	SFC PFMI Guidelines – paragraph 16.1		
2. An FMI should have prompt access to its assets and the assets provided by participants, when required.	SFC PFMI Guidelines – paragraph 16.2		
3. An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.	SFC PFMI Guidelines – paragraph 16.3		
4. An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.	SFC PFMI Guidelines – paragraph 16.4		

Principle 17: Operational risk **An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.**	SFC PFMI Guidelines – Principle 17: Operational risk	**Consistent**	
1. An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.	SFC PFMI Guidelines – paragraph 17.1		
2. An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.	SFC PFMI Guidelines – paragraph 17.2		
3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	SFC PFMI Guidelines – paragraph 17.3		
4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	SFC PFMI Guidelines – paragraph 17.4		
5. *An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.*	SFC PFMI Guidelines – paragraph 17.5		

6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	SFC PFMI Guidelines – paragraph 17.6		
7. An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.	SFC PFMI Guidelines – paragraph 17.7		

Principle 18: Access and participation requirements **An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.**	SFC PFMI Guidelines – Principle 18: Access and participation requirements	**Consistent**	
1. An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.	SFC PFMI Guidelines – paragraph 18.1		

2. *An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.*	SFC PFMI Guidelines – paragraph 18.2		
3. *An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.*	SFC PFMI Guidelines – paragraph 18.3		

Principle 19: Tiered participation arrangements **An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.**	SFC PFMI Guidelines – Principle 19: Tiered participation arrangements	**Consistent**	
1. *An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.*	SFC PFMI Guidelines – paragraph 19.1		
2. *An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.*	SFC PFMI Guidelines – paragraph 19.2		

3. *An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.*	SFC PFMI Guidelines – paragraph 19.3		
4. *An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.*	SFC PFMI Guidelines – paragraph 19.4		

Principle 20: FMI links **An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.**	SFC PFMI Guidelines – Principle 20: FMI links	**Consistent**	
1. *Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.*	SFC PFMI Guidelines – paragraph 20.1		
2. *A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.*	SFC PFMI Guidelines – paragraph 20.2		
7. *Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.*	SFC PFMI Guidelines – paragraph 20.7		

8. *Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.*	SFC PFMI Guidelines – paragraph 20.8	Consistent	

Principle 21: Efficiency and effectiveness **An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.**	SFC PFMI Guidelines – Principle 21: Efficiency and effectiveness	**Consistent**	
1. *An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.*	SFC PFMI Guidelines – paragraph 21.1		
2. *An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.*	SFC PFMI Guidelines – paragraph 21.2		
3. *An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.*	SFC PFMI Guidelines – paragraph 21.3		

Principle 22: Communication procedures and standards **An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.**	SFC PFMI Guidelines – Principle 22: Communication procedures and standards	**Consistent**	
1. An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.	SFC PFMI Guidelines – paragraph 22.1		

Principle 23: Disclosure of rules, key procedures, and market data **An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.**	SFC PFMI Guidelines – Principle 23: Disclosure of rules, key procedures, and market data	**Consistent**	
1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	SFC PFMI Guidelines – paragraph 23.1		
2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	SFC PFMI Guidelines – paragraph 23.2		
3. An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.	SFC PFMI Guidelines – paragraph 23.3		

4. *An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.*	SFC PFMI Guidelines – paragraph 23.4		
5. *An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO* Disclosure *framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.*	SFC PFMI Guidelines – paragraph 23.5		

4.2.3 Central securities depositories / securities settlement systems

Implementation of the principles			
1. Text of applicable Principles and Key Considerations (KCs)[43]	**2. Implementation measures of the jurisdiction**	**3. Key conclusions for principle**	**4. Recommendations and comments**
Principle 1: Legal basis **An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.**	HKMA PFMI Guideline paragraph 6.1 SFC PFMI Guidelines – Principle 1: Legal basis	**Consistent**	
1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	HKMA PFMI Guideline paragraph 6.1.1 SFC PFMI Guidelines – paragraph 1.1		
2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	HKMA PFMI Guideline paragraph 6.1.2 SFC PFMI Guidelines – paragraph 1.2		
3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.	HKMA PFMI Guideline paragraph 6.1.3 SFC PFMI Guidelines – paragraph 1.3		
4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	HKMA PFMI Guideline paragraph 6.1.4 SFC PFMI Guidelines – paragraph 1.4		

[43] Only the relevant principles for CSDs or SSSs (as set forth in the annex E of the PFMI) are included.

5. *An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.*	HKMA PFMI Guideline paragraph 6.1.5 SFC PFMI Guidelines – paragraph 1.5		

Principle 2: Governance **An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.**	HKMA PFMI Guideline paragraph 6.2 SFC PFMI Guidelines – Principle 2: Governance	**Consistent**	
1. *An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.*	HKMA PFMI Guideline paragraph 6.2.1 SFC PFMI Guidelines – paragraph 2.1		
2. *An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.*	HKMA PFMI Guideline paragraph 6.2.2 SFC PFMI Guidelines – paragraph 2.2		
3. *The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.*	HKMA PFMI Guideline paragraph 6.2.3 SFC PFMI Guidelines – paragraph 2.3	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. *The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*	HKMA PFMI Guideline paragraph 6.2.4 SFC PFMI Guidelines – paragraph 2.4	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
5. *The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.*	HKMA PFMI Guideline paragraph 6.2.5 SFC PFMI Guidelines – paragraph 2.5		
6. *The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.*	HKMA PFMI Guideline paragraph 6.2.6 SFC PFMI Guidelines – paragraph 2.6		
7. *The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.*	HKMA PFMI Guideline paragraph 6.2.7 SFC PFMI Guidelines – paragraph 2.7		

Principle 3: Framework for the comprehensive management of risks **An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.**	HKMA PFMI Guideline paragraph 6.3 SFC PFMI Guidelines – Principle 3: Framework for the comprehensive management of risks	**Consistent**	
1. An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.	HKMA PFMI Guideline paragraph 6.3.1 SFC PFMI Guidelines – paragraph 3.1		
2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	HKMA PFMI Guideline paragraph 6.3.2 SFC PFMI Guidelines – paragraph 3.2		
3. An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.	HKMA PFMI Guideline paragraph 6.3.3 SFC PFMI Guidelines – paragraph 3.3		
4. An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.	HKMA PFMI Guideline paragraph 6.3.4 SFC PFMI Guidelines – paragraph 3.4	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 4: Credit risk **An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.**	HKMA PFMI Guideline paragraph 6.4 SFC PFMI Guidelines – Principle 4: Credit risk	**Consistent**	
1. An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.	HKMA PFMI Guideline paragraph 6.4.1 SFC PFMI Guidelines – paragraph 4.1	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

2. *An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.*	HKMA PFMI Guideline paragraph 6.4.2 SFC PFMI Guidelines – paragraph 4.2	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.*	HKMA PFMI Guideline paragraph 6.4.3 SFC PFMI Guidelines – paragraph 4.3	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
7. *An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.*	HKMA PFMI Guideline paragraph 6.4.4 SFC PFMI Guidelines – paragraph 4.7	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 5: Collateral **An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.**	HKMA PFMI Guideline paragraph 6.5 SFC PFMI Guidelines – Principle 5: Collateral	**Consistent**	
1. An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.	HKMA PFMI Guideline paragraph 6.5.1 SFC PFMI Guidelines – paragraph 5.1	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.	HKMA PFMI Guideline paragraph 6.5.2 SFC PFMI Guidelines – paragraph 5.2	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.	HKMA PFMI Guideline paragraph 6.5.3 SFC PFMI Guidelines – paragraph 5.3	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. *An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.*	HKMA PFMI Guideline paragraph 6.5.4 SFC PFMI Guidelines – paragraph 5.4	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
5. *An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.*	HKMA PFMI Guideline paragraph 6.5.5 SFC PFMI Guidelines – paragraph 5.5	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
6. *An FMI should use a collateral management system that is well-designed and operationally flexible.*	HKMA PFMI Guideline paragraph 6.5.6 SFC PFMI Guidelines – paragraph 5.6	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 7: Liquidity risk **An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.**	HKMA PFMI Guideline paragraph 6.6 SFC PFMI Guidelines – Principle 7: Liquidity risk	**Consistent**	
1. *An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.*	HKMA PFMI Guideline paragraph 6.6.1 SFC PFMI Guidelines – paragraph 7.1	Consistent	
2. *An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.*	HKMA PFMI Guideline paragraph 6.6.2 SFC PFMI Guidelines – paragraph 7.2	Consistent	
3. *A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.*	HKMA PFMI Guideline paragraph 6.6.3 SFC PFMI Guidelines – paragraph 7.3		

5. *For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.*	HKMA PFMI Guideline paragraph 6.6.4 SFC PFMI Guidelines – paragraph 7.5		
6. *An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.*	HKMA PFMI Guideline paragraph 6.6.5 SFC PFMI Guidelines – paragraph 7.6		

7. An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.	HKMA PFMI Guideline paragraph 6.6.6 SFC PFMI Guidelines – paragraph 7.7		
8. An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.	HKMA PFMI Guideline paragraph 6.6.7 SFC PFMI Guidelines – paragraph 7.8		

9. An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.	HKMA PFMI Guideline paragraph 6.6.8 SFC PFMI Guidelines – paragraph 7.9		

10. An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.	HKMA PFMI Guideline paragraph 6.6.9 SFC PFMI Guidelines – paragraph 7.10		

Principle 8: Settlement finality **An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.**	HKMA PFMI Guideline paragraph 6.7 SFC PFMI Guidelines – Principle 8: Settlement finality	**Consistent**	
1. An FMI's rules and procedures should clearly define the point at which settlement is final.	HKMA PFMI Guideline paragraph 6.7.1 SFC PFMI Guidelines – paragraph 8.1		
2. An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.	HKMA PFMI Guideline paragraph 6.7.2 SFC PFMI Guidelines – paragraph 8.2		
3. An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.	HKMA PFMI Guideline paragraph 6.7.3 SFC PFMI Guidelines – paragraph 8.3		

Principle 9: Money settlements **An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.**	HKMA PFMI Guideline paragraph 6.8 SFC PFMI Guidelines – Principle 9: Money settlements	**Consistent**	
1. An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.	HKMA PFMI Guideline paragraph 6.8.1 SFC PFMI Guidelines – paragraph 9.1		
2. If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.	HKMA PFMI Guideline paragraph 6.8.2 SFC PFMI Guidelines – paragraph 9.2		
3. If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.	HKMA PFMI Guideline paragraph 6.8.3 SFC PFMI Guidelines – paragraph 9.3		
4. If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.	HKMA PFMI Guideline paragraph 6.8.4 SFC PFMI Guidelines – paragraph 9.4		

5. *An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.*	HKMA PFMI Guideline paragraph 6.8.5 SFC PFMI Guidelines – paragraph 9.5		

Principle 10: Physical deliveries **An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.**	HKMA PFMI Guideline paragraph 6.9 SFC PFMI Guidelines – Principle 10: Physical deliveries	**Consistent**	
1. *An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.*	HKMA PFMI Guideline paragraph 6.9.1 SFC PFMI Guidelines – paragraph 10.1		
2. *An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.*	HKMA PFMI Guideline paragraph 6.9.2 SFC PFMI Guidelines – paragraph 10.2		

Principle 11: Central securities depositories **A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.**	HKMA PFMI Guideline paragraph 6.10 SFC PFMI Guidelines – Principle 11: Central securities depositories	**Consistent**	

1. *A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.*	HKMA PFMI Guideline paragraph 6.10.1 SFC PFMI Guidelines – paragraph 11.1		
2. *A CSD should prohibit overdrafts and debit balances in securities accounts.*	HKMA PFMI Guideline paragraph 6.10.2 SFC PFMI Guidelines – paragraph 11.2		
3. *A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.*	HKMA PFMI Guideline paragraph 6.10.3 SFC PFMI Guidelines – paragraph 11.3		
4. *A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.*	HKMA PFMI Guideline paragraph 6.10.4 SFC PFMI Guidelines – paragraph 11.4		
5. *A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.*	HKMA PFMI Guideline paragraph 6.10.5 SFC PFMI Guidelines – paragraph 11.5		
6. *A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.*	HKMA PFMI Guideline paragraph 6.10.6 SFC PFMI Guidelines – paragraph 11.6		

Principle 12: Exchange-of-value settlement systems **If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other**	HKMA PFMI Guideline paragraph 6.11 SFC PFMI Guidelines – Principle 12: Exchange-of-value settlement systems	**Consistent**	
1. An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.	HKMA PFMI Guideline paragraph 6.11.1 SFC PFMI Guidelines – paragraph 12.1		

Principle 13: Participant-default rules and procedures **An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.**	HKMA PFMI Guideline paragraph 6.12 SFC PFMI Guidelines – Principle 13: Participant-default rules and procedures	**Consistent**	
1. An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.	HKMA PFMI Guideline paragraph 6.12.1 SFC PFMI Guidelines – paragraph 13.1	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

2. *An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.*	HKMA PFMI Guideline paragraph 6.12.2 SFC PFMI Guidelines – paragraph 13.2	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *An FMI should publicly disclose key aspects of its default rules and procedures.*	HKMA PFMI Guideline paragraph 6.12.3 SFC PFMI Guidelines – paragraph 13.3	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
4. *An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.*	HKMA PFMI Guideline paragraph 6.12.4 SFC PFMI Guidelines – paragraph 13.4	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 15: General business risk **An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.**	HKMA PFMI Guideline paragraph 6.13 SFC PFMI Guidelines – Principle 15: General business risk	**Consistent**	
1. An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.	HKMA PFMI Guideline paragraph 6.13.1 SFC PFMI Guidelines – paragraph 15.1		
2. An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.	HKMA PFMI Guideline paragraph 6.13.2 SFC PFMI Guidelines – paragraph 15.2	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

3. *An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.*	HKMA PFMI Guideline paragraph 6.13.3 SFC PFMI Guidelines – paragraph 15.3	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
4. *Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.*	HKMA PFMI Guideline paragraph 6.13.4 SFC PFMI Guidelines – paragraph 15.4	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
5. *An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.*	HKMA PFMI Guideline paragraph 6.13.5 SFC PFMI Guidelines – paragraph 15.5	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 16: Custody and investment risks **An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.**	HKMA PFMI Guideline paragraph 6.14 SFC PFMI Guidelines – Principle 16: Custody and investment risks	**Consistent**	
1. An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.	HKMA PFMI Guideline paragraph 6.14.1 SFC PFMI Guidelines – paragraph 16.1	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. An FMI should have prompt access to its assets and the assets provided by participants, when required.	HKMA PFMI Guideline paragraph 6.14.2 SFC PFMI Guidelines – paragraph 16.2	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.	HKMA PFMI Guideline paragraph 6.14.3 SFC PFMI Guidelines – paragraph 16.3	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

4. *An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.*	HKMA PFMI Guideline paragraph 6.14.4 SFC PFMI Guidelines – paragraph 16.4	CMU: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 17: Operational risk **An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.**	HKMA PFMI Guideline paragraph 6.15 SFC PFMI Guidelines – Principle 17: Operational risk	**Consistent**	
1. *An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.*	HKMA PFMI Guideline paragraph 6.15.1 SFC PFMI Guidelines – paragraph 17.1		
2. *An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.*	HKMA PFMI Guideline paragraph 6.15.2 SFC PFMI Guidelines – paragraph 17.2		

3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	HKMA PFMI Guideline paragraph 6.15.3 SFC PFMI Guidelines – paragraph 17.3		
4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	HKMA PFMI Guideline paragraph 6.15.4 SFC PFMI Guidelines – paragraph 17.4		
5. An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.	HKMA PFMI Guideline paragraph 6.15.5 SFC PFMI Guidelines – paragraph 17.5		
6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	HKMA PFMI Guideline paragraph 6.15.6 SFC PFMI Guidelines – paragraph 17.6		
7. An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.	HKMA PFMI Guideline paragraph 6.15.7 SFC PFMI Guidelines – paragraph 17.7		

Principle 18: Access and participation requirements **An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.**	HKMA PFMI Guideline paragraph 6.16 SFC PFMI Guidelines – Principle 18: Access and participation requirements	**Consistent**	
1. *An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.*	HKMA PFMI Guideline paragraph 6.16.1 SFC PFMI Guidelines – paragraph 18.1	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
2. *An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.*	HKMA PFMI Guideline paragraph 6.16.2 SFC PFMI Guidelines – paragraph 18.2	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	
3. *An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.*	HKMA PFMI Guideline paragraph 6.16.3 SFC PFMI Guidelines – paragraph 18.3	<u>CMU</u>: The approach taken by the HKMA for the central bank-operated SSS is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs*.	

Principle 19: Tiered participation arrangements **An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.**	HKMA PFMI Guideline paragraph 6.17 SFC PFMI Guidelines – Principle 19: Tiered participation arrangements	**Consistent**	
1. An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.	HKMA PFMI Guideline paragraph 6.17.1 SFC PFMI Guidelines – paragraph 19.1		
2. An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.	HKMA PFMI Guideline paragraph 6.17.2 SFC PFMI Guidelines – paragraph 19.2		
3. An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.	HKMA PFMI Guideline paragraph 6.17.3 SFC PFMI Guidelines – paragraph 19.3		
4. An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.	HKMA PFMI Guideline paragraph 6.17.4 SFC PFMI Guidelines – paragraph 19.4		

Principle 20: FMI links **An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.**	HKMA PFMI Guideline paragraph 6.18 SFC PFMI Guidelines – Principle 20: FMI links	**Consistent**	

1. Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.	HKMA PFMI Guideline paragraph 6.18.2 SFC PFMI Guidelines – paragraph 20.1		
2. A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.	HKMA PFMI Guideline paragraph 6.18.3 SFC PFMI Guidelines – paragraph 20.2		
3. Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.	HKMA PFMI Guideline paragraph 6.18.4 SFC PFMI Guidelines – paragraph 20.3		
4. Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.	HKMA PFMI Guideline paragraph 6.18.5 SFC PFMI Guidelines – paragraph 20.4		
5. An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.	HKMA PFMI Guideline paragraph 6.18.6 SFC PFMI Guidelines – paragraph 20.5		
6. An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.	HKMA PFMI Guideline paragraph 6.18.7 SFC PFMI Guidelines – paragraph 20.6		

Principle 21: Efficiency and effectiveness **An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.**	HKMA PFMI Guideline paragraph 6.19 SFC PFMI Guidelines – Principle 21: Efficiency and effectiveness	**Consistent**	
1. An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.	HKMA PFMI Guideline paragraph 6.19.1 SFC PFMI Guidelines – paragraph 21.1		
2. An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.	HKMA PFMI Guideline paragraph 6.19.2 SFC PFMI Guidelines – paragraph 21.2		
3. An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.	HKMA PFMI Guideline paragraph 6.19.3 SFC PFMI Guidelines – paragraph 21.3		

Principle 22: Communication procedures and standards **An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.**	HKMA PFMI Guideline paragraph 6.20 SFC PFMI Guidelines – Principle 22: Communication procedures and standards	**Consistent**	
1. An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.	HKMA PFMI Guideline paragraph 6.20.1 SFC PFMI Guidelines – paragraph 22.1		

Principle 23: Disclosure of rules, key procedures, and market data **An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.**	HKMA PFMI Guideline paragraph 6.21 SFC PFMI Guidelines – Principle 23: Disclosure of rules, key procedures, and market data	**Consistent**	
1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	HKMA PFMI Guideline paragraph 6.21.1 SFC PFMI Guidelines – paragraph 23.1		
2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	HKMA PFMI Guideline paragraph 6.21.2 SFC PFMI Guidelines – paragraph 23.2		
3. An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.	HKMA PFMI Guideline paragraph 6.21.3 SFC PFMI Guidelines – paragraph 23.3		
4. An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.	HKMA PFMI Guideline paragraph 6.21.4 SFC PFMI Guidelines – paragraph 23.4		

5. *An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO* Disclosure *framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.*	HKMA PFMI Guideline paragraph 6.21.5 SFC PFMI Guidelines – paragraph 23.5		

4.2.4 Trade repositories

Implementation of the principles			
1. Text of applicable Principles and Key Considerations (KCs)[44]	**2. Implementation measures of the jurisdiction**	**3. Key conclusions for principle**	**4. Recommendations and comments**
Principle 1: Legal basis **An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.**	TR Guideline paragraph 7.2	**Consistent**	
1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	TR Guideline paragraph 7.2.2		
2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	TR Guideline paragraph 7.2.1		
3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.	TR Guideline paragraph 7.2.3		
4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	TR Guideline paragraph 7.2.4		
5. An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.	TR Guideline paragraph 7.2.5		

[44] Only the relevant principles for TRs (as set forth in the annex E of the PFMI) are included.

Principle 2: Governance **An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.**	TR Guideline paragraph 7.3	**Consistent**	
1. *An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.*	TR Guideline paragraph 7.3.1		
2. *An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.*	TR Guideline paragraph 7.3.2		
3. *The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.*	TR Guideline paragraph 7.3.3 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	
4. *The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*	TR Guideline paragraph 7.3.4 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	

5. The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.	TR Guideline paragraph 7.3.5		
6. The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.	TR Guideline paragraph 7.3.6		
7. The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.	TR Guideline paragraph 7.3.7		

Principle 3: Framework for the comprehensive management of risks **An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.**	TR Guideline paragraph 7.4	**Consistent**	
1. An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.	TR Guideline paragraph 7.4.1		

2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	TR Guideline paragraph 7.4.3		
3. An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.	TR Guideline paragraph 7.4.4		
4. An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.	TR Guideline paragraph 7.4.5 TR Guideline paragraph 5.4	HKTR The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	

Principle 15: General business risk **An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.**	TR Guideline paragraph 8.1	**Consistent**	
1. An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.	TR Guideline paragraph 8.1.1		

2. *An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.*	TR Guideline paragraph 8.1.3 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	
3. *An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.*	TR Guideline paragraph 8.1.4 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	
4. *Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.*	TR Guideline paragraph 8.1.5 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	
5. *An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.*	TR Guideline paragraph 8.1.6 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	

Principle 17: Operational risk **An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.**	TR Guideline paragraph 8.6	**Consistent**	
1. An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.	TR Guideline paragraph 8.6.1		
2. An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.	TR Guideline paragraph 8.6.2		
3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	TR Guideline paragraph 8.6.3		
4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	TR Guideline paragraph 8.6.5		
5. *An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.*	TR Guideline paragraph 8.6.4		

6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	TR Guideline paragraph 8.6.6		
7. An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.	TR Guideline paragraph 8.6.7		

Principle 18: Access and participation requirements **An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.**	TR Guideline paragraph 9.5	**Consistent**	
1. An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.	TR Guideline paragraph 9.5.1 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	

2. An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.	TR Guideline paragraph 9.5.2 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	
3. An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.	TR Guideline paragraph 9.5.3 TR Guideline paragraph 5.4	<u>HKTR</u> The approach taken by the HKMA for the central bank-operated TR is consistent with paragraph 1.23 of the PFMI, as elaborated in the CPMI-IOSCO Guidance note *Application of the Principles for financial market infrastructures to central bank FMIs.*	

Principle 19: Tiered participation arrangements **An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.**	TR Guideline paragraph 9.7	**Consistent**	
1. An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.	TR Guideline paragraph 9.7.1		
2. An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.	TR Guideline paragraph 9.7.2		

3. An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.	TR Guideline paragraph 9.7.3		
4. An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.	TR Guideline paragraph 9.7.4		

Principle 20: FMI links **An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.**	TR Guideline paragraph 10.1	**Consistent**	
1. Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.	TR Guideline paragraph 10.1.1		
2. A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.	TR Guideline paragraph 10.1.2		
9. A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.	TR Guideline paragraph 10.1.3		

Principle 21: Efficiency and effectiveness **An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.**	TR Guideline paragraph 9.1	**Consistent**	
1. *An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.*	TR Guideline paragraph 9.1		
2. *An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.*	TR Guideline paragraph 9.1.2		
3. *An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.*	TR Guideline paragraph 9.1.3		

Principle 22: Communication procedures and standards **An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.**	TR Guideline paragraph 9.8	**Consistent**	
1. *An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.*	TR Guideline paragraph 9.8.1		

Principle 23: Disclosure of rules, key procedures, and market data **An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.**	TR Guideline paragraph 11.1	**Consistent**	
1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	TR Guideline paragraph 11.1.1		
2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	TR Guideline paragraph 11.1.2		
3. An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.	TR Guideline paragraph 11.1.3		
4. An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.	TR Guideline paragraph 11.1.4		
5. An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.	TR Guideline paragraph 11.1.5		

Principle 24: Disclosure of market data by trade repositories **A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.**	TR Guideline paragraph 12.1	**Consistent**	
1. A TR should provide data in line with regulatory and industry expectations to relevant authorities and the public, respectively, that is comprehensive and at a level of detail sufficient to enhance market transparency and support other public policy objectives.	TR Guideline paragraph 12.1.1		
2. A TR should have effective processes and procedures to provide data to relevant authorities in a timely and appropriate manner to enable them to meet their respective regulatory mandates and legal responsibilities.	TR Guideline paragraph 12.1.2		
3. A TR should have robust information systems that provide accurate current and historical data. Data should be provided in a timely manner and in a format that permits it to be easily analysed.	TR Guideline paragraph 12.1.4		

Annex A: List of abbreviations

AM	Assessment methodology
AT	Assessment team
CCP	Central counterparty
CLS	Continuous linked settlement system
CMU	Central Moneymarkets Unit
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CSD	Central securities depository
CSS	Clearing and settlement system
EFO	Exchange Fund Ordinance
FMI	Financial market infrastructure
FSB	Financial Stability Board
HKCC	HKFE Clearing Corporation Ltd.
HKD CHATS	Hong Kong Dollar Clearing House Automated Transfer System
HKMA	Hong Kong Monetary Authority
HKSCC	Hong Kong Securities Clearing Company Ltd.
HKTR	Hong Kong Trade Repository
IMSG	Implementation Monitoring Standing Group
IOSCO	International Organization of Securities Commissions
OC	Oversight committee
OTC	Over-the-counter
PFMI	*Principles for financial market infrastructures*
PS	Payment system
PSSVFO	Payment Systems and Stored Value Facilities Ordinance
RCH	Recognized Clearing House
SEOCH	SEHK Options Clearing House Ltd.
SFC	Securities and Futures Commission
SFO	Securities and Futures Ordinance
SSS	Securities settlement system
TR	Trade repository

Annex B: Reference documents

Payment Systems and Stored Value Facilities Ordinance –
https://www.elegislation.gov.hk/hk/cap584!en@2017-02-13T00:00:00

Securities and Futures Ordinance –
https://www.elegislation.gov.hk/hk/cap571!en@2017-02-13T00:00:00

Exchange Fund Ordinance –
https://www.elegislation.gov.hk/hk/cap66!en@1997-07-01T00:00:00

HKMA PFMI Guideline –
http://www.gld.gov.hk/egazette/pdf/20162020/egn201620202778.pdf

HKMA PSSVFO Guideline -
http://www.gld.gov.hk/egazette/pdf/20162020/egn201620202777.pdf

SFC PFMI Guidelines –
http://www.sfc.hk/web/EN/assets/components/codes/files-current/web/guidelines/guidelines-on-the-application-of-the-cpss-iosco-principles-for-financial-market-infrastructures/Guidelines%20on%20the%20Application%20of%20the%20CPMI-IOSCO%20Principles%20for%20Financial%20Market%20Infrastructures%20May%202016%20onwards.pdf

TR Guideline –
http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/TR_guideline.pdf

HKMA and SFC Joint Statement –
http://www.hkma.gov.hk/eng/key-information/press-releases/2013/20130328-6.shtml ; or
http://www.sfc.hk/edistributionWeb/gateway/EN/news-and-announcements/news/doc?refNo=13PR28

HKMA Policy Statement – Oversight of Financial Market Infrastructures by the HKMA
http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/FMI_oversight.pdf

Memorandum of understanding –
http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/CSSO_MoU.pdf

CPSS-IOSCO, *Principles for financial market infrastructures*, April 2012
http://www.bis.org/cpmi/publ/d101a.pdf

CPSS-IOSCO, *Principles for financial market infrastructures: disclosure framework and assessment methodology*, December 2012
http://www.bis.org/publ/cpmi106.pdf

CPMI-IOSCO, *Implementation monitoring of PFMI: Third update to Level 1 assessment report*, June 2016
http://www.bis.org/cpmi/publ/d145.pdf

CPMI-IOSCO, *Implementation monitoring of PFMIs: Second update to Level 1 assessment report*, June 2015
http://www.bis.org/cpmi/publ/d129.pdf

CPSS-IOSCO, *Implementation monitoring of PFMIs: First update to Level 1 assessment report*, May 2014
http://www.bis.org/publ/cpmi117.pdf

CPSS-IOSCO, *Implementation monitoring of PFMIs – Level 1 assessment report*, August 2013
http://www.bis.org/publ/cpmi111.pdf

CPMI-IOSCO, *Application of the* Principles for financial market infrastructures *to central bank FMIs*, August 2015
http://www.bis.org/cpmi/publ/d130.htm

CPMI-IOSCO, *Assessment and review of application of Responsibilities for authorities*, November 2015
http://www.bis.org/cpmi/publ/d139.htm

Annex C: Detailed response from the Hong Kong authorities

No additional information provided by Hong Kong authorities.

Annex D: Allocation of responsibilities

Allocation of responsibilities for Principles – PSs — Table 6

Principle	Responsible authority
1. Legal basis 2. Governance 3. Framework for the Comprehensive Management of Risks 4. Credit risk 5. Collateral 4. Credit risk 5. Collateral 7. Liquidity risk 8. Settlement finality 9. Money settlements 12. Exchange-of-value settlement systems 13. Participant default rules and procedures 15. General business risk 16. Custody and investment risks 17. Operational risk 18. Access and participation requirements 19. Tiered participation arrangements 21. Efficiency and effectiveness 22. Communication procedures and standards 23. Disclosure of rules, key procedures and market data	HKMA

Allocation of responsibilities for Principles – CCPs

Table 7

Principle	Responsible authority
1. Legal basis 2. Governance 3. Framework for the Comprehensive Management of Risks 4. Credit risk 5. Collateral 4. Credit risk 5. Collateral 6. Margin 7. Liquidity risk 8. Settlement finality 9. Money settlements 10. Physical deliveries 12. Exchange-of-value settlement systems 13. Participant default rules and procedures 14. Segregation and portability 15. General business risk 16. Custody and investment risks 17. Operational risk 18. Access and participation requirements 19. Tiered participation arrangements 20. Financial market infrastructure links 21. Efficiency and effectiveness 22. Communication procedures and standards 23. Disclosure of rules, key procedures and market data	SFC

Allocation of responsibilities for Principles – CSDs/SSSs Table 8

Principle	Responsible authority
1. Legal basis 2. Governance 3. Framework for the Comprehensive Management of Risks 4. Credit risk 5. Collateral 4. Credit risk 5. Collateral 7. Liquidity risk 8. Settlement finality 9. Money settlements 10. Physical deliveries 11. Central securities depositories 12. Exchange-of-value settlement systems 13. Participant default rules and procedures 15. General business risk 16. Custody and investment risks 17. Operational risk 18. Access and participation requirements 19. Tiered participation arrangements 20. Financial market infrastructure links 21. Efficiency and effectiveness 22. Communication procedures and standards 23. Disclosure of rules, key procedures and market data	HKMA for CSDs/SSSs for debt securities (CMU) SFC for CSDs/SSSs for stock market (HKSCC)

Allocation of responsibilities for Principles – TRs

Table 9

Principle	Responsible authority
1. Legal basis 2. Governance 3. Framework for the Comprehensive Management of Risks 15. General business risk 17. Operational risk 18. Access and participation requirements 19. Tiered participation arrangements 20. Financial market infrastructure links 21. Efficiency and effectiveness 22. Communication procedures and standards 23. Disclosure of rules, key procedures and market data 24. Disclosure of market data by trade repositories	HKMA

Annex E: FMIs in Hong Kong subject to the Principles

Systemically important PSs

- Hong Kong Dollar Clearing House Automated Transfer System (HKD CHATS)
- USD CHATS
- EUR CHATS
- RMB CHATS

CCPs

- Hong Kong Securities Clearing Company Ltd. (HKSCC)
- HKFE Clearing Corporation Ltd. (HKCC)
- The SEHK Options Clearing House Ltd. (SEOCH)
- OTC Clearing Hong Kong Limited (OTC Clear)

CSDs/SSSs

- Central Moneymarkets Unit (CMU)
- Hong Kong Securities Clearing Company Ltd. (HKSCC)

TRs

- Hong Kong Trade Repository (HKTR)