

Principles for Financial Market Infrastructures: Disclosure for HKD CHATS

<p>Responding Institution(s):</p>	<p>Jointly prepared by HKMA and HKICL in the capacity of the Settlement Institution and System Operator respectively of HKD CHATS</p>
<p>Jurisdiction in which the FMI operates:</p>	<p>Hong Kong</p>
<p>Authority overseeing the FMI:</p>	<p>HKMA empowered under the PSSVFO</p>
<p>The date of this disclosure:</p>	<p>29 May 2020</p>
<p>The website on which the disclosure is posted:</p>	<p>HKMA website http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/infrastructure/payment-systems.shtml</p> <p>HKICL website http://www.hkicl.com.hk</p>
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List of abbreviations used in this Disclosure

BCD	Banking Conduct Department
BCP	Business Continuity Plan
CCP	Central Counterparty
CCASS	Central Clearing and Settlement System (for equities)
CHATS	Clearing House Automated Transfer System
CHATS Rules	Clearing House Rules
CP	Clearing Participant
CLS	Continuous Linked Settlement
CMU	Central Moneymarkets Unit
CPMI	Committee on Payments and Market Infrastructures
CSSO	Clearing and Settlement Systems Ordinance
Discount Window	Discount Window Facility under Settlement Facilities
DvP	Delivery versus Payment
EFBNs	Exchange Fund Bills and Notes
EFO	Exchange Fund Ordinance
EUR	Euro
FID	Financial Infrastructure Department
FMIO	Financial Market Infrastructure Oversight
FMI	Financial Market Infrastructures
FPS	Faster Payment System
FPS DW repo	Discount Window repo facility for Faster Payment System
FPS Rules	Faster Payment System Rules
HKAB	Hong Kong Association of Banks
HKD	Hong Kong Dollar
HKICL	Hong Kong Interbank Clearing Limited
HKMA	Hong Kong Monetary Authority
HKGBs	Hong Kong SAR Government Bonds
Intraday Repo	Intraday Repo Facility under Settlement Facilities
ICSDs	International Central Securities Depositories
IOSCO	International Organization of Securities Commissions
INEDs	Independent non-executive directors
LBs	Licensed Banks
MPF	Mandatory Provident Fund
OTC	Over-the-counter
OTCC	OTC Clearing Hong Kong Limited (CCP for OTC derivatives)
Procedures	Operating Procedures
PFMI	Principles for Financial Market Infrastructures
PSOD	Payment Systems Operation Division
PSSVFO	Payment Systems and Stored Value Facilities Ordinance
PvP	Payment versus Payment
RMB	Renminbi
RMC	Risk Management Committee
RLBs	Restricted Licence Banks
RPO	Retail Payment Oversight
Rules	CHATS Rules and FPS Rules
RTGS	Real Time Gross Settlement
SI	Settlement Institution
SP	Settlement Participant
SO	System Operator
SVFs	Stored Value Facilities
USD	US Dollar

I. Executive summary

1. HKD CHATS is the interbank payment system in Hong Kong for settling HKD transactions on an RTGS basis. It has been operating smoothly since its launch on 9 December 1996. The settlement institution (SI) of HKD CHATS is the HKMA¹ (through its Payment Systems Operation Division (PSOD) of the Financial Infrastructure Department (FID)) and the system operator (SO) is Hong Kong Interbank Clearing Limited (HKICL).

2. HKD CHATS was deemed designated under the Clearing and Settlement Systems Ordinance (CSSO)² on enactment of the ordinance in 2004 and granted a certificate of finality to provide settlement finality for transactions settled in the system. On 13 November 2015, the CSSO was amended and retitled as the Payment Systems and Stored Value Facilities Ordinance (PSSVFO)³. The designation of HKD CHATS and certificate of finality granted under the pre-amended CSSO continue to have effect under the PSSVFO. The HKD CHATS is subject to the oversight of the HKMA (via the Financial Market Infrastructure Oversight (FMIO) team of the Banking Conduct Department (BCD)).

3. Apart from settling large-value interbank payments, HKD CHATS also provides clearing and settlement of small-value retail payments on a multilateral netting basis, and settlement of PvP and DvP transactions via links with other local RTGS systems, the CMU (debt securities settlement system) and CCASS (equities settlement system) in Hong Kong. The system features and the turnover statistics are publicly disclosed.

4. To further enhance the efficiency of retail payment services, HKD FPS was launched on 17 September 2018⁴ as an extension of HKD CHATS to enable the public to make instant retail fund transfers and payments across different banks or stored value facilities (SVFs) on a round-the-clock basis. Similar to HKD CHATS, the HKD FPS is subject to the oversight of FMIO team of HKMA under the PSSVFO,

¹ The office of the Monetary Authority (MA) is known as the Hong Kong Monetary Authority (HKMA), and the MA is the Chief Executive of the HKMA. The MA is appointed under the Exchange Fund Ordinance to assist the Financial Secretary in performing his functions under the Exchange Fund Ordinance and to perform such other functions as are assigned by other Ordinances or by the Financial Secretary.

² The CSSO, which came into effect on 4 November 2004, provides a statutory regime for the HKMA to designate and oversee clearing and settlement systems which are material to the monetary or financial stability of Hong Kong or to the functioning of Hong Kong as an international financial centre. It also empowers the HKMA to issue guidelines to explain its role, policies and requirements in relation to the oversight of systems designated under the CSSO. The purpose of the CSSO is to promote the general safety and efficiency of clearing and settlement systems designated under the Ordinance.

³ The PSSVFO, which came into effect on 13 November 2015, introduces a regulatory regime for stored value facilities and retail payment systems in addition to the existing oversight framework for clearing and settlement systems under the pre-amended CSSO. The empowerment and statutory regime established for the HKMA to designate and oversee clearing and settlement systems remain unchanged.

⁴ FPS was launched on 17 September 2018 for a period of staff pilot run, and it was fully activated on 30 September 2018. Since then the public can make or receive real-time payments through the FPS. The FPS supports the use of phone numbers, email addresses, FPS Identifiers or QR codes for receiving payments in HKD and RMB. The system availability target of HKD FPS is 99.5% for components within the control of the system operator.

which also provides statutory backing to the settlement finality for transactions made through the HKD FPS.

5. Participation in HKD CHATS and HKD FPS as direct participants is mandatory for licensed banks (LBs) in Hong Kong, and each of them is required to maintain a settlement account (including a CHATS ledger account and an FPS ledger account) with the HKMA. Restricted licence banks (RLBs) may also join the system on a need basis. To promote healthy competition between banks and non-banks, SVF licensees licensed under PSSVFO can join the FPS as clearing participants (CPs), each of which must engage an FPS settlement participant (SP), i.e. a system direct participant, as its settlement service provider to settle its payments on FPS via its corresponding SP's FPS ledger account. The HKD CHATS/FPS participants are required to comply with the PSSVFO, the Rules and Procedures of HKD CHATS and HKD FPS, which are well documented and communicated to the participants. The HKD CHATS is not a CCP and does not guarantee settlement of payments, and hence is not exposed to any significant liquidity and credit risk to participants. In particular, the participants have to ensure that they have adequate liquidity to meet their payment obligations.

6. HKD CHATS has a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational and other risks. The risks of operating HKD CHATS are identified, measured, monitored, managed and controlled comprehensively and prudently under a sound risk assessment and management framework of the HKMA.

7. To facilitate liquidity management by participants, the SI provides liquidity to participants through fully collateralized repurchase arrangements. A number of liquidity management tools have been built in to HKD CHATS and real-time information is available to facilitate liquidity management by participants. A robust operational risk management framework, supported by appropriate system designs and features, IT policies, procedures and controls, is in place to ensure operational reliability and security. On-site resilience, a hot back up site, together with a second back up site for FPS and a comprehensive disaster recovery plan which is regularly reviewed and rehearsed, help ensure the critical operations of SI and SO can be resumed in a timely manner under various disruption scenarios.

II. Summary of major changes since the last update of the disclosure

8. This version has been updated with 2019 payment figures, the refinement of Settlement Facilities offered by the HKMA⁵ and HKICL's latest arrangements relating to cyber resilience since the last update in May 2019.

⁵ The HKMA refined its Settlement Facilities in August 2019 under which the Discount Facility for HKGBs is discontinued for it but has been subsumed under other liquidity facilities provided by the HKMA. Details of various types of liquidity facilities provided by the HKMA for banks can be found at <https://www.hkma.gov.hk/eng/key-functions/money/liquidity-facility-framework/hong-kong-dollar-liquidity-facility-framework/>.

III. General background on the FMI

General description of the HKD CHATS and the markets it serves

9. The HKMA plays an active role in the development of financial infrastructure in Hong Kong, including the payment systems and debt securities settlement system (CMU) designated under PSSVFO, with a view to maintaining Hong Kong as an international financial centre and developing Hong Kong into a settlement hub in the Asian region.

10. HKD CHATS provides a safe and efficient settlement platform for HKD interbank payments, which are settled in central bank money. Interbank payments are settled continuously on a gross deal-by-deal basis across the book of the HKMA as long as there are sufficient funds in the settlement accounts of the HKD CHATS participants. Settlements are irrevocable and enjoy immediate finality with the statutory backing of the PSSVFO. To help enhance participants' liquidity management for smooth operation of HKD CHATS, the HKMA offers Settlement Facilities (Intraday Repo and Discount Window) to participants of HKD CHATS and have introduced a number of liquidity management tools to HKD CHATS.

11. In addition to settling large-value payments between banks, the system also handles bulk settlement of paper cheques, e-Cheques, stock market and OTC derivatives-related payments, MPF schemes' switching transactions, credit card payments and other small-value bulk electronic payments, such as electronic point of sale payments, auto-credit and auto-debit transactions, and automatic teller machine transfers. The bulk items are settled on a multilateral netting basis.

12. HKD CHATS also settles transactions that involve the settlement of two linked obligations simultaneously, thus eliminating principal risks arising from the settlement time lag between the two obligations. It supports PvP for EUR/HKD, USD/HKD, and RMB/HKD foreign exchange transactions via the links with the EUR, USD and RMB CHATS in Hong Kong, and DvP for debt and equities transactions via the links with CMU and CCASS respectively.

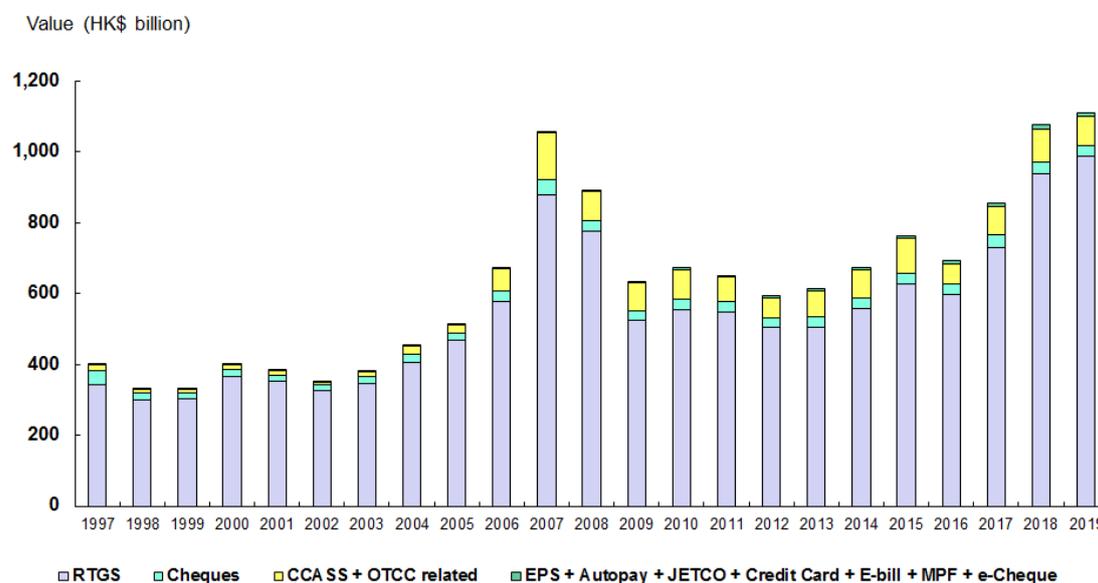
13. HKD FPS, as an extension of HKD CHATS, operating on a 24x7 basis with full connectivity among banks and SVF accounts on the same platform, enables almost instantaneous fund transfers and retail payments, anytime, anywhere, across banks or SVFs. It supports real-time person-to-person, person-to-business, including bill payments and other merchant payments, and business-to-business payments across banks or SVFs and e-wallet top-up from bank accounts etc. Similar to HKD CHATS, interbank payments are settled continuously on a gross deal-by-deal basis across the book of the HKMA as long as there are sufficient funds in the FPS ledger accounts of HKD FPS participants. Settlements are irrevocable and enjoy immediate finality with the statutory backing of the PSSVFO. For liquidity management, sweeping mechanism is in place in CHATS and FPS to support liquidity transfer between HKD CHATS ledger accounts and HKD FPS ledger accounts of SPs during the CHATS operating hours. In order to facilitate banks' liquidity management for settling FPS transactions during the period after the HKD CHATS is closed, banks will be allowed to borrow HKD funds from the HKMA, by entering into sale and repurchase transactions for the provision of interest-free HKD funds for use in the FPS, namely the FPS DW repo transactions.

14. There is no loss-sharing arrangement in HKD CHATS. In other words, in case of a failed settlement, the defaulting party will be fully liable for the failed

payment. In this connection, each participant has a responsibility to ensure that it has sufficient liquidity to effect its payments in a timely and orderly manner. Default procedures are in place and regularly drilled to minimise the impact of a default on the system and the participants.

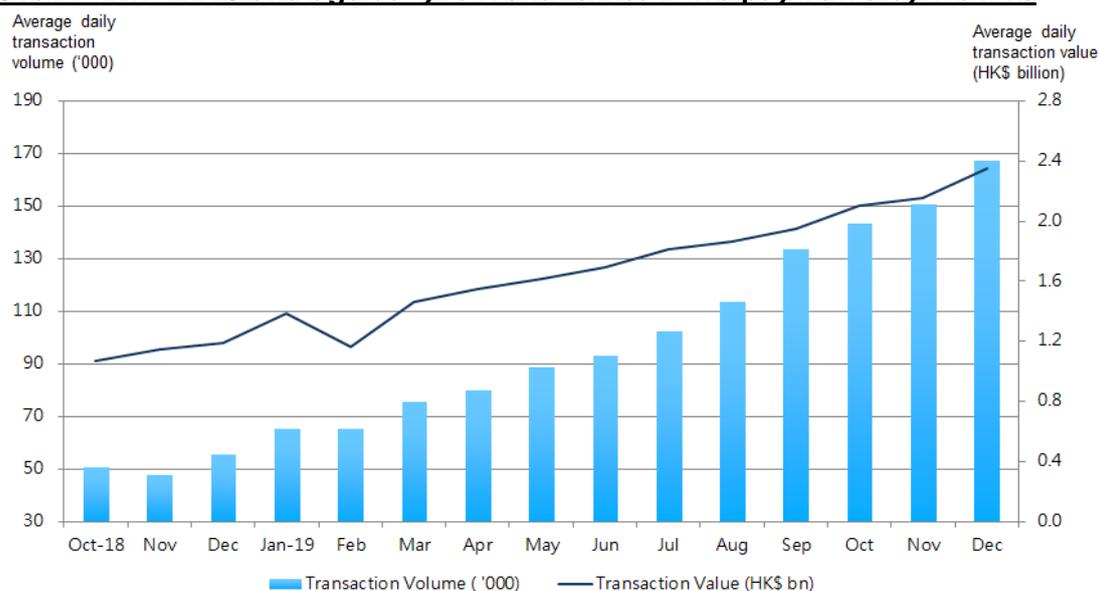
15. HKD CHATS, as well as the HKD FPS, has been operating safely and smoothly since its launch. HKD CHATS is subject to a system availability target of 99.9%⁶ for prime time and 99.5% for non-prime time for components within the control of the system operator. The prime time and non-prime time system availability rates were both 100% in 2019, excluding aspects not within the control of the system operator. In 2019 HKD CHATS settled on average around 31,000 RTGS transactions each operating day, with an average daily value of HK\$987 billion. It also processed on average around 0.8 million bulk items each operating day, involving an average daily value of HK\$123 billion (Chart 1). In 2019 HKD FPS settled on average around 107,000 real-time payment transactions each operating day, with an average daily value of HK\$1.8 billion (Chart 2).

Chart 1: Hong Kong dollar RTGS system average daily turnover



⁶ There are other target measurements for HKICL's monitoring.

Chart 2: HKD FPS average daily turnover of real-time payments by months



General organisation of the HKD CHATS

16. HKD CHATS (including HKD FPS as an extension of HKD CHATS) has 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. The SI of the HKD CHATS/FPS is the HKMA through the PSOD, which is part of the FID. The SI has appointed HKICL as the SO of the HKD CHATS/FPS. HKICL is jointly owned by the HKMA and Hong Kong Association of Banks (HKAB). The HKAB is the association of the banks in Hong Kong which represents the interests of the banking community. The HKD SI and SO have developed policies and procedures for the safe and efficient operation of HKD CHATS (including FPS), which is subject to the oversight of the HKMA (via the FMIO team).

17. Since the PSOD is a division of the HKMA, the management and operations of this division fall under the governance structure of the HKMA, and are therefore subject to the normal governance, decision-making, audit and control processes of the HKMA. The PSOD is tasked with the day-to-day operations of the SI functions, liaison with participants as appropriate and initiating on-going development and enhancements. The HKD CHATS/FPS participants are thoroughly consulted and briefed with sufficient advance notice on important initiatives and events affecting HKD CHATS/FPS, which may be driven by the HKMA, the local banking industry, or the latest developments in international practice and regulation. Further details of the governance structure of the HKMA are available at the HKMA website.

18. HKICL is responsible for the day-to-day computer and data operations, clearing services and management of HKD CHATS/FPS on the terms and conditions set out in the service agreement signed between the HKMA (as SI) and HKICL. It is also responsible for system development as well as any equipment upgrade and maintenance. HKICL is operated as a separate legal entity, with its own Board of Directors and management team. The Board of Directors of HKICL comprises representatives of the HKMA, representatives of HKAB and two independent non-executive directors (INEDs). The operation of HKICL is managed by the CEO, who is accountable to the Board. HKICL, as the SO, is also accountable to the SI.

Further details of the governance structure of HKICL are available at the HKICL website.

Legal and regulatory framework

19. The laws of Hong Kong form the legal basis for the operations of HKD CHATS, supplemented by various statutes, regulations and contractual provisions. All the relevant documents are governed by Hong Kong law and are legally binding and enforceable. The EFO provides the basis for banks to open a settlement account with the HKMA. The HKMA exercises a delegated power under section 3A(1) of the EFO to serve notices on banks in Hong Kong requiring them to open accounts with the HKMA for the account of the Exchange Fund, which is effectively the HKD settlement account. All LBs in Hong Kong are required to maintain a HKD settlement account with the HKMA which contains two separate ledgers, namely HKD CHATS ledger account and FPS ledger account for settling HKD CHATS and HKD FPS transactions respectively. In May 2000, the HKMA announced that RLBs in Hong Kong may also be allowed to access HKD CHATS, provided that they demonstrate a business need. The SI assesses applications of RLBs based on objective, risk-based, and publicly disclosed criteria. The RLBs maintaining a CHATS ledger account may opt to become FPS SPs, subject to SI's approval.

20. There are other legal documents (*Conditions Governing Access to the Settlement Account and Master Sale and Repurchase Agreements*) setting out terms and conditions for the settlement accounts of participants with the HKMA and repurchase arrangements between the HKMA and participants. The HKMA (as SI) has appointed HKICL as the SO under the terms and conditions of the service agreement between the HKMA and HKICL.

21. The HKD Clearing House Rules (the CHATS Rules) set out rights and obligations for participation of the HKD CHATS. The Rules for HKD FPS (the FPS Rules) set out rights and obligations for participation in the HKD FPS. These documents are made available to each participant when joining the system. The HKD CHATS and FPS participants are required to adhere to the CHATS Rules and FPS Rules respectively, and comply with the terms and conditions in the account opening form and other documents as specified by the HKMA and HKICL. These Rules are available on the website of the HKICL.

22. HKD CHATS was deemed designated under the CSSO on 4 November 2004, and granted a certificate of finality on the same day. CSSO was retitled as PSSVFO on 13 November 2015, under which the designation of HKD CHATS and certificate of finality continue to have effect under the PSSVFO. The certificate of finality provides statutory backing for the finality of settlement of transactions settled through the system. This finality is protected from insolvency laws and other laws by the PSSVFO. This ensures that transactions settled through HKD CHATS are final and irrevocable and will not be reversed in circumstances, including the insolvency of a system participant, whereas any rights resulting from the underlying transaction of any such transaction will be preserved. HKD FPS launched as an extension of HKD CHATS in September 2018 enjoys the same designation and settlement finality of HKD CHATS under PSSVFO. The SI and the oversight functions of HKD CHATS (including HKD FPS) are carried out by two different departments of the HKMA to ensure segregation of duties and avoid conflicts of interest. Both the SI and SO of the HKD CHATS are required to comply with the safety and efficiency requirements

stipulated in the PSSVFO and other guidelines or requirements specified by the HKMA (as overseer) from time to time.

System design and operations

Operating hours

23. HKD CHATS opens for settlement from 08:30 to 18:30 (Hong Kong Time) every working day, Monday to Friday, except Hong Kong's public holidays. Meanwhile, it is available around-the-clock during Monday to Sunday for transaction input (or cancellation), except during pre-scheduled system housekeeping tasks. HKD FPS operates on a 24x7 basis, except during scheduled housekeeping and maintenance announced to participants from time to time, if required.

Communication mode

24. Since May 2009, HKD CHATS has been operating on SWIFT's messaging network (SWIFTNet), which helps enhance interoperability between domestic and international messages for payment instructions and remove operational barriers for overseas institutions to join the system.

Clearing and settlement processes

25. All payments submitted to the HKD CHATS have to go through a validation process. Payment instructions with input errors will be automatically rejected. All validated transactions will be settled immediately if there is sufficient balance in the HKD CHATS account of the paying participant. Otherwise, payment instructions will be queued in the system and settled on a first-in-first-out basis until there are sufficient funds in the respective HKD CHATS ledger account to settle all the instructions in the queue. If a HKD CHATS payment valued on the same day is not settled by the cut-off time of the system, it will be automatically cancelled by the system.

26. HKD CHATS provides participants with real-time enquiry functions to monitor the account status and has queue management functions to re-sequence outstanding payments in payment queues.

Clearing and settlement of bulk items

27. In addition to settling large-value interbank payments in RTGS mode, HKD CHATS also handles daily bulk clearings for bulk items mentioned above. These items are cleared through HKICL and settled through the bulk settlement runs on a multilateral netting basis. Each type of the bulk items has its own set of operating procedures, which describes comprehensively the clearing and settlement processing flow and requirements and contingency measures.

Clearing and settlement of HKD FPS items

28. All payments submitted to HKD FPS will be validated. Payment instructions with input errors will be automatically rejected. Different from HKD CHATS, HKD FPS has no queueing mechanism in place. All validated transactions will be settled immediately on an RTGS basis if there is sufficient balance in the HKD FPS ledger account of the paying participant and rejected in the case of insufficient balance.

Similar to HKD CHATS, HKD FPS provides participants with real time enquiry functions to monitor the account status.

Liquidity management system features

For CHATS

29. As interbank transactions are settled on an RTGS mode, to reduce the chance of payment gridlocks and to smooth payment flows, the SI has implemented various measures including the provision of Settlement Facilities in the form of intraday and overnight repo, and development of liquidity saving devices for the HKD CHATS. The key tools are summarized as follows:

- a. Settlement Facilities: Participants can arrange with the HKMA to obtain intraday and overnight liquidity through interest-free Intraday Repo Facility and interest bearing Discount Window Facility, respectively, with EFBNs as collaterals. Intraday repos that cannot be repurchased before the close of system will be automatically rolled into Discount Window on which interest is charged by the HKMA.
- b. Interbank Intraday Liquidity Facility: This facility improves liquidity management of participants by allowing them to obtain intraday loans more efficiently from other participants who are registered as liquidity providers.
- c. Queuing mechanism: If a participant does not have sufficient balance in its HKD CHATS ledger account to effect a payment, the transaction is queued in the HKD CHATS. Participants can make use of the re-sequencing function to move transactions up or down their list of queued payments. The queuing mechanism allows the banks to manage their own queues of outstanding payment instructions.
- d. Real time balance enquiry function and pre-notification of bulk settlement flows: Participants are able to view the balance in their HKD CHATS ledger accounts on a real time basis. They also have access to the net amounts they need to pay (or receive) for each of the bulk clearing runs that take place during the day so that they can arrange funding in advance for settlement if necessary.
- e. Liquidity saving devices (liquidity optimisers): Two types of liquidity saving devices riding on the multilateral offsetting mechanism have been developed to help HKD CHATS participants manage intraday liquidity efficiently. One is a built-in optimiser triggered automatically by HKD CHATS at regular intervals during the day or, if needed, by the SI for periodic multilateral offsetting of payment instructions queued in HKD CHATS. The other optimiser may also be triggered by a participant netting with the bulk settlement payments in the bulk settlement runs involving paper cheque, auto-debit items and equities transactions.
- f. Throughput guidelines: To encourage banks to make payments in a timely and an orderly manner throughout the day, each bank is required to release and settle not less than 35% of their interbank payments by 13:30, and 70% by 16:30 based on the value of its total RTGS payments for the day.

- g. Monitoring: To ensure the smooth processing of the payment system, the SI closely monitors the payment condition of each participant on a real-time basis.

For FPS

30. Similar to HKD CHATS, FPS interbank transactions are settled on a gross deal-by-deal basis on the book of the SI. To ensure the FPS participating banks to have adequate liquidity for the settlement of FPS transactions on an RTGS mode around-the-clock, the following liquidity management tools are built in the HKD FPS:

- a. Account balance sweeping during the HKD CHATS operating hours: Account balance sweeping functions are provided to FPS participating banks to manage their liquidity positions of the CHATS ledger accounts and FPS ledger accounts. During the operating hours of HKD CHATS, a bank can transfer funds from its CHATS ledger account to FPS ledger account, and vice versa, through manual operation or automatic balance sweeping function. The automatic account balance sweeping function operates according to the threshold values (maximum, optimal and minimum balance) set by individual participants while the manual account balance sweeping requests are initiated by participants on their discretion based on their own operational needs.
- b. Account balance sweeping at the opening and close of HKD CHATS: At the close of the HKD CHATS, the closing balance in the HKD CHATS ledger account for individual banks will be transferred to the FPS ledger account automatically. At the opening of HKD CHATS next value day, the balance in the FPS ledger account in excess of the optimal balance as pre-defined by individual banks will be transferred from the FPS ledger account to the HKD CHATS ledger account.
- c. FPS DW Repo facility: A bank can request interest-free FPS DW repo transactions during the period from 17:30 to 18:30 on a HKD CHATS operating day. The funds borrowed through the FPS DW repo transactions can only be used in the FPS after the funds are automatically swept to the FPS when the HKD CHATS closes. Such transactions would be governed by the Master Sale and Repurchase Agreement. Banks can determine the amount borrowed under the FPS DW repo based on their business and liquidity needs as far as they have sufficient holdings of EFBNs as the DW repo collateral.

IV. Principle-by-principle summary narrative disclosure

Principle 1: Legal basis	<i>An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.</i>
Summary disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions 2. For the SI⁷: <ul style="list-style-type: none"> - the EFO provides the basis for the establishment of and access to the HKD CHATS/FPS - the PSSVFO ensures the settlement finality of payments made on the HKD CHATS, including the HKD FPS which is an extended service of HKD CHATS - appointment of HKICL as the SO to perform the day-to-day computer operations and clearing services is supported by proper legal documentation and governed by laws in Hong Kong - the Master Sale and Repurchase Agreement sets out the terms and conditions for SI to provide liquidity to HKD CHATS/FPS participants through repo arrangements 3. For the SO⁸: <ul style="list-style-type: none"> - appointment of the HKICL as the SO of the HKD CHATS, including HKD FPS, is known to the public via the website of the HKMA and HKICL - appointment of HKICL as the SO to perform the day-to-day computer operations and clearing services is supported by proper legal documentation, including a Services Agreement and various addendums (“Services Agreement”) between the HKMA and HKICL - all participants of HKD CHATS and HKD FPS are required to observe the CHATS Rules and FPS Rules promulgated by HKICL, which set out the terms and conditions of the clearing arrangements for the HKD CHATS and HKD FPS respectively. The Rules are governed by the Hong Kong law - the Services Agreement, CHATS Rules and FPS Rules cover all material aspects of the operations of HKICL and are all clear, understandable and consistent with relevant laws and regulations

⁷ The SI refers the HKMA (via the PSOD of FID).

⁸ The SO refers to HKICL.

Principle 2: Governance	<p><i>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.</i></p>
Summary Disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has 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 2. For the SI: <ul style="list-style-type: none"> - the SI of the HKD CHATS (including HKD FPS) operates as a department (i.e. FID) within the HKMA, with clear and direct lines of responsibility and accountability - the SI function is subject to the oversight of another department (i.e. the FMIO team of the BCD) in the HKMA (pursuant to provisions of the PSSVFO) as well as to the internal audit and risk management processes of the HKMA (see the Annex for the organisational chart of the HKMA showing FID and FMIO team) - the HKMA has a clear, publicly-communicated governance structure - the HKMA has clear, publicly-communicated policy objectives of promoting the stability and integrity of the financial system, and maintaining and developing Hong Kong as an international financial centre - HKICL, as SO of HKD CHATS (including HKD FPS), is accountable to the HKMA pursuant to the terms and conditions for its appointment, e.g. documented service standards and regular assessments. The HKMA (via its FID) is also represented in the Board of the HKICL 3. For the SO: <ul style="list-style-type: none"> - HKICL is a private company jointly owned by the HKMA and the HKAB - HKICL has a clear, publicly communicated governance structure. Its Board of Directors, Board Sub-Committee and Risk Management Committee (RMC) comprise representatives of the HKMA, representatives of HKAB, and INEDs - HKICL has clear, publicly-communicated mission of providing reliable, quality, efficient, cost-effective and innovative clearing and settlement services in Hong Kong - the SO function is subject to the oversight of the FMIO team in the HKMA (pursuant to provisions of the PSSVFO) - as the SO, HKICL is accountable to the HKMA, as the SI of the HKD CHATS (including HKD FPS), under a contract (Services Agreement) - HKICL has implemented a mechanism for regular reviews of both the overall Board performance and performance of individual Board members - internal audit function is in place to assess the effectiveness of HKICL's risk management and internal controls system on an ongoing basis - all material changes affecting the operations of the HKD CHATS (including HKD FPS) are made available to participants via various

	means, including the amendment of the relevant documentation and communication to the participants via documents available on the website
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Principle 3: Framework for the comprehensive management of risks	<i>FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.</i>
Summary Disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks 2. For the SI: <ul style="list-style-type: none"> - operating as a department of the HKMA, the SI function is subject to the management framework of the HKMA. The framework requires regular assessments of all facets of risk relating to the department, and implementation of effective measures to pre-empt and address the applicable risks 3. For the SO: <ul style="list-style-type: none"> - the HKICL Board, Board Sub-Committee and RMC oversee the implementation of a sound and comprehensive risk management framework in the HKICL with focus on information technology, operational resilience and business continuity. A risk management framework is in place to identify, measure, monitor, and manage effectively the risks for HKD CHATS (including HKD FPS) - there are stringent requirements on information technology and operational risk management. External and/or internal audits are organised to assess critical aspects of the company by carrying out, where applicable, regular information technology audits, operations audits, compliance assessments of the Cheque Imaging and Truncation System (CITS) system and financial audits. Pre-launch system audits are conducted prior to the introduction of major systems (including FPS) to ensure quality and integrity. Contingency drills and rehearsals of disaster recovery arrangements are carried out to ensure business continuity in disaster scenarios - HKICL has implemented a recovery plan based on the international standard on FMI recovery published in October 2014 (revised in July 2017) and updated the same as appropriate - HKICL has obtained certification under two ISO systems and established associated risk management frameworks: the ISO27001 standards for Information Security Management System and ISO9001 for Quality Management System. Under these frameworks, the HKICL adopts organised methodologies to effectively identify, measure, monitor and manage all facets of risks that arise in or are borne by HKICL

Principle 4: Credit Risk	<i>An FMI should effectively measure, monitor, and manage its credit exposure 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.</i>
Summary Disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS has effective credit risk management processes to measure, monitor and manage its credit exposures to participants 2. For the SI: <ul style="list-style-type: none"> - HKD CHATS (including HKD FPS) is not a CCP, the SI does not guarantee settlement, and thus will not incur credit exposure to payer banks in terms of payments made to payee banks not being recoverable from the payer banks - the SI may incur potential credit exposure to participants due to the provision of liquidity to participants through securities repo (Intraday Repo and Discount Window under Settlement Facilities as well as FPS DW repo) in HKD CHATS when the market value of the securities under repo drops below the amount of liquidity provided - the SI accepts only securities issued by the HKMA (EFBNs) for repo and FPS DW repo and hence will not incur credit exposure to any other third-party issuers of the repo securities - the SI applies prudent haircuts (increasing with remaining maturity) on the mark-to-market value of the repo securities to minimize the potential credit exposure to participants arising from fluctuations in market value of the securities 3. For the SO: <ul style="list-style-type: none"> - Not applicable. As the SO, HKICL does not incur any credit exposure to participants of HKD CHATS (including HKD FPS)

Principle 5: Collateral	<i>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.</i>
Summary Disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS accepts only collateral with no credit risk, low liquidity and market risk, and has set and enforce conservative haircuts 2. For the SI: <ul style="list-style-type: none"> - the SI may incur potential credit exposure to participants due to the provision of liquidity to participants through securities repo (Intraday Repo and Discount Window and FPS DW repo) when the market value of the securities under repo drops below the amount of liquidity provided - the SI accepts only securities issued by the HKMA (EFBNs) for repo and FPS DW repo and hence will not incur credit exposure to any other third-party issuers of the repo securities - EFBNs are highly liquid instruments supported by a market-making arrangement - the SI applies prudent haircuts (increasing with remaining maturity) on the mark-to-market value of the repo securities to minimize the potential credit exposure to participants arising from fluctuations in market value of the securities - the collateral management system used for securities repo, the CMU, is well designed and operationally flexible - through CMU's real-time interface with ICSDs, cross-border collaterals can be brought into the CMU system quickly at any time as required. Real time information enables participants to use the collaterals efficiently 3. For the SO: <ul style="list-style-type: none"> - Not applicable. As the SO, the HKICL does not incur any credit exposure to participants of HKD CHATS (including HKD FPS), and hence does not impose any collateral requirement on participants

Principle 6: Margin	<i>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.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMI.

<p>Principle 7: Liquidity Risk</p>	<p><i>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.</i></p>
<p>Summary Disclosure</p>	<ol style="list-style-type: none"> 1. The HKD CHATS (including HKD FPS) measures, monitors and manages its liquidity risk effectively. Sufficient liquid resources in the relevant currency (HKD) are available to meet its payment obligations under potential stress scenarios 2. For the SI: <ul style="list-style-type: none"> - HKD CHATS (including HKD FPS) is not a CCP, the SI does not guarantee settlement, and thus will not incur liquidity risk in terms of obligations to make payments to payee banks - liquidity need of the SI arises only in the context of the provision of liquidity to participants through securities repo (Intraday Repo or Discount Window or FPS DW repo) - the SI can create liquidity for provision to the participants under securities repo in compliance with the Currency Board Principles, i.e. Linked Exchange Rate system adopted by Hong Kong (http://www.hkma.gov.hk/eng/key-functions/monetary-stability/linked-exchange-rate-system.shtml), under which different components of monetary base are interchangeable as long as the sum of their amounts remains fully backed by foreign reserves. Through securities repos, the SI can create and provide an amount of HKD liquidity to participants in the form of account balances in the HKD CHATS (a component of monetary base) equals to the amount of EFBNs (another component of monetary base) taken in by the SI under the repos, thereby keeping the overall level of monetary base unchanged - the SI assists participants in the management of their liquidity requirements through the liquidity-efficient design of the HKD CHATS and FPS, the provision of liquidity via repo, and provision of real-time information on transactions and settlement account balances of participants 3. For the SO: <ul style="list-style-type: none"> - Not applicable. HKICL is not a participant in the HKD CHATS (including HKD FPS) nor would it provide liquidity to participants

Principle 8: Settlement finality	<i>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.</i>
Summary disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS (including HKD FPS) provides clear and certain final settlement in both intraday day and real time modes 2. For the SI: <ul style="list-style-type: none"> - the PSSVFO confers settlement finality to all the payments settled in the HKD CHATS, including HKD FPS which is an extended service of HKD CHATS, including payments settled real-time or payments settled in batch mode (at scheduled bulk settlement runs) 3. For the SO: <ul style="list-style-type: none"> - as stipulated in the HKD CHATS Rules and FPS Rules, the settlement of a payment is deemed made, completed, irrevocable and final once it is debited from or credited to the HKD settlement account that a participant maintains with the SI

Principle 9: Money settlements	<i>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.</i>
Summary disclosure	The HKD CHATS (including HKD FPS) conducts money settlement in central bank money across the book of the HKMA.

Principle 10: Physical deliveries	<i>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.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMI.

Principle 11: Central securities depositories	<i>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.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMI.

Principle 12: Exchange-of- value settlement systems	<i>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.</i>
Summary Disclosure	<ol style="list-style-type: none"> 1. HKD CHATS has implemented arrangements to eliminate principal risk for the settlement of HKD payments with a linked obligation 2. For the SI: <ul style="list-style-type: none"> - PvP arrangements have been implemented for settling USD/HKD, RMB/HKD and EUR/HKD foreign exchange transactions - CLS Bank has access to HKD CHATS so that PvP transactions for foreign exchange transactions involving a HKD leg against other eligible CLS currencies can be supported by the HKD CHATS - DvP arrangements have been implemented for settling debt and equity transactions at the CMU and CCASS 3. For the SO: <ul style="list-style-type: none"> - automatic mechanisms and linkages have been implemented in the relevant CHATS and securities settlement systems to support effective and efficient PvP and DvP settlements, the mechanisms will help match the PvP or DvP related obligations in the respective systems and synchronize the settlement of the obligations in the respective systems to achieve PvP or DvP settlement

Principle 13: Default Management	<p><i>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.</i></p>
Summary Disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS (including HKD FPS) has effective and clearly defined rules and procedures to manage a participant default 2. For the SI: <ul style="list-style-type: none"> - HKD CHATS (including HKD FPS) is not a CCP, the SI does not guarantee settlement, and thus will not incur any loss or liquidity risk in terms of payments made to payee banks not being able to be recovered from the payer banks - loss may arise only in the context of a defaulting participant not being able to repay the liquidity provided by the SI through securities repo, and the value of the collateral having dropped below the amount of liquidity provided - a prudent risk management framework has been implemented to guard against the collateral risk (see PFMI 5) - the rules and procedures for managing a participant default have been set out in the HKD CHATS Rules and Procedures and HKD FPS Rules and Procedures issued by the HKICL, the SO of the HKD CHATS (including HKD FPS) 3. For the SO: <ul style="list-style-type: none"> - the HKD CHATS Rules and Procedures, and HKD FPS Rules and Procedures contain clearly defined rules and operating procedures for handling a participant's default in honouring its payment obligations, including the triggering conditions and procedures for suspension of service to the default participant - The HKD CHATS Rules and Procedures, and HKD FPS Rules and Procedures on default arrangements are subject to regular reviews and drills

Principle 14: Segregation and portability	<i>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.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMI.

Principle 15: General Business Risk	<p><i>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.</i></p>
Summary disclosure	<ol style="list-style-type: none"> 1. Not applicable to the HKMA as the SI of HKD CHATS/FPS, since the HKMA is Hong Kong's central banking institution. 2. For the SO: <ul style="list-style-type: none"> - HKICL has a robust management and control system to identify, monitor and manage general business risk - HKICL manages its financial and cash flow position prudently and continuously to operate the company as a going concern. It adheres to commonly adopted corporate governance standards and has a Board of Directors which sets the strategic direction of the company, makes major decisions affecting the business risk profile of the company, and reviews the financial position of the company on a regular basis - HKICL operates on a cost-recovery basis and the HKICL balances its financial position by covering all operating costs from the income it generates. It regularly evaluates the clearing house tariff, which provides income to the HKICL, against projected costs - based on approved development plans, the company always maintains sufficient cash flow to meet daily operational needs and high quality liquid financial resources equivalent to six months' operating expenses funded by equity in the form of retained earnings. Viable plans are also available to meet additional ad hoc or persistent liquidity needs - HKICL has implemented a recovery plan based on the international standard on FMI recovery published in October 2014 (revised in July 2017) and updated the same as appropriate

Principle 16: Custody and investment risks	<i>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.</i>
Summary Disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS (including HKD FPS) has prudent investment and risk management policies and procedures to safeguard its own and its participants' assets 2. For the SI: <ul style="list-style-type: none"> - the department in the HKMA (FID) responsible for the SI function of the HKD CHATS (including HKD FPS) does not own any assets - the assets of the HKMA (Exchange Fund) are invested in accordance with the investment and risk management policy of the Exchange Fund, a description of which can be found in the website and annual report of the HKMA - collaterals posted by participants to the SI under repo for liquidity provision are custodised with the CMU operated by the HKMA, which is immediately accessible and free from any credit, market or liquidity risk 3. For the SO: <ul style="list-style-type: none"> - as the SO, HKICL does not hold any assets for the participants of HKD CHATS (including HKD FPS) - liquid assets of HKICL are mainly held in deposits with banks in Hong Kong. All banks in Hong Kong are under the prudential supervision of the HKMA

Principle 17: Operational risks	<p><i>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.</i></p>
Summary Disclosure	<ol style="list-style-type: none"> 1. Plausible sources of operational risk have been identified by the HKD CHATS (including HKD FPS) and appropriate systems, policies, procedures and controls have been designed and implemented to address such risks 2. For the SI: <ul style="list-style-type: none"> - operating as a department of the HKMA, the SI function is subject to the risk assessment and management framework of the HKMA. The framework requires regular assessments of all facets of risk relating to the department, and implementation of effective measures to pre-empt and address the applicable risks - timely recovery of the SI functions at the HKMA has been fully recognised in the corporate BCP of the HKMA, specifically the critical SI functions have been assigned priority for immediate recovery in case of wide-scale or major disruption - timely recovery of the SI functions performed by the SO is ensured by the risk management and business continuity management processes of HKICL 3. For the SO: <ul style="list-style-type: none"> - the HKICL Board assigns operational reliability performance targets and imposes stringent operational risk management requirements. It pays particular attention to ensuring operational resilience and effective business continuity arrangements. Also, HKICL has established plans which are being executed to ensure cyber resilience - the operational policies, procedures and controls of HKICL are designed to meet the objectives of maintaining a high level of system availability (over 99.5%) of the HKD CHATS (including HKD FPS) system. They are regularly reviewed and tested thoroughly before and after significant changes are launched. The systems are designed to be scalable to accommodate stress volumes under prevailing performance levels and are tested before going live. The computer systems and controls, and operational policies and procedures are subject to regular information technology audits, operations audits and certification audits (ISO standards) carried out by internal/external auditors and certification authorities - HKICL has established plan which is being executed to observe the Guidance on Cyber Resilience for Financial Market Infrastructures issued by CPMI-IOSCO and the Cybersecurity Fortification Initiative issued by HKMA in addressing cyber threats - HKICL conducts attestation against Customer Security Controls Framework issued by SWIFT regularly - HKICL has defined endpoint security and anti-fraud requirements for participants to reduce the risk of payment frauds in the wholesale payment ecosystem. Participants are required to make self-declaration annually and/or as needed basis in compliance of

	<p>endpoint security and anti-fraud requirements</p> <ul style="list-style-type: none">- Security and anti-fraud bulletin and guidelines on handling of fraudulent payments are issued to promote awareness, support ongoing education and information sharing to participants- HKICL employs comprehensive business continuity plan (BCP) arrangements to cater for events posing a significant risk of disrupting operations, including events that could cause a wide scale or major disruption- the BCP provides arrangements for the SO to respond to unplanned service disruption to HKD CHATS (including HKD FPS) and aims at facilitating timely resumption of HKD CHATS (including HKD FPS) in the event of a disruption- the BCP is reviewed regularly and updated when necessary. Procedures are in place to ensure that it reflects the latest system changes
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Principle 18: Access and participation requirements	<i>An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.</i>
Summary disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has objective, risk-based and publicly disclosed criteria for participants, which permit fair and open access 2. For the SI: <ul style="list-style-type: none"> - the EFO provides the basis for the establishment of and access to the HKD CHATS/FPS. The HKMA is exercising a delegated power under section 3A(1) of the EFO to serve a notice on banks in Hong Kong requiring them to open an account with the HKMA for the account of the Exchange Fund, and the settlement account comprises CHATS ledger account and FPS ledger account - with reference to the EFO, the HKMA has set the direct participant's entry criteria of the HKD CHATS and HKD FPS as follows: <ol style="list-style-type: none"> (i). all LBs are required to join (ii). RLBs with clear business needs may apply to join (iii). other institutions may join subject to the discretion of the HKMA <p>http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/infrastructure/payment-systems.shtml</p> - to promote healthy competition between banks and non-banks, SVF licensees licensed and supervised by the HKMA (via Retail Payment Oversight (RPO) Division) under PSSVFO can join the FPS as CPs, each of which must engage an FPS SP as its settlement service provider to settle its FPS transactions via its SP's FPS ledger account opened directly with the HKMA. Other institutions may join as CPs, subject to the discretion of the HKMA, and by agreement with an SP - the entry/exit criteria are objective (LB, RLB, SVF licensee status) and risk-based (LBs, RLBs and SVF licensees are subject to supervision of the HKMA), and have been publicly communicated on the HKMA website - standing arrangements are in place for the licensing unit of the BCD and RPO of the HKMA to inform the FID (performing the function of the SI) of any impending changes in the licensing status of any institutions, so that the resulting changes in participants can be effected smoothly in accordance with established policies and procedures - suspension and exit arrangements are also covered in the HKD CHATS and FPS Rules and Procedures, which constitutes a contract between the SO and participants 3. For the SO: <ul style="list-style-type: none"> - established procedures are in place in the HKD CHATS and FPS Rules and Procedures for handling accession of new participants, suspensions and exits of participants and communicating such changes

Principle 19: Tiered participation arrangements	<i>An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.</i>
Summary disclosure	<p><u>HKD CHATS:</u> Not applicable to HKD CHATS. The HKD CHATS adopts a single-tier membership structure in which eligible institutions join as direct participants and maintain CHATS ledger accounts with the HKMA directly.</p> <p><u>HKD FPS:</u> HKD FPS supports SPs and CPs. Except for the settlement account arrangement, CPs basically operate as SPs on FPS as a single tier given the full connectivity of SPs and CPs on FPS platform.</p> <p>Each CP must engage an FPS SP as its settlement service provider to settle its FPS transactions via its SP's FPS ledger account opened directly with the HKMA. While the HKD FPS SPs are the HKD CHATS member banks being supervised by the HKMA, the CPs are the SVF licensees being licensed and supervised by the HKMA under PSSVFO.</p> <p>The CPs can initiate and receive payments as the SPs in FPS, given the full connectivity of SPs and CPs on the same platform in FPS. The corresponding relationship of SP and CP as well as all the CPs' payment activities are recorded in the FPS. The visibility of a CP's payment activities is basically the same as an SP's in FPS, thus enabling HKD SI to perform monitoring and risk management for both SPs and CPs (including dependencies between SP and CP).</p>

Principle 20: FMI links	<i>An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMIIs.

Principle 21: Efficiency and effectiveness	<i>An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.</i>
Summary disclosure	<ol style="list-style-type: none"> 1. The HKD CHATS (including HKD FPS) is effective and efficient in meeting the requirements of its participants and the markets it serves 2. For the SI: <ul style="list-style-type: none"> - apart from operating HKD CHATS (including HKD FPS), the FID is also responsible for formulating long-term strategy to promote the development, operational excellence, safety and efficiency of the financial infrastructure in Hong Kong - since inception in 1996, HKD CHATS has provided a reliable and efficient interbank payment system, and helped to maintain Hong Kong's status as an international financial centre - the effectiveness, efficiency and safety of HKD CHATS (including HKD FPS as an extension of HKD CHATS) is further ensured by the effective oversight exercised by the FMIO team of the HKMA pursuant to the PSSVFO - apart from formulating long-term development strategies, the SI also works with the SO in identifying new initiatives that may enhance the operating efficiency, effectiveness and safety of the HKD CHATS/FPS 3. For the SO: <ul style="list-style-type: none"> - HKICL has publicly communicated objectives of delivering safe, efficient and effective solutions - clearly defined and measurable targets have been set for monitoring operational performance, which are subject to regular reviews by the Board of the HKICL, the SI and the FMIO team of the HKMA - the effectiveness and efficiency of the system in meeting the requirements of participants and market is ensured by engaging the relevant stakeholders in the design stage as well as the implementation stage of the relevant system features, including through working groups and project-specific committees - HKICL conducts regular customer satisfaction surveys with an aim of obtaining feedback from users and business partners on HKICL's services and identifying areas for improvement. Participants can also make use of this survey to provide comments and suggestions on clearing systems and system features

Principle 22: Communication procedures and standards	<i>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.</i>
Summary disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has adopted internationally-accepted communication procedures and standards to facilitate efficient payment, clearing, settlement and recording 2. SWIFT network (SWIFTNet), an internationally accepted message carrier network, is used to process RTGS payments. The use of SWIFT standards facilitates overseas users to access HKD CHATS via SWIFTNet in the same way as local users without the need for any proprietary technology or special arrangements. Hence, operating procedures, processes, and system use by the overseas and local users are the same. Meanwhile, HKD FPS operates on a secured private network

Principle 23: Disclosure of rules, key procedures, and market data	<p><i>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.</i></p>
Summary disclosure	<ol style="list-style-type: none"> 1. HKD CHATS (including HKD FPS) has clear and comprehensive rules and procedures to facilitate participants to understand the risks, fees, and other material costs they incur by participation. Key features and procedures of the HKD CHATS (including HKD FPS), and/or the respective system turnover, have been publicly disclosed 2. For the SI: <ul style="list-style-type: none"> - the role and functions of the HKMA as the SI of the HKD CHATS (including HKD FPS) have been publicly disclosed in various publications and the website of the HKMA - the key features of HKD CHATS (including HKD FPS), including settlement modes, liquidity management tools and settlement finality, have been publicly disclosed in various publications and the website of the HKMA - the detailed operating rules and procedures, and the fee schedule of the HKD CHATS and HKD FPS are covered in the Rules and Procedures and other communications issued by the SO to participants 3. For the SO: <ul style="list-style-type: none"> - the HKD CHATS Rules and Procedures, and HKD FPS Rules and Procedures, which are fully accessible by all participants, provide clear and comprehensive information in relation to the risks, fees and other material costs of participating in HKD CHATS and HKD FPS - key operational information of HKD CHATS (including HKD FPS) deemed less technical in nature and easily understandable by the public, such as statistics on clearing volume and value, list of participants and participant codes, have been made publicly accessible on HKICL's website - as the SO, HKICL has discussed with the SI and HKAB the appropriate level of public disclosure of the key rules and operating procedures of HKD CHATS (including HKD FPS)

Principle 24: Disclosure of market data by trade repositories	<i>A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.</i>
Summary disclosure	Not applicable to HKD CHATS (including HKD FPS) as this principle is not applied to a payment system according to the PFMLs. HKD CHATS (including HKD FPS) is not a trade repository.

V. List of publicly available resources

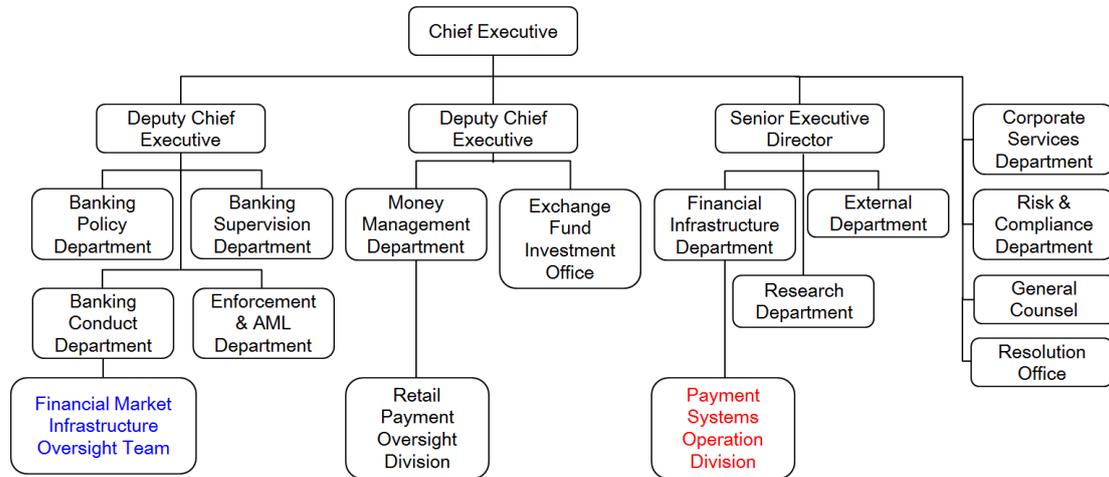
List of public resources relevant to HKD CHATS		Website
1.	EFO	https://www.elegislation.gov.hk/hk/cap66
2.	PSSVFO	https://www.elegislation.gov.hk/hk/cap584
3.	Policy Statement - Oversight of Financial Market Infrastructures by the Hong Kong Monetary Authority	http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/FMI_oversight.pdf
4.	Oversight Framework for Designated Clearing and Settlement Systems - A Guideline issued by the Monetary Authority under the PSSVFO	http://www.gld.gov.hk/egazette/pdf/20162020/egn201620202777.pdf
5.	Application of Principles for Financial Market Infrastructures to Designated Clearing and Settlement Systems – A Guideline issued by the Monetary Authority under the PSSVFO	http://www.gld.gov.hk/egazette/pdf/20162020/egn201620202778.pdf
6.	Explanatory Note on Designation and Issuance of Certificate of Finality of Clearing and Settlement Systems under PSSVFO	http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/explanatory_note.pdf
7.	HKMA Annual Report	https://www.hkma.gov.hk/eng/data-publications-and-research/publications/annual-report/2019/
8.	HKICL	https://www.hkicl.com.hk
9.	FPS	https://fps.hkicl.com.hk https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/financial-market-infrastructure/faster-payment-system-fps/
10.	HKD CHATS - System Features and Participation Requirement	http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/infrastructure/payment-systems.shtml
11.	Liquidity and Risk Management in the RTGS System – the Hong Kong Experience	http://www.hkma.gov.hk/media/eng/publication-and-research/quarterly-bulletin/qb200803/fa2_print.pdf

List of public resources relevant to HKD CHATS		Website
12.	Assessment of HKD CHATS against the Principles for Financial Market Infrastructures	http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/HKD_CHATS_assessment_2015.pdf
13.	<i>“Payment, Clearing and Settlement Systems in Hong Kong”</i> , Payment, Clearing and Settlement Systems in the CPSS countries - Volume 2	https://www.bis.org/publ/cpss105.pdf
14.	Implementation of a Faster Payment System in Hong Kong	https://www.hkma.gov.hk/media/eng/publication-and-research/quarterly-bulletin/qb201809/fa2.pdf
15.	HKMA Quarterly Bulletin	http://www.hkma.gov.hk/eng/publications-and-research/quarterly-bulletin/
16.	HKMA Statistical Bulletin (Turnover of Clearing House and FPS)	http://www.hkma.gov.hk/eng/market-data-and-statistics/monthly-statistical-bulletin/
17.	HKICL Clearing Statistics	https://www.hkicl.com.hk/eng/information_centre/statistics_of_clearing_transaction_volume_and_value.php
18.	HKICL FPS Statistics	https://fps.hkicl.com.hk/eng/fps/about_fps/statistics.php
19.	HKD CHATS Participation Criteria	http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/infrastructure/payment-systems.shtml
20.	HKD FPS Participation Criteria	https://fps.hkicl.com.hk/eng/fps/about_fps/participant.php
21.	List of HKD CHATS Participants	https://www.hkicl.com.hk/eng/information_centre/clearing_members_participants_list.php
22.	List of HKD FPS Participants	https://fps.hkicl.com.hk/eng/fps/about_fps/participant.php
23.	Redacted Version of Hong Kong Dollar Clearing House Rules Rainstorm Procedures Typhoon Procedures	https://www.hkicl.com.hk/eng/information_centre/redacted_version_of_clearing_house_rules.php
24.	Redacted Version of Rules for Faster Payment System (FPS)	https://fps.hkicl.com.hk/eng/fps/about_fps/scheme_documentation.php
25.	Hong Kong Dollar Clearing Tariff	https://www.hkicl.com.hk/eng/information_centre/clearing_tariffs.php

List of public resources relevant to HKD CHATS		Website
26.	HKD FPS Tariff	https://fps.hkicl.com.hk/eng/fps/about_fps/scheme_documentation.php
27.	Implementation of the Stored Value Facilities Regulatory Regime	https://www.hkma.gov.hk/media/eng/publication-and-research/quarterly-bulletin/qb201609/fa2.pdf

Annex. Organisational Chart of the HKMA

(http://www.hkma.gov.hk/media/eng/doc/about-the-hkma/the-hkma/organisation-chart/accessible_org_chart.pdf)



Notes:

The relevant division acting as the HKD SI is marked in red.

The relevant division overseeing the HKD SI is marked in blue.