Principles for Financial Market Infrastructures: Disclosure for Euro CHATS

Responding Institution(s):	Jointly prepared by SCBHK and HKICL in the capacity of the Settlement Institution and System Operator respectively of Euro CHATS
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List of abbreviations used in this Disclosure

BCD Banking Conduct Department
BCP Business Continuity Plan
CCP Central Counterparty

CHATS Clearing House Automated Transfer System

CMU Central Moneymarkets Unit

CMUP Central Moneymarkets Unit Processor

CPMI Committee on Payments and Market Infrastructures

CSSO Clearing and Settlement Systems Ordinance

DP Direct Participant

DvP Delivery-versus-Payment
EFBNs Exchange Fund Bills and Notes
EFO Exchange Fund Ordinance

EUR/Euro/euro European Dollar

FMIO Financial Market Infrastructure Oversight

FMIs Financial Market Infrastructures
HKAB Hong Kong Association of Banks

HKD Hong Kong Dollar

HKICL Hong Kong Interbank Clearing Limited

HKMA Hong Kong Monetary Authority

ICU Indirect CHATS User

IILF Interbank Intraday Liquidity Facility
INEDs Independent non-executive directors

IOSCO International Organization of Securities Commissions

LBs Licensed Banks

PFMI Principles for Financial Market Infrastructures

Procedures Operating Procedures

PSSVFO Payment Systems and Stored Value Facilities Ordinance

PvP Payment versus Payment

RMB Renminbi

RMC Risk Management Committee
RTGS Real Time Gross Settlement

Rules Euro Clearing House Rules, Rainstorm Procedures, Typhoon

Procedures

SCBHK Standard Chartered Bank (Hong Kong) Limited

SI Settlement Institution
SO System Operator
TPU Third Party User
TR Trade Repositories

USD US Dollar

I. Executive summary

- 1. Euro CHATS is the interbank payment system in Hong Kong for settling EUR transactions on an RTGS basis. It is built on the same infrastructure and operates in the same manner as HKD CHATS. The Euro CHATS has been operating smoothly since its launch on 28 April 2003. The Hong Kong Monetary Authority (HKMA) appointed Standard Chartered Bank (Hong Kong) Limited (SCBHK) as the settlement institution (SI) of Euro CHATS; and SCBHK appointed Hong Kong Interbank Clearing Limited (HKICL) as the system operator (SO).
- 2. Euro CHATS was designated under the Clearing and Settlement Systems Ordinance (CSSO)¹ 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)². The designation of Euro CHATS and certificate of finality granted under the pre-amended CSSO continue to have effect under the PSSVFO. The Euro 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, Euro CHATS also provides settlement of PvP and DvP transactions via links with other local RTGS systems and the CMU (debt securities settlement system) in Hong Kong. The system features and the turnover statistics are publicly disclosed.
- 4. Participation in Euro CHATS is voluntary. Licensed banks (LBs) in Hong Kong may join as Direct Participants (DP)³, Indirect CHATS Users (ICU)⁴ or Third Party Users (TPU)⁵ based on their business needs. Participation of institutions other than LBs will be subject to the approval of the SI and the HKMA on a case-by-case basis. The Euro CHATS participants are required to comply with the PSSVFO, the Rules and Procedures of Euro CHATS, which are well documented and communicated to the participants. The Euro CHATS is not a CCP and does not guarantee settlement of payments. In particular, the participants have to ensure that they have adequate liquidity to meet their payment obligations.

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¹ 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.

² 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.

³ Each DP maintains a settlement account with the SI to clear and settle CHATS payments.

⁴ ICU does not maintain any settlement account with the SI. Its CHATS payments are settled through a DP.

⁵ TPU does not maintain any settlement account with the SI. Its CHATS payments are processed by its DP(s).

- 5. Euro CHATS has a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational and other risks. The risks of operating Euro CHATS are identified, measured, monitored, managed and controlled comprehensively and prudently under a sound risk assessment and management framework of SCBHK.
- 6. To facilitate liquidity management by participants, the SI provides liquidity to participants through clean intraday overdraft and fully collateralized repurchase arrangements. A number of liquidity management tools have been built into Euro 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 comprehensive disaster recovery plan which is regularly reviewed and rehearsed, help ensure that 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

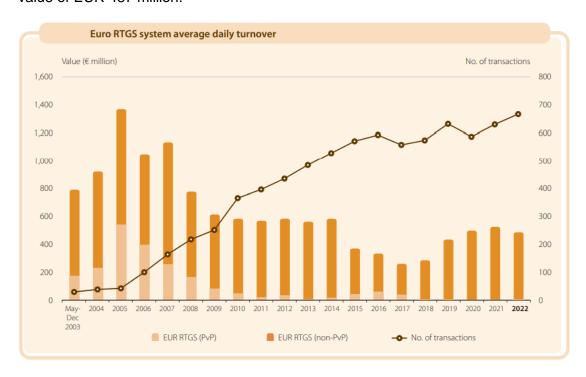
7. This version has been updated with 2022 payment figures.

III. General background on the FMI

General description of the FMI and the markets it serves

- 8. The HKMA plays an active role in the development of financial infrastructure in Hong Kong, including the payment systems (CHATS) 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.
- 9. Euro CHATS provides a safe and efficient settlement platform for EUR interbank payments, which are settled in commercial bank money. The HKMA adopted a private sector approach in establishing the Euro CHATS. It has appointed a commercial bank, SCBHK, as the SI since April 2003. Interbank payments are settled continuously on a gross deal-by-deal basis across the book of the SI as long as there are sufficient funds in the settlement accounts of the Euro CHATS participants. Settlements are irrevocable and enjoy immediate finality with the statutory backing of the PSSVFO. To help enhance participants' liquidity management, the SI offers collateralized intraday repo facilities to participants of Euro CHATS and has introduced a number of liquidity management tools to Euro CHATS.
- 10. Euro 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/USD, EUR/HKD, and EUR/RMB foreign exchange transactions via the links with the USD, HKD and RMB CHATS in Hong Kong; and DvP for debt securities transactions via the link with CMU.

- 11. There is no loss-sharing arrangement in Euro 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.
- 12. Euro CHATS has been operating safely and smoothly since its launch in April 2003. Euro CHATS is subject to a system availability target of 99.9% for prime time and 99.5% for non-prime time for components within the control of the system operator. Euro CHATS met each of the system availability targets in 2022. In 2022 Euro CHATS settled on average around 668 transactions each operating day, with an average daily value of EUR 487 million.



(Source: HKMA Annual Report 2022)

General organisation of Euro CHATS

- 13. Euro 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 Euro CHATS is SCBHK, which is a licensed bank in Hong Kong regulated by the HKMA. The SI has appointed HKICL as the SO of the Euro CHATS. 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 SI and SO have developed policies and procedures for the safe and efficient operation of Euro CHATS, which is subject to the oversight of the HKMA (via the FMIO team).
- 14. Since the SI is a business function of SCBHK, the management and operations of this function fall under the governance structure of SCBHK, and are therefore

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

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subject to the normal governance, decision-making, audit and control processes of SCBHK. SCBHK 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 Euro CHATS participants are thoroughly consulted and briefed with sufficient advance notice on important initiatives and events affecting Euro CHATS, which may be driven by the HKMA as the developer and facilitator, the local banking industry, or the latest developments in international practice and regulation.

15. HKICL is responsible for the day-to-day computer and data operations, clearing services and management of Euro CHATS on the terms and conditions set out in the service agreement signed between SCBHK (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

- 16. The laws of Hong Kong form the legal basis for the operations of Euro 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 general principle for access to the Euro CHATS by a participant is stated in the Rules. LBs in Hong Kong can join the system as DPs, ICUs or TPUs. Participation of institutions other than LBs will be subject to the approval of the SI and the HKMA on a case-by-case basis. The SI and the HKMA assess applications of non-LBs based on objective, risk-based, and publicly disclosed criteria.
- 17. There are other legal documents (Account Opening Form for EUR Settlement Account and Master Sale and Repurchase Agreement) setting out terms and conditions for the settlement account of DPs with SCBHK and repurchase arrangements between SCBHK and DPs. SCBHK (as SI) has appointed HKICL as the SO under the terms and conditions of the service agreement between SCBHK and HKICL.
- 18. The Rules and Procedures set out rights and obligations for participating in the Euro CHATS. These documents are made available to each DP when joining the system. The Euro CHATS participants are required to adhere to the Rules and Procedures and comply with the terms and conditions in the account opening form and other documents as specified by SCBHK and HKICL. A redacted version of the Rules is available on the website of the HKICL for public access.
- 19. Euro CHATS was designated under the CSSO on 26 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 Euro CHATS and certificate of finality continue to have effect under the PSSVFO. The certificate of finality provides statutory backing to the finality status 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 Euro 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. Both the SI and SO of the Euro 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

20. Euro CHATS opens for settlement from 08:30 to 18:30 (Hong Kong Time) every working day, Monday to Friday, including Hong Kong's public holidays (except on 1 January). Meanwhile, it is available around-the-clock during Monday to Sunday for transaction input (or cancellation), except during pre-scheduled system housekeeping tasks.

Communication mode

21. Since May 2009, Euro 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

- 22. All payments submitted to the system 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 or intra-day overdraft limit in the settlement 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 settlement account to settle all the instructions in the queue. If a 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.
- 23. Euro CHATS provides DPs with real-time enquiry functions to monitor the account status and has queue management functions to re-sequence outstanding payments in payment queues.

System features

- 24. Apart from settling interbank transactions on a RTGS mode as mentioned above, to further reduce the chance of payment gridlocks and to smooth payment flows, the SI has implemented various measures including the provision of credit facilities in the form of intraday repo, and development of liquidity saving devices for the Euro CHATS. The key tools are summarized as follows:
 - a. <u>Repo facility</u>: DPs can arrange with the Euro SI to obtain intraday liquidity through interest-free intraday repo facility. Intraday repos that cannot be repurchased in the settlement run before system opened in the next working day will be automatically rolled into overnight repo on which interest is charged by the Euro SI.
 - b. Queuing mechanism: If a DP does not have sufficient balance in its settlement account to effect a payment, the transaction is queued in the Euro CHATS. DPs 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.

- c. <u>Real-time balance enquiry function</u>: DPs are able to view the balance in their settlement accounts on a real-time basis, so that they can arrange funding in advance for settlement if necessary.
- d. <u>Liquidity saving devices (liquidity optimizers)</u>: The liquidity saving devices riding on the multilateral offsetting mechanism have been developed to help Euro CHATS participants manage intraday liquidity efficiently. A built-in optimizer triggered automatically by Euro CHATS at regular intervals during the day or, if needed, by the Euro SI for periodic multilateral offsetting of payment instructions queued in Euro CHATS.
- e. <u>Interbank Intraday Liquidity Facility</u>: It serves to enhance efficiency of the liquidity provision mechanism between Liquidity Provider(s) (i.e. lending DP(s)) and its registered Liquidity Consumer(s) (i.e. borrowing DP(s)) in Euro CHATS on commercial terms.
- f. <u>CHATS throughput guidelines</u>: To encourage banks to make payments at 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 CHATS payments for the day.
- g. <u>Monitoring</u>: To ensure the smooth processing of the payment system, the Euro SI closely monitors the payment condition of each participant on a real-time basis.

IV. Principle-by-principle summary narrative disclosure

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.
Summary disclosure	Euro CHATS has a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions
	2. For the SI ⁷ :
	 the laws of Hong Kong provide the legal basis of the operation of the Euro CHATS and the contracts underlying the system the PSSVFO ensures the settlement finality of payments made on the Euro CHATS the HKMA appointed Standard Chartered Bank (Hong Kong) Limited ("SCBHK") as the settlement institution for the Euro
	CHATS ("Euro SI") for a period of five years commencing 1 March 2003, and re-appointed SCBHK as the Euro SI for another five years for four times commencing 1 March 2008, 1 March 2013, 1 March 2018 and 1 March 2023 respectively. The terms and conditions for SCBHK to act as the Euro SI are specified in an agreement signed between the HKMA and the SCBHK - SCBHK as the SI appointed HKICL as the SO to perform the day-
	to-day computer operations and clearing services. The appointment is supported by proper legal documentation and governed by laws in Hong Kong - Account Opening Form for EUR Settlement Account sets out the
	terms and conditions for the settlement accounts of participants with SI
	 the Master Sale and Repurchase Agreement sets out the terms and conditions for SI to provide liquidity to DPs through repo arrangements
	the SI grants intraday repo facilities to DPs on a bilateral basis based on commercial terms
	3. For the SO ⁸ :
	 appointment of the HKICL as the SO of the Euro CHATS is known to the public via the website of the HKMA 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 SCBHK and HKICL all DPs of Euro CHATS are required to observe the Rules and Procedures promulgated by HKICL, which set out the terms and conditions of the clearing arrangements for the Euro CHATS. The
	addendums ("Services Agreement") between the SCBHK and HKICL - all DPs of Euro CHATS are required to observe the Rules and

 $^{^7\,}$ The SI refers to Standard Chartered Bank (Hong Kong) Ltd acting as the Euro SI $^8\,$ The SO refers to HKICL

-	the Services Agreement, Rules and Procedures cover all material aspects of the operations of HKICL and are all clear, understandable and consistent with relevant laws and regulations

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Principle 2:	An FMI should have governance arrangements that are clear and
Governance	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.
Summary	Euro CHATS has governance arrangements that are clear and
disclosure	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:
	- the daily operation of SI of the Euro CHATS is undertaken by a
	distinct unit within SCBHK, with clear and direct lines of
	responsibility and accountability
	 the SI function is subject to the oversight of the FMIO team under
	the BCD in the HKMA (pursuant to provisions of the PSSVFO) as
	well as to the internal audit and risk management processes of
	SCBHK
	- at the bank level, SCBHK continues to monitor to ensure fulfilment
	of its Euro SI role through existing governance of contributing
	functions (Cash Management Services / Legal / Credit /
	Transaction Banking / Compliance / Asset and Liability
	Management / Operational Risk, etc.)
	- HKICL, as SO of Euro CHATS, is accountable to SCBHK pursuant
	to the terms and conditions for its appointment, including (but not
	limited to) meeting documented service standards, conducting and
	passing regular assessments
	3. For the SO:
	- 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 SCBHK, as the SI of the
	Euro CHATS, 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 Euro CHATS
	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	FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.
Summary disclosure	 Euro CHATS has a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks For the SI: the SI function is a business unit of SCBHK and hence is subject to the management framework of SCBHK. SCBHK continues to monitor to ensure fulfilment of its Euro SI role, through existing governance of contributing functions (Cash Management Services / Legal / Credit / Transaction Banking / Compliance / Asset and Liability Management / Operational Risk, etc) For the SO: 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 Euro CHATS

Principle 4: Credit Risk	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.
Summary disclosure	The Euro CHATS has effective credit risk management processes to measure, monitor and manage its credit exposures to DPs
	2. For the SI:
	 Euro CHATS 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 to facilitate DPs' liquidity management, the SI will grant collateralized intraday repo facility to DPs, and hence will have credit exposure to the DPs. The SI manages its credit risk against the DPs in a way similar to the way a commercial bank manages its counterparty risk. The SI monitors its credit exposure against the DPs through relevant statistical reports and subject to the collateralized intraday repo limits granted on managing the credit risks DPs exposed to the SI, DPs are not required to maintain any minimum balance in the settlement accounts on managing the SI's credit exposure to the DPs, the settlement account opening agreement and the Master Sale and Repurchase Agreement have specified clearly the arrangement and the terms and conditions for the usage of the collateralized intraday repo facility. The SI may incur credit exposure to DPs due to the provision of liquidity to DPs through collateralized intraday repo facility when the market value of the securities under repo drops below the amount of liquidity provided the SI accepts only high quality collateral registered with HKMA Central Moneymarkets Unit (CMU) as eligible securities for intraday repo. Currently, these securities consist of all Exchange Fund Bills and Notes (EFBNs) issued by the HKMA; and Euro denominated bonds issued in Hong Kong by The Ministry of Finance of the People's Republic of China 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 granting of intraday credit line is discretionary and is subject to review on an ongoing basis taking into considerations various cost and risk
	 Not applicable. As the SO, HKICL does not incur any credit exposure to participants of Euro CHATS

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.
Summary disclosure	 The Euro CHATS accepts only collateral with no credit risk, low liquidity and market risk, and has set and enforced conservative haircuts For the SI: the SI may incur credit exposure to participants due to the provision of liquidity to DPs through collateralized intraday repo when the market value of the securities under repo drops below the amount of liquidity provided the SI accepts only high quality collateral registered with the HKMA CMU as eligible securities for intraday repo. Currently, eligible securities for intraday repo consist of all Exchange Fund Bills and Notes (EFBNs) issued by the HKMA and the Euro denominated bonds issued in Hong Kong by The Ministry of Finance of the People's Republic of China the SI applies prudent haircuts (increasing with remaining maturity) on the mark-to-market value of the repo securities to minimize the 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 DPs to use the collaterals efficiently 3. For the SO: - Not applicable. As the SO, the HKICL does not incur any credit exposure to DPs of Euro CHATS, and hence does not impose any collateral requirement on DPs

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.
Summary disclosure	Not applicable to the Euro CHATS as this principle is not applied to a payment system according to the PFMI

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.

Summary disclosure

 The Euro CHATS measures, monitors and manages its liquidity risk effectively. Sufficient liquid resources in the relevant currency (EUR) are available to meet its payment obligations under potential stress scenarios

2. For the SI:

- Euro CHATS 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
- the SI assists DPs in the management of their liquidity requirements through the liquidity-efficient design of the Euro CHATS, the provision of liquidity via collateralized intraday repo facilities, the availability of intraday funding and end-of-day funding/defunding arrangement for settlement accounts, the establishment of IILF to facilitate the DPs to lend and borrow uncollateralized funds on traditional commercial terms basis among themselves, and provision of real-time information on transactions and settlement account balances of participants
- liquidity need of the SI arises in the provision of liquidity to participants through intraday repo. The SI only accepts highly liquid and marketable securities as collateral, which, when pledged, are subject to prudent haircut to address adverse effect on their valuation changes. See Principle 5 for more details
- DPs are expected to follow the CHATS throughput guidelines to ensure their payments are cleared and settled at a timely and an orderly manner throughout the day
- SI conducts stress testing regularly for the purpose of testing the sufficiency of liquidity of Euro CHATS

3. For the SO:

 Not applicable. HKICL is not a participant in the Euro CHATS nor would it provide liquidity to participants

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.
Summary disclosure	 The Euro CHATS provides clear and certain final settlement in both intraday day and real-time modes For the SI:
	the PSSVFO confers settlement finality to all the payments settled in the Euro CHATS
	 For the SO: as stipulated in the Rules and Procedures, the settlement of a payment is deemed made, completed, irrevocable and final once it is debited from or credited to the settlement account that a participant maintains with the SI

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.
Summary disclosure	1. The HKMA adopts a private sector solution approach for developing multi-currencies payment systems in Hong Kong. Accordingly, the HKMA has appointed large commercial banks with good credit standing and sound financial position as SIs for foreign currencies payment systems in Hong Kong. SCBHK was appointed by the HKMA as the SI for Euro CHATS effective from April 2003. All payment instructions effected through Euro CHATS are settled across the books of SCBHK in the form of commercial money
	 2. For the SI: SCBHK is a note-issuing bank in Hong Kong under the direct supervision of the HKMA, and has continuously obtained very high credit ratings. The bank managed to withstand the recent world-wide financial crisis on its own without the need for government support, which reaffirms its credit position though the transactions are not settled in the form of central bank money per se, a number of measures have been put in place to manage and minimize the credit risk and the liquidity risk involved (see Principles 4 and 7). The risks, if any, are known to the DPs who choose to join the system voluntarily
	 3. For the SO: Not applicable. HKICL is not a participant in the Euro CHATS nor would it provide credit facilities/liquidity to participants

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.
Summary disclosure	Not applicable to Euro CHATS as this principle is not applied to a payment system according to the PFMI

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.
Summary disclosure	Not applicable to Euro CHATS as this principle is not applied to a payment system according to the PFMI

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.	
Summary disclosure	 Euro CHATS has implemented arrangements to eliminate principal risk for the settlement of Euro payments with a linked obligation For the SI: PvP arrangements have been implemented for settling EUR/HKD, EUR/USD and EUR/RMB foreign exchange transactions DvP arrangements have been implemented for settling debt securities transactions at the CMU For the SO: 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	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.		
Summary disclosure	 The Euro CHATS has effective and clearly defined rules and procedures to manage a participant default For the SI: Euro CHATS is not a CCP, the SI does not guarantee settlement of payments, 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 collateralized intraday 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 credit risk and collateral risk (see Principles 4 and 5) the rules and procedures for managing a participant default have been set out in the Rules and Procedures issued by the HKICL, the SO of the Euro CHATS For the SO: the 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 Rules and Procedures on default arrangements are subject to 		
	regular reviews and drills		

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.
Summary disclosure	Not applicable to Euro CHATS as this principle is not applied to a payment system according to the PFMI

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.

Summary disclosure

1. For the SI:

- SI is operated as a unit of SCBHK, under supervision of the HKMA
- SCBHK as a whole has sufficient financial resources and risk management framework to well cover the inherent risks. Asset and Liability Committee in SCBHK is responsible for maintaining a strong balance sheet (capital and liquidity) which supports business objectives and to comply with all internal policies and regulatory requirements
- there is annual operating expenses planning process that covers projected costs for the SI, any extraordinary expenses beyond original budget would be subject to review and approval

2. For the SO:

- HKICL has a robust management and control system to identify, monitor and manage general business risk
- the 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	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.		
Summary disclosure	The Euro CHATS has prudent investment and risk management policies and procedures to safeguard its own and its participants' assets		
	2. For the SI:		
	 the SI is investing the positive settlement account balances in short-term or liquid assets that comply with the control framework and limit of SCBHK. The investment involves short-term lending, or high-quality assets that can be converted to cash on necessity without any stigma or relationship implication. The investment will be subject to SCBHK's internal credit risk, liquidity risk and market risk limit which is monitored under SCBHK's Group Risk and Asset Liability and Management team collaterals posted by participants to the SI under repo for liquidity provision are in custody with the CMU operated by the HKMA. SI will not use the collaterals unless the DP is default or cannot cover its short balance DPs may keep credit balance in their settlement accounts with the Euro SI. As such, DP's assets are their funds kept in the custody of the Euro SI, which is Standard Chartered Bank (Hong Kong) Ltd. It is a licensed bank in HK and under the supervision of HKMA, and subject to the banking law and regulation in HK DPs may hold securities in HKMA CMU for custody. They can pledge the eligible securities holding in the CMU to trigger repo with Euro SI, which will also keep the pledged securities in the HKMA CMU for custody. Assets of DPs kept in the Euro SI and HKMA can be freely assessed and moved by the DPs. as the Euro SI, SCBHK's investment strategy should apply. The financial and investment information is disclosed in the SCBHK annual financial statement which is published in SCBHK's website 		
	3. For the SO:		
	 as the SO, the HKICL does not hold any assets for the participants of Euro CHATS 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

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.

Summary disclosure

1. Plausible sources of operational risk have been identified by the Euro CHATS and appropriate systems, policies, procedures and controls have been designed and implemented to address such risks

2. For the SI:

- the operation of the SI function of SCBHK is subject to the operational risk management framework of the bank
- Business Continuity Plan (BCP) is established to ensure timely recovery of the SI function of the SCBHK. Provision of clearing services to participants is targeted to recover at full capacity under the BCP
- assessment on operational readiness and contingency planning are conducted prior to launch of new service or major system enhancement
- regular independent audits on the information technology systems and operation of the Euro CHATS are in place. Back up sites are available, with real-time data mirroring implemented between both production and backup sites. The disaster recovery procedures for the operations of the system are also properly described and documented. Business Continuity Plans are reviewed, updated and regularly tested
- testing or assessment on system capacity is carried out before launch of new applications/ systems, or implementation of system enhancements which involve significant changes. The estimated system capacity is matched against the projected business growth on a regular basis to ensure that the systems are capable of meeting business needs
- in operating the SI function, SCBHK uses a number of measures including training, cross-team/ cross-division support, flexible working hours, maker-checker preventive controls for manual input, to prevent and mitigate human-related operational risks
- in order to ensure the overall safety and efficiency of Euro CHATS, the SI has put in place a number of physical and logical access controls to protect the relevant resources of the system against unauthorized access/modification disclosure, loss or impairment

3. For the SO:

- 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 Euro CHATS 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 has conducted attestation against Customer Security Controls Framework issued by SWIFT
- HKICL has defined endpoint security and anti-fraud requirements for participants to reduce the risk of the payment frauds in the wholesale payment ecosystem. Participants are required to make self-declaration annually and/or as needed basis in compliance of endpoint security and anti-fraud requirements
- 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 Euro CHATS and aims at facilitating timely resumption of Euro CHATS 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

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.		
Summary disclosure			

Principle 19: Tiered participation arrangements	An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.		
Summary disclosure	 The Euro CHATS adopts a two-tier membership structure in which eligible institutions can join as either DPs or ICUs/TPUs. DPs will open settlement accounts with SCBHK as Euro SI directly while ICUs/TPUs will open accounts with their selected DPs For the SI: 		
	 it is defined in the Rules that licensed banks (LBs) in Hong Kong may, by agreement with a DP, become ICUs/TPUs through such DP unless otherwise provided by HKMA or any applicable law. Institutions other than LBs, with the permission of the SI and HKMA on a case-by-case basis and by agreement with a DP, may choose to become ICUs/TPUs through such DP the Euro CHATS mainly hosts information on DP's turnover and their credit line usage. Similar information on ICUs/TPUs is not currently available from the system or from the SI. To assess the potential risk posed by tiered participation arrangements, the HKMA will gather information from DPs on their ICUs/TPUs' activities on regular basis For the SO: Not applicable. HKICL is not a participant in the Euro CHATS 		

Principle 20: FMI links	An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.
Summary disclosure	Not applicable to Euro CHATS as this principle is not applied to a payment system according to the PFMIs

Principle 21: Efficiency and effectiveness	An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.		
Summary disclosure	 The Euro CHATS is effective and efficient in meeting the requirements of its participants and the markets it serves For the SI: 		
	 since inception in 2003, Euro 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 Euro CHATS are further ensured by the effective oversight exercised by the FMIO team of the HKMA pursuant to the PSSVFO apart from supporting the HKMA's long-term development strategies, the SI also works with the HKMA and SO in identifying new initiatives that may enhance the operating efficiency, effectiveness and safety of the Euro CHATS SCBHK as the SI appoints HKICL as the SO to perform clearing services in respect of the Euro CHATS. The current terms and conditions of the clearing arrangements are specified in the Euro Clearing System Development and Clearing Services Agreement signed between the SCBHK and the HKICL, as amended from time to time. Performance criteria, such as system availability target of 99.9% for prime time and 99.5% for non-prime time, are included in the Services Agreement 		
	 For the SO: 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 are 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	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.	
Summary disclosure	 Euro CHATS has adopted internationally-accepted communication procedures and standards to facilitate efficient payment, clearing, settlement and recording 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 Euro 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 	

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.		
Summary disclosure	 Euro CHATS 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 Euro CHATS, as well as the system turnover, have been publicly disclosed 		
	 2. For the SI: the role and functions of SCBHK as the SI of the Euro CHATS have been publicly disclosed in various publications and the website of the HKMA the key features of Euro CHATS, 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 Euro CHATS are covered in the Rules and Procedures and other communications issued by the SO to participants 		
	 3. For the SO: the 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 Euro CHATS key operational information of Euro CHATS 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 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 Euro CHATS 		

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.
Summary disclosure	Not applicable to Euro CHATS as this principle is not applied to a payment system according to the PFMIs. Euro CHATS is not a TR

V. List of publicly available resources

	of public resources	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	https://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	https://www.gld.gov.hk/egazette/pdf/20162020/egn201620202 777.pdf
5.	Explanatory Note on Designation and Issuance of Certificate of Finality of Clearing and Settlement Systems under PSSVFO	https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/explanatory_note.pdf
6.	HKMA Annual Report	https://www.hkma.gov.hk/eng/data-publications-and-research/publications/annual-report/2022/
7.	HKICL	https://www.hkicl.com.hk
8.	Euro CHATS - System Features and Participation Requirement	https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/financial-market-infrastructure/payment-systems/
9.	Liquidity and Risk Management in the RTGS System – the Hong Kong Experience	https://www.hkma.gov.hk/media/eng/publication-and-research/quarterly-bulletin/qb200803/fa2_print.pdf
10.	Assessment of Euro CHATS by the HKMA for its Compliance with the Core Principles for Systemically Important Payment Systems	https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/oversight/assessment-Euro-CHATS-2016.pdf
11.	"Payment, Clearing and Settlement Systems in Hong Kong SAR", Payment, Clearing and Settlement Systems in the	https://www.bis.org/publ/cpss105.pdf

List of public resources relevant to Euro CHATS		Website
	CPSS countries - Volume 2	
12.	"Payment, Clearing and Settlement Systems in Hong Kong", Payment Clearing and Settlement Systems in EMEAP Economies	https://www.emeap.org/wp- content/uploads/2016/07/wgmeeting- Payment Clearing and Settlement Systems in EMEAP_Eco nomies_August_2012pdf
13.	HKMA Statistical Bulletin	https://www.hkma.gov.hk/eng/data-publications-and- research/data-and-statistics/monthly-statistical-bulletin/
14.	Euro CHATS Participation Criteria	https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/financial-market-infrastructure/payment-systems/
15.	List of Euro CHATS Participants	https://www.hkicl.com.hk/eng/information_centre/clearing_me mbers_participants_list.php
16.	Redacted Version of Euro Clearing House Rules Rainstorm Procedures Typhoon Procedures	https://www.hkicl.com.hk/eng/information_centre/redacted_ver_sion_of_clearing_house_rules.php
17.	Euro Clearing Tariff	https://www.hkicl.com.hk/eng/information_centre/clearing_tariff_s.php
18.	SCBHK	https://www.sc.com/hk/
19.	SCBHK Financial Reports	https://www.sc.com/hk/investor- relations/https://www.sc.com/hk/investor-relations/hong-kong- financial-reports/