



Zurich, 16 June 2020

Disclosure report on the Swiss Interbank Clearing (SIC) payment system¹

Institutions responsible: Swiss National Bank (Department III) and SIX Interbank Clearing Ltd

Jurisdiction in which the financial market infrastructure (FMI) operates: Switzerland

Authorities which regulate, monitor or oversee the FMI: Oversight by the SNB (Department II) in accordance with the Financial Market Infrastructure Act (FinMIA), the Financial Market Infrastructure Ordinance (FinMIO), the National Bank Act (NBA) and the National Bank Ordinance (NBO)

Publication date of this Disclosure Report: 16 June 2020

The disclosure report is published at:

www.snb.ch/en/iabout/paytrans/sic/id/paytrans_wissenswertes

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This Disclosure Report provides information on the Swiss Interbank Clearing (SIC) payment system, in accordance with the provisions of the NBO and the CPMI-IOSCO² Principles for Financial Market Infrastructures (PFMI). It is the result of collaboration between the SNB (Department III) in its capacity as the commissioning party and SIC system manager, and SIX Interbank Clearing Ltd (SIC Ltd) as SIC system operator.

¹ **Disclaimer:** This is an English translation of a German original. Only the German original text is authoritative.

² Committee on Payment and Settlement Systems (renamed Committee on Payments and Market Infrastructures [CPMI] in 2014) and Technical Committee of the International Organization of Securities Commissions, Principles for Financial Market Infrastructures, April 2012, <https://www.bis.org/cpmi/publ/d101a.pdf>.



I. Summary

Swiss Interbank Clearing (SIC) is the central electronic Swiss payment system, in which the participating financial institutions process their large-value payments as well as a substantial part of their retail payments in Swiss francs. The SIC system is a real-time gross payment system that is operated on behalf of the SNB by SIX Interbank Clearing Ltd (SIC Ltd), a subsidiary of SIX Group Ltd (SIX).

The SIC system plays a central role in the implementation of the SNB's tasks. First, the SIC system has a particularly significant role in providing the Swiss franc money market with liquidity (art. 5 para. 2 (a) NBA) and thus in the implementation of monetary policy. Second, it facilitates and secures the operation of cashless payments (art. 5 para. 2 (c) NBA). Third, it contributes to the stability of the financial system (art. 5 para. 2 (e) NBA). Furthermore, as a key element of Switzerland's financial market infrastructure, the SIC system is also essential for the Swiss financial centre.

The SNB (Department III) steers the SIC system and ensures that there is sufficient liquidity by granting, when necessary, intraday loans to SIC participants against collateral. As a payment system that is deemed important for the stability of the Swiss financial system, the SIC system is subject to oversight by the SNB (Department II). The SNB thus plays a dual role regarding the SIC system: Department II is responsible for overseeing the SIC system and Department III is the commissioning party and system manager.

As a systemically important financial market infrastructure, the SIC system is subject to the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI). According to the [PFMI guidelines \(cf. table 1, page 14\)](#), 18 of the 24 principles apply to payment systems. In Switzerland, the PFMIs are implemented through provisions of the NBO. Pursuant to art. 4 para. 3 FinMIA, the SIC system is not subject to authorisation or supervision by the Swiss Financial Market Supervisory Authority (FINMA); it is therefore subject to the provisions of arts. 22–34 NBO.

With this Disclosure Report, the SNB (Department III) and SIC Ltd are complying with PFMI Principle 23 and art. 23a para. 2 NBO. The structure of the report is based on the CPMI-IOSCO guidelines ([Disclosure Framework and Assessment Methodology](#)).

II. Most important changes since the last Disclosure Report

The last Disclosure Report was published on 31 August 2018. The important changes made since then are listed below:

Eligibility of fintech companies: On 1 January 2019, the revised Ordinance on Banks and Savings Banks ([Banking Ordinance](#)) entered into force; it provides details on the new licensing category of fintech companies, as set down by parliament in the Banking Act. In January 2019, the SNB decided to grant SIC system access to companies with the requisite fintech licences issued by FINMA and a business model that is significant in the area of Swiss franc payment transactions. In light of this, the SNB published its [‘Instruction sheet on admission to the SIC system and sight deposit accounts’](#), which sets out the rules governing SIC system access and replaced the ‘Instruction sheet on cashless payment transactions’. In addition to the eligibility of companies with fintech licences, the new instruction sheet also covers aspects such as access to the SIC system for third-party system operators.

Dialogue on cashless payment transactions: In spring 2019, the SNB and SIX initiated a dialogue on the ongoing development of cashless payment transactions, bringing together suppliers and users of payment solutions with the aim of maintaining the efficiency, security and future viability of cashless payment transactions in Swiss francs. A key focus of this dialogue is the evolution of cashless payment transactions in the direction of ‘instant payments’ and the central role of the SIC system in this development. With instant payments, account-based payments can be settled by private payment solution providers at any time and within seconds via the SIC system.

Change in shareholder structure: There was a change in the shareholder structure of SIX Interbank Clearing Ltd (SIC Ltd) in the first half of 2019. SIX Group Ltd acquired the 25% minority interest in SIC Ltd previously held by PostFinance Ltd. SIC Ltd has since been a wholly-owned subsidiary of SIX Group Ltd.

Introduction of ISO 20022 messaging standard concluded: The introduction of the new ISO 20022 messaging standard was completed as planned in 2018. The purpose of this standard is to harmonise messaging in the electronic exchange of data between different financial market participants. The technical foundation for the migration of SIC participants’ messages to ISO 20022 was laid by the renewal of the SIC system (SIC4) in 2016.

Migration of PostFinance payment transactions to the SIC system: In 2017, PostFinance Ltd began migrating its bilateral payment transactions with other financial institutions via the SIC system. This phased process will continue in 2020 and is scheduled for completion in the first half of 2021. The migration of PostFinance payments is resulting in a substantial rise in the volume of payments settled by the SIC system, thus further increasing the significance of the SIC system. To make it possible to settle this higher volume, the processing capacity of the SIC system was increased from 10 million transactions in a ten-hour period to 20 million.

Change to pricing structure: A new pricing structure came into force on 1 January 2020. Prices are lower than in the previous model, as well as less degressive.³ The pricing structure has also been simplified in that there are no longer any surcharges on late payments (payments from 13.00 and from 16.00 under the previous model). As before, the costs are borne by the sending financial institution (for outgoing payments) and the receiving financial institution (for incoming payments).

III. Information on the SIC system

General description of the SIC system

The SIC system has been operated by SIC Ltd on behalf of the SNB since 1987. The main elements of the SIC system are the sight deposit accounts of SIC participants at the SNB and the SIC settlement accounts⁴, the settlement system operated by SIC Ltd, and the organisational and administrative rules of conduct and contracts. The funds which SIC participants hold in their sight deposit accounts at the SNB serve as the means of payment. Settlements take place in the SIC system in Swiss franc central bank money.

Organisation of the SIC system

The SIC system is steered by the SNB. It is a key element of the Swiss financial market infrastructure, which originated as a joint enterprise between Swiss financial institutions. The Swiss financial market infrastructure is operated by SIC Ltd, which is owned by SIX Group Ltd. The SNB, SIX and representatives of financial institutions have seats on SIC Ltd's Board of Directors. The [cooperation between the SNB and SIC Ltd](#) is governed by contracts and other agreements.

The SNB (Department III) is the system manager. In this function, it lays down the conditions for admission to and exclusion from the SIC system. It provides the liquidity necessary for settlement in the SIC system, sets the times when the SIC settlement day begins and ends, and maintains the sight deposit accounts of the participating financial institutions. The SNB also monitors daily operations and is responsible for crisis management in the event of disruptions or incidents.

SIC Ltd for its part is responsible for the operation and maintenance of the data centres as well as the communications and security facilities. It also handles the development of the SIC system and software maintenance, as well as managing the data files, the Swiss RTGS Handbook and the Swiss Payments Rulebook.

³ The less degressive pricing is to be applied until the migration of PostFinance transactions is completed (cf. section 'Migration of Post-Finance payment transactions to the SIC system'). Once this has been concluded, prices will again be set on a degressive basis.

⁴ The reason for having a separate sight deposit account and SIC settlement account is of a technical nature; from a legal point of view, both accounts are considered as one.

More detailed information on the respective organisational structures can be found on the websites of [SIX Group Ltd](#), [SIC Ltd](#) and the [SNB](#).

Legal framework

The organisational and administrative rules of conduct of the SIC system comprise the contracts and regulations between the SNB and the SIC participants, between SIC Ltd and the SIC participants, as well as between the SNB and SIC Ltd. The Swiss RTGS Handbook and the Swiss Payments Rulebook, as well as special regulations and directives (such as circulars and implementation guidelines), also form an integral part of these rules of conduct.

The SIC contracts, i.e. the individual contracts between SIC participants, the SNB and SIC Ltd, are subject to Swiss law. The place of jurisdiction is Zurich, Switzerland.

Functioning and operation of the SIC system

A detailed description of the functioning and operation of the SIC system, as well as other information, can be found in the report ‘The Swiss Interbank Clearing (SIC) payment system’, published on the SNB website under www.snb.ch, *Payment transactions*. The respective figures for transactions and turnover in the SIC system are published on the [SNB’s data portal](#) and are updated on a regular basis. The transaction prices for the SIC system are published on [SIC Ltd’s website](#).

IV. Applying the CPMI-IOSCO principles in the SIC system

According to the [PFMI \(table 1, p. 14\)](#), of the 24 CPMI-IOSCO principles, the following 18 principles are applicable to payment systems and thus to the SIC system. Depending on the principle in question, the SNB and/or SIC Ltd are responsible for ensuring compliance with the requirements. Explanations of how each of the 18 relevant principles are applied in the SIC system are given below.

Principle 1: Legal basis

A financial market infrastructure (FMI) should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Participation in the SIC system is based on bilateral agreements between SIC participants and the SNB (SIC giro agreement) on the one hand, and between SIC participants and SIC Ltd (SIC supplementary agreement) on the other. The technical regulations relevant to the SIC system, in particular the Swiss RTGS Handbook and the Swiss Payments Rulebook, provide more specific detail on the areas governed by these agreements. The SNB’s ‘Terms of business’ also apply and are available on the SNB’s website under www.snb.ch, *The SNB, Legal basis, Guidelines and regulations*.

These documents govern the contractual relations between the SNB, SIC Ltd and the SIC participants, as well as their rights and obligations. The SIC contracts, i.e. the individual contracts between SIC participants, the SNB and SIC Ltd, are subject to Swiss law. The place of jurisdiction is Zurich, Switzerland.

Pursuant to art. 4 para. 3 FinMIA, the SIC system is not subject to FINMA authorisation or supervision. It is subject to the provisions of arts. 22–34 NBO, through which the PFMI are implemented for systemically important financial market infrastructures in Switzerland.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

The operation of the SIC system has been entrusted to SIC Ltd. SIC Ltd is a wholly-owned subsidiary of SIX Group Ltd. SIX Group Ltd is an unlisted joint-stock company owned by a large number of financial institutions. Ownership is spread across a broad range of shareholders, thus ruling out the possibility of any individual category of bank having an absolute majority. Any change to the shareholder structure would require the approval of the Board of Directors of SIX Group Ltd. More information on the organisation, shareholders, the Board of Directors and the Executive Board can be found on [SIX Group Ltd's website](#).

The provision of services for the SIC system is laid down in an agreement between the SNB and SIC Ltd. Furthermore, the SNB has a seat on the Board of Directors of SIC Ltd. The SNB is also in regular contact with SIX Group Ltd. The [division of tasks between the SNB and SIC Ltd](#) is explained in a [diagram](#) on the SNB website. More information on the Board of Directors and the Executive Committee, as well as the Annual Report, can be found on [SIC Ltd's website](#).

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

SIC Ltd runs a comprehensive risk management operation and reports on it regularly to the SNB in accordance with art. 36 NBO. SIC Ltd's risk management operation is reviewed and updated annually by its Executive Committee and approved by its Board of Directors.

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. [...]

As the system operator, SIC Ltd is not exposed to direct credit risk in the event of participant default (other than loss of revenue). The SNB provides intraday and liquidity-shortage financing facilities only against collateral (cf. Principle 5).

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.

The SNB gives SIC participants the possibility of using intraday and liquidity-shortage financing facilities via the SIX Repo Ltd trading platform. The SNB provides these facilities only against liquid, high-quality collateral. Procedures for this, and information on eligible collateral, are set out in the Guidelines of the Swiss National Bank on Monetary Policy Instruments and the relevant instruction sheets, available on the SNB's website under www.snb.ch, *The SNB, Legal Basis, Guidelines and regulations*.

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.

The SIC system only executes payments if adequate cover is available. If this condition is not met, the SIC system places the payment in a queue until adequate cover is available. This means that SIC Ltd is not exposed to liquidity risk through settlements of transactions in the SIC system.

The SNB provides SIC participants with interest-free liquidity during the day via the intraday facility. Any liquidity obtained by participants must be repaid to the SNB by the end of the same value day. The SNB charges penalty interest in the event of late repayment. Via the liquidity-shortage financing facility, the SNB provides SIC participants with call money to enable them to bridge short-term liquidity bottlenecks. Both facilities are offered only against collateral. More detailed information on the intraday and liquidity-shortage financing facilities are set out in the Guidelines of the Swiss National Bank on Monetary Policy Instruments and

the relevant instruction sheets, available on the SNB's website under www.snb.ch, *The SNB, Legal Basis, Guidelines and regulations*.

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.

The SIC system is a real-time gross settlement system (RTGS system). This means payment orders are executed irrevocably and individually in central bank money in real time through the participants' SIC settlement accounts (provided that sufficient cover is available).

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.

The SIC system only processes payments using balances on sight deposit accounts at the SNB, i.e. with central bank money.

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.

According to the PFMI (table 1, p. 14), this principle applies to payment systems. It is implemented in Switzerland via art. 25b NBO, but applies to the securities settlement system SECOM rather than the SIC system.

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

SIC Ltd and the SNB have established procedures for managing the default of one or more SIC participants. The SNB decides on access to the SIC system and on the suspension or exclusion of a participant. The SNB may terminate access to the SIC system with immediate effect (exclusion) or temporarily exclude a participant (suspension) under the following circumstances: if the participant no longer fulfils the conditions for participation; if insolvency law measures have been imposed against the participant; if the participant is in

material breach of either the contractual provisions or the associated regulations; or if a case arises that the SNB assesses as posing a particular risk for the SIC system.

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.

SIC Ltd's business risks are identified in its recovery plan. Procedures and key indicators have been defined. The key indicators are continually monitored and the defined measures can, if needed, be put into action promptly.

SIC Ltd holds sufficient assets to function as a going concern for the six months required pursuant to art. 31 para. 2 NBO. Should further assets be required, the measures possible are described in the recovery plan and can be implemented without delay.

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.

The assets in the SIC system are exclusively deposits held by SIC participants in their sight deposit accounts, and are thus central bank money. Hence, the risk of loss for participants on their assets in the SIC system is reduced to a minimum.

As regards the risk for the SIC system in respect of its own assets, a distinction needs to be drawn between the SNB as commissioning party and SIC Ltd as operator. SIC Ltd's assets mainly comprise liquid assets, short-term claims on shareholders, and intangible assets. The credit, market and liquidity risks its assets are exposed to are thus low.

Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

SIC Ltd and the SNB have defined various procedures and tools for the timely recovery of operations and fulfilment of obligations in the event of an interruption or disruption. A

distinction is made between interruptions affecting one SIC participant and those that affect the whole SIC system.

The SIC system itself has a multi-stage backup and recovery process and a ‘two data centre’ strategy (hot standby) to ensure the continuity of operations in various different scenarios. The second instance of the SIC system in the backup centre (hot standby) can be activated at any time or – if internet access is impossible, for example – batch processing can be started (miniSIC). The changeover to the backup centre and batch processing are practised annually, the latter with system-critical SIC participants⁵ and SIC participants connected via Finance IPNet (Messaging Gateway, cf. Principle 22 below). SIC Ltd tests the functionality of the technical process at least once a year. As SIC system manager, the SNB is informed of the test results.

As SIC system manager, the SNB is also responsible for crisis management across the Swiss financial centre within the framework of the Interbank Alarm and Crisis Management Organisation (IAKO), and it defines appropriate tools for this. Alongside the SNB and FINMA, the SIC participants deemed system-critical and those represented on SIC Ltd’s Board of Directors participate in IAKO. Regular exercises are conducted with regard to the functioning of IAKO.

In addition to the backup and recovery process at the system level, in the event of interruptions or disruptions affecting individual SIC participants there is the possibility of submitting and receiving transactions via a backup data carrier. Furthermore, as system manager, the SNB can directly access the SIC system acting on behalf of the SIC participant. Generally, the SIC system and its subscriber lines are actively monitored on both the technical and the operational level during operating hours.

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.

The SNB decides the criteria for access to SNB sight deposit accounts and the SIC system. Participation requirements are explained in detail in the ‘Instruction sheet on cashless payment transactions’ and the ‘Terms of business’, which are both available on the SNB’s website under www.snb.ch, *Legal basis, Guidelines and regulations*.

⁵ The Swiss Payments Rulebook defines system-critical participants as being those financial institutions and third-party computer centres or service bureaus which accounted for a share of at least 5% of SIC’s turnover (excluding the SNB) during all of the preceding three years.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

SIC participation must be effected directly, i.e. without another SIC participant acting as intermediary. The sole exception in this regard is participation in the SIC system via a FINMA-recognised clearing house that serves as a SIC system interface for banks connected to it. Both the clearing house itself and the participants connected to it must have a banking licence and thus be subject to FINMA supervision.

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

The SIC system is steered by the SNB. It is a key element of the Swiss financial market infrastructure, which originated as a joint enterprise between Swiss financial institutions. The SNB, SIX and representatives of other financial institutions have seats on SIC Ltd's Board of Directors. Thanks to the involvement of the participants and the SNB, the efficiency and effectiveness of the system can be ensured and developed on an ongoing basis. Through their activities, other financial market bodies (such as the Swiss Payments Council, Payments Committee Switzerland, Project and IT Process Steering Committee) contribute to market requirements being taken into account.

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.

Participants have the choice between Messaging Gateway or SWIFT as their default access channel. Depending on the channel, communications are transmitted via the closed Finance IPNet (Messaging Gateway) network or the SWIFTNet (SWIFT) network. There is an online portal for checking settlement accounts. Data carriers and the SIX file transfer service can also be used as access channels in an emergency.

ISO 20022 (2009 version) has been the standard for payment messages since November 2018. The SWIFTNet participants were also changed over to ISO 20022 as of the end of 2019, and the SWIFT MX messaging standards have been used since then.

The SIX Advanced Security Server (SASS) is used to protect the integrity of incoming and outgoing messages in the SIC system. This is a Swiss solution developed for the SIC system to provide the cryptographic components for message encryption and authentication. It has been in use since April 2017 and meets the highest requirements for unchangeable data and secure transmission of messages between SIC participants, the SNB and the SIC system. For

SWIFTNet participants, the SWIFT security requirements apply to transmission through to the interface with SIC Ltd.

More information on the system interfaces and interbank security systems used in the SIC system can be found on [SIC Ltd's website](#) and in the Swiss RTGS Handbook available to SIC participants.

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.

The SIC system is explained in easily understandable terms for the general public on the websites of the [SNB](#) and [SIC Ltd](#). A detailed description of the functioning and operation of the SIC system, as well as other information, can be found in the report 'The Swiss Interbank Clearing (SIC) payment system', available on the SNB website under www.snb.ch, [Payment transactions](#).

Conditions for participation in SNB sight deposit accounts and the SIC system are detailed in the 'Instruction sheet on admission to the SIC system and sight deposit accounts', which is available on the SNB website under www.snb.ch, [Payment transactions](#), [Business operations](#).

All SIC participants can access the full range of SIC documents on the extranet of SIC Ltd. The most important documents for SIC participants are the Swiss Payments Rulebook and the Swiss RTGS Handbook.

The respective figures for transactions and turnover in the SIC system are published on the [SNB's data portal](#) and are updated on a regular basis. The transaction prices for the SIC system are published on [SIC Ltd's website](#).