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## Disclosure report on the Swiss Interbank Clearing (SIC) payment system

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

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

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

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

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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-IOSCO<sup>1</sup> 'Principles for financial market infrastructures'. It is the result of collaboration between the SNB (Department III) in its capacity as SIC system manager, and SIX Interbank Clearing (SIC Ltd) as SIC system operator.

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<sup>1</sup> Committee on Payments and Market Infrastructures (CPMI), International Organization of Securities Commissions (IOSCO).



## I. Summary

Swiss Interbank Clearing (SIC) is the central electronic Swiss payment system, in which a large part of the cashless payment transactions of banks and other eligible financial market participants in Swiss francs are settled. 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.

The SIC system plays a central role in the implementation of the SNB's monetary policy. SIC is also very important for the operation of the Swiss financial centre and is a key element in the Swiss [Financial Market Infrastructure](#).

The SNB (Department III) steers the SIC system and ensures that there is sufficient liquidity by granting, when necessary, intraday loans to banks against collateral. Because the SIC payment system is important for the stability of the Swiss financial system, it is subject to SNB (Department II) oversight. 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 system manager and steers the SIC system.

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 \(cf. table 1, page 14\)](#) eighteen principles apply to payment systems. In Switzerland, the CPMI–IOSCO PFMI are implemented through provisions of the NBO (cf. art. 22–34 NBO).

With this disclosure report, the SNB (Department III) and SIC Ltd are complying with Principle 23 and NBO art. 23a para. 2. The structure of the report is based on the CPMI–IOSCO guidelines (cf. pp 82–83 ['Disclosure Framework and Assessment Methodology'](#)).

## II. Most important changes since the last disclosure

This is the first disclosure report on the SIC system.

## 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, the settlement system operated by SIC Ltd, as well as 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 central bank money.

## Organisation of the SIC system

The SIC system, which is steered by the SNB and is a key element of the Swiss financial market infrastructure, originated as a joint enterprise among Swiss banks. The Swiss financial market infrastructure is operated by SIX, a company owned by around 140 financial institutions. 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, and explained in, 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 SIC, sets 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 operates and maintains the processing centres as well as the communications and security installations. It also develops and maintains the software, as well as managing the data files, the 'SIC/euroSIC User Handbook' and the 'Swiss Payments Rulebook'.

Follow these links to find more information on the organisation of: [SIX Group Ltd](#), [SIC Ltd](#) and [the SNB](#).

## Legal and regulatory 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. This also includes the 'SIC/euroSIC User Handbook' and the 'Swiss Payments Rulebook' as well as special regulations and directives, e.g. circulars.

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 Switzerland.

## Operation and functioning of the SIC system

A detailed description of the operation and functioning 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 at [www.snb.ch](http://www.snb.ch), [Payment transactions](#). Transactions and turnover in the SIC system are published on the [SNB's data portal](#) and are updated on a regular basis.

## IV. Addressing 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 are applicable to the SIC system. Depending on the principle, the SNB and/or SIC Ltd are responsible for ensuring compliance with the regulations. Here is an explanation as to how each of the 18 relevant principles are addressed in the SIC system.

### 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.

Participation in the SIC system is based on bilateral agreements between SIC participants and the SNB (SIC giro contract) on the one hand, and between SIC participants and SIC Ltd (SIC supplementary agreement) on the other. These contracts are described in more detail in the technical regulations relevant to the SIC system, in particular the ‘SIC/euroSIC User Handbook’ and the ‘Swiss Payments Rulebook’. The SNB’s ‘Terms of business’ also apply and are available at [www.snb.ch](http://www.snb.ch), [The SNB, Legal basis, Guidelines and regulations, Terms of Business of the SNB](#).

These documents regulate the contractual relations between 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 Switzerland.

As a systemically important FMI, the SIC system must fulfil the requirements of art. 22–36 NBO, which implement the CPMI–IOSCO PFMI for payment systems 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.

SIC Ltd is a subsidiary of SIX Group Ltd, which owns 75% of the shares. The other 25% of the shares are held by PostFinance. SIX Group Ltd, in turn, is an unlisted public limited company domiciled in Zurich. The company is owned by around 140 national and international financial institutions, who are also the main users of the services provided by SIX. More information on organisation, shareholders, the Board of Directors and the Group Executive Board can be found on [SIX Group Ltd’s website](#).

The SNB (Department III) has a seat on the Board of Directors of SIC Ltd. The SNB is also in regular contact with SIX Group Ltd at group level. The division of tasks between the SNB and SIC Ltd is explained with a diagram at [www.snb.ch](http://www.snb.ch), [Payment transactions, Further information, Swiss Interbank Clearing \(SIC\), The Swiss Interbank Clearing \(SIC\) system, Organisation](#). More information on the Board of Directors, the Executive Committee and the Annual Report can be found on [SIC Ltd’s website](#). Furthermore, SIC Ltd plays an important role in the interbank coordination of the Swiss financial centre.

### **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 executive management reviews and updates its risk management operation annually. This is approved by SIC Ltd's 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 system operator, SIC Ltd is not exposed to direct credit risk in case of participant defaults (other than loss in revenue). The SNB only provides intraday and liquidity-shortage financing facilities 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.

Being a SIC participant makes it possible to obtain SNB intraday and liquidity-shortage financing facilities. The SNB only provides these facilities against liquid, high-quality collateral. Procedures for this, and acceptable collateral, are set out in the Guidelines of the Swiss National Bank on Monetary Policy Instruments and the relevant instructions sheets, available at [www.snb.ch](http://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 SIC.

As the transaction price for payments in the SIC system increases throughout the SIC settlement day, SIC participants have an incentive to transfer payment orders to the system early, while at the same time providing sufficient liquidity so that settlement can take place early too.

### **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 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, this principle generally applies to payment systems. However, this does not include the SIC system – the principle applies to SECOM as the securities settlement system (art. 25b NBO).

### **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.

### **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 has identified business risks 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 6 months required in the 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.

SIC Ltd has no financial investments of its own nor does it manage any for SIC participants.

#### **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 multistage 'backup and recovery process' and a 'two data centre strategy' (hot standby) to ensure the continuity of operations in various different scenarios. In a backup computer centre, the online application can be re-established, or – if internet access is impossible – batch processing can begin (miniSIC). The second of these options is practised annually with SIC participants. The functionality of the purely technical process is tested by SIC Ltd at least once a year. As commissioning party, the SNB is informed of the test results.

For interruptions or disruptions affecting one SIC participant there is the possibility of submitting and receiving transactions via a backup data carrier, for example. Furthermore, as system manager, the SNB has the possibility of either directly accessing the SIC system if it deems it necessary or 'acting on behalf' of the SIC participant.

Generally, the SIC system and its subscriber lines are permanently and actively monitored on both the technical and the operational level during operating hours. In the context of Swiss payment systems, the SNB (Department III) also conducts around-the-clock crisis management 365 days a year for the financial sector, and defines appropriate tools for this. This is practised regularly and with financial market representatives.

**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 participation in both the sight deposit and SIC systems. Participation requirements are explained in detail in the ‘Instruction sheet on cashless payment transactions’ and the ‘Terms of business’, which are available at [www.snb.ch](http://www.snb.ch), *The SNB, Legal basis, Guidelines and regulations*.

**Principle 19: Tiered participation arrangements**

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

There is no tiered participation in the SIC system.

**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 among Swiss banks. The SNB, SIX and representatives of other financial institutions have seats on SIC’s Board of Directors. The efficiency and functional capacity of the SIC system are laid down in Service Level Agreements (SLAs) and reviewed on an ongoing basis.

Furthermore, various committees for interbank issues (e.g. Swiss Payments Council, Payments Committee Switzerland, Project and IT Process Steering Committee) ensure that the requirements of SIC participants and markets are met and that any changes in the market are taken into account appropriately.

**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.

Finance IPNet – a communication network provided by SIX – and/or the SWIFT network SWIFTNet are used for the transmission of payments.

Finance IPNet is a Swiss communications solution that complies with both Swiss and international security requirements. SWIFTNet is an international communications solution that is used around the world in the field of finance, and that complies with international security requirements.

All incoming and outgoing transactions in the SIC system are signed (authenticated) individually and encrypted.



The Swiss hardware and software solutions for ensuring information security meet the highest requirements for unchangeable data and secure transmission of payment transactions between SIC participants, the SNB and the SIC system.

More information on the system interfaces and interbank security system (IBASEC) used in the SIC system can be found on [SIC Ltd's website](#).

### **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.

In the interests of transparency, the SIC system is explained in easily understandable terms on the [SNB](#) and [SIC Ltd's](#) websites. A detailed description of the operation and functioning of the SIC system, and other information, can be found in the report 'The Swiss Interbank Clearing (SIC) payment system', available on the SNB website, [www.snb.ch](http://www.snb.ch), [Payment transactions](#).

Conditions for participation in the sight deposit system and the SIC system are detailed in the 'Instruction sheet on cashless payment transactions', which is available at [www.snb.ch](http://www.snb.ch), [Payment transactions](#), [Business operations](#).

All SIC participants can access all SIC documents on the extranet of SIC Ltd. The most important documents are the 'SIC/euroSIC User Handbook' and the 'Swiss Payments Rulebook'.

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](#).