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Bankgirot's FMI Disclosure report

Public version

I. Summary

Bankgirot has written this report on assignment for the Riksbank and the Swedish Financial Supervisory Authority. The report is based on an evaluation in accordance with the Principles for Financial Market Infrastructures (“PFMI”) as issued by the Committee on Payment and Settlement Systems (“CPSS”) and the International Organization of Securities Commissions (“IOSCO”). The CPSS (now CPMI) is a committee within the Bank for International Settlements (“BIS”) and IOSCO is an organisation for supervisory authorities.

The report work has been carried out by internal working groups at Bankgirot. Both Bankgirot’s CEO and board have been involved in the work, as have the Risk and Compliance functions.

Operational risk is the main type of risk for Bankgirot’s Clearing and Settlement Service. In order to minimise the operational risk for Bankgirot’s Clearing and Settlement Service, an annual review of the participation requirements is conducted for each participant. Bankgirot also establishes a risk management plan once a year. The Risk function is responsible for monitoring and managing risks.

Bankgirot also continuously monitors risks attributable to other parties, such as participants in Bankgirot’s Clearing and Settlement Service and the Riksbank’s RIX payment system.

Bankgirot has identified risks and simulated scenarios for Bankgirot’s Clearing and Settlement Service as regards critical processes. These scenarios are managed in Bankgirot’s combined business continuity plans and contingency procedures. In order to cover these types of risks Bankgirot has redundancy in all parts of its critical infrastructure, for example.

The evaluation has been carried out on the basis of sixteen of the principles and primarily relates to Bankgirot’s Clearing and Settlement Service. For principles where the assessment of Bankgirot’s Clearing and Settlement Service is not possible or appropriate, to some extent Bankgirot’s entire operations – including the parent company BGC Holding AB – have been assessed.

This evaluation describes the circumstances at Bankgirot as at 30 June 2016.

II. Bankgirot's role as a clearing organisation

Introduction

Bankgirot is a clearing organisation with operations in Sweden. Bankgirot's objective is to deliver market-leading payment solutions to increase the competitive advantages both of participants and of other customers. The vast majority of Bankgirot's operations, which include Bankgirot's four payment systems, do not aim to maximise profits. The ambition is, in principle, to break even over a period of several years. In this part of operations, Bankgirot's long-term goal is instead to reduce prices for participants in the systems, which is achieved via cost reductions and volume growth in the payment systems.

In the part of operations that includes the payment systems, operational costs comprise the basis for the pricing offered to system participants, with a small profit mark-up. The profit mark-up in recent years has amounted to SEK 14 million per annum. Pricing for the participants is set annually based on the budgeted costs for the payment systems and the volume estimates for the participants. Bankgirot is strongly protected against losses caused by major volume reductions in the Bankgiro System (as defined below) via a volume guarantee, which guarantees Bankgirot's income from the system.

As a clearing organisation for retail payments in Sweden, Bankgirot has a central role in the Swedish payment infrastructure. The majority of these payment types are processed by Bankgirot.

Bankgirot's operations were founded in 1959 and today the company employs about 250 people. Bankgirot is owned by Skandinaviska Enskilda Banken AB (publ), Swedbank AB (publ), Svenska Handelsbanken AB (publ), Nordea Bank AB, Danske Bank A/S, Denmark, Swedish branch, SkandiaBanken Aktiebolag (publ) and Länsförsäkringar Bank Aktiebolag (publ). The CEO of Bankgirot is Torbjörn Ericsson.

Operations

Introduction

Bankgirot provides payment systems for retail payments with products and services that aim to enable and optimise payment processing for Swedish companies. Bankgirot is the central organisation in Sweden for the processing of payments and the supplying of payment information between the participants in the payment systems and said participants' customers.

Bankgirot's payment system is comprised of two payment platforms. One of the payment platforms is used to process both the *Bankgiro System*, which handles Bankgirot's own payment products under the name "Bankgiro products", and *Bankgirot's Clearing and Settlement Service*. The other system is used to process and settle real-time transactions and Swish. This document focuses on Bankgirot's Clearing and Settlement Service. The Bankgiro products comprise a number of payment and receivable products for companies in the Swedish domestic payments market. Bankgirot's Clearing and Settlement Service handles receivables and creates instructions for the settlement

institute, RIX, where final settlement takes place. Bankgirot's Clearing and Settlement Service is used by the Bankgiro System and its Bankgiro products, as well as by third-party payment products (such as Visa and MasterCard).

Within the scope of the Bankgiro System, Bankgirot also provides *bank branch products* that facilitate the participants' use of the payment products handled by the system. In addition to this, Bankgirot pursues subsidiary business in the shape of *electronic document management and identification*.

Bankgirot also provides payments in real time, comprised of the settlement system PRT Settlement Service and the general payment system PRT), which are characterised by speed and accessibility with the ability to process instant transactions 24/7 every day of the year. Real-time payments are processed by a separate platform.

Bankgirot's Clearing and Settlement Service

Bankgirot's Clearing and Settlement Service is authorised by the Swedish Financial Supervisory Authority (Finansinspektionen) and is registered with the European Commission. Bankgirot's Clearing and Settlement Service conducts clearing and creates settlement instructions that are sent via SWIFTNet to the Riksbank's RIX system, which handles settlement in SEK. For payments in EUR, Bankgirot sends payment instructions to the remitting bank, which is responsible for settlement taking place in the European Central Bank's settlement system TARGET2. All payments in SEK in Sweden between banks, with the exception of payments settled directly in RIX, use Bankgirot's Clearing and Settlement Service. As such, Bankgirot's Clearing and Settlement Service is used for a number of payment products, with the Bankgiro System and its Bankgiro products representing the largest share.

The actual *clearing* comprises the compilation of each participant's debts to and receivables from each counterparty as a result of the payment instructions received by Bankgirot. The majority of payments are compiled in the clearing process as the gross bilateral positions between the parties prior to settlement. Bankgirot's Clearing and Settlement Service does not use netting between participants. For the Visa, MasterCard and Bankomat (ATMs) payment flows, clearing is conducted in external systems as multilateral relations between the parties. In the settlement of these flows netting is used if a party is both a payer and a payee.

The Bankgiro System and the Bankgiro products

The Bankgiro System is a general payment system that includes and supports the Bankgiro products. The Bankgiro System handles bankgiro payments by approving the payments, creating debit instructions for payers and credit instructions for payees and distributing payment information to the concerned participants. The payments are charged to the payer's account before they are entered in Bankgirot's Clearing and Settlement Service, which takes place as soon as they have undergone delivery checks. The Bankgiro System relies on Bankgirot's Clearing and Settlement Service for clearing the Bankgiro products and for creating the necessary settlement instructions. The Bankgiro products are used in a number of different payment scenarios in the retail payments market. A few examples of Bankgiro products are Autogiro (Direct Debit), Leverantörsbetalningar (Supplier Payments), Avgående betalningar bank (Pre-authorized Payments), Löner (Salary) and Bankgiro Inbetalningar (Bankgiro Receivables). Bankgiro payments are first processed on the debit side by the Bankgiro

System and then via Bankgirot's Clearing and Settlement Service, after which they are once again processed by the Bankgirot System on the credit side.

Other payment products that use Bankgirot's Clearing and Settlement Service

In addition to the Bankgirot System's Bankgirot products, Bankgirot's Clearing and Settlement Service is used by Bankgirot's Cash Management service. Moreover, Bankgirot's Clearing and Settlement Service is used by third-party payment products. These flows are Dataclearing (DCL, interbank account transfers), Visa, MasterCard, Bankomat (ATMs) and Bankernas Depåbolag (BDB) (cash depots). Common to these payment products is that the debit checks, and in some cases even clearing, are conducted in external payment systems for which Bankgirot is not responsible. The payment products rely on the normal operation of Bankgirot's Clearing and Settlement Service.

Payments in Real Time

Payments in Real Time is characterised by speed and availability, with the ability to process instant transactions 24/7 every day of the year. With PRT Settlement Service, PRT and Swish, Bankgirot is able to offer rapid, 24/7 payments, which means payments can be made even when the Riksbank is closed.

PRT Settlement Service

The PRT Settlement Service is at the heart of the real-time flow and ensures that the financial transactions are settled at the settlement institute, RIX. The PRT Settlement Service is a settlement system authorised by the Swedish Financial Supervisory Authority and registered with the European Commission.

PRT and Swish

PRT is a general payment system. A payment from one bank account to another bank account takes just a few seconds. For both the payer's bank and the payee's bank, the service is without risk as neither party extends credit. If the payer's bank account has sufficient funds the account is debited and the specified amount is transferred; if the account has insufficient funds the transaction cannot take place.

Swish is the first product on the real time platform. Swish is owned by GetSwish AB, which is owned by the six banks Danske Bank A/S, Denmark, Swedish branch, Svenska Handelsbanken AB (publ), Länsförsäkringar Bank Aktiebolag (publ), Nordea Bank AB, Swedbank AB (publ) and Skandinaviska Enskilda Banken AB (publ). Swish is operated and maintained by Bankgirot.

Electronic document management and identification

General

Bankgirot's electronic document management and identification products and services do not require participation in Bankgirot's payment systems. Electronic document management and identification provide an IT infrastructure within e-services for banks and companies alongside the development of solutions for secure and effective digital business transactions.

Bg E-invoice

Bg E-invoice mostly deals with the communication of invoice information digitally rather than in print. The purpose of the service is to optimise invoicing for invoice issuers and invoice management for payers. The first step does not involve the actual payment transaction being effected by the solution, but rather the communication of the instructions in the shape of invoice information required for the customer to make the payment transaction. Bankgirot then effects the payment transaction and communicates the payment information, both to the payer and back to the invoice issuer.

Bg PKI Services

Within the scope of Bg PKI Services, Bankgirot provides a service for e-identification and secure identification. Bg PKI Services is a support infrastructure that enables Bankgirot to offer secure services within, for example, electronic invoicing. Bg PKI Services is e.g. used by Bankgirot to verify the identities of payers and payees.

Bg eID Gateway

Bg eID Gateway is an electronic identification service that is used, among other things, by participating banks when creating a 'digital wallet', which is based on cards issued by a bank for bank customers.

Bankgirot is under supervision and oversight

Bankgirot is under the supervision of the Swedish Financial Supervisory Authority and the oversight of the Riksbank. Bankgirot is licensed by the Swedish Financial Supervisory Authority to pursue clearing operations in accordance with the Swedish Securities Market Act (2007:528) and as such is under the supervision of the Swedish Financial Supervisory Authority. Under the aforementioned Act, Bankgirot is permitted, in addition to clearing operations, solely to pursue other business activities that are closely related to clearing operations. The operation of Bankgirot's own payment systems, the Bankgiro System and PRT are considered closely related to Bankgirot's clearing operations. Both the Bankgiro System and PRT are general payment systems in accordance with the definition in the Swedish Act on Banking and Financing Business (2004:297) and the Swedish Payment Services Act (2010:751). Bankgirot has also been licensed by the Swedish Financial Supervisory Authority to pursue subsidiary business operations encompassing electronic invoicing (Bg E-invoice), secure identification (Bg PKI Services) and Bg eID Gateway.

Bankgirot's two settlement systems (Bankgirot's Clearing and Settlement Service and the PRT Settlement Service) have been approved by the Swedish Financial Supervisory Authority in consultation with the Riksbank and registered with the European Commission in accordance with the Swedish Systems for Settlement of Obligations on the Financial Market Act (1999:1309). Settlement system refers to a system for netting and settling transfer instructions between the system's participants for financial instruments and payment funds.

III. Applicable principles

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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.

The material aspects of Bankgirot's Clearing and Settlement Service comprise the participants' obligation to create a settlement amount and Bankgirot establishing and presenting debt and claim relations via clearing, creating settlement instructions for settlement using the participants' funds held at the central bank, checking that settlement has been made and, when necessary, the ability to deal with defaulting participants.

Bankgirot's Clearing and Settlement Service is governed by common rules and standardised arrangements in the form of the agreement on Bankgirot's Clearing and Settlement Service (see Appendix A). A clause on governing law stipulates that Swedish law applies to the entire agreement, that is to all aspects of Bankgirot's Clearing and Settlement Service. All of Bankgirot's agreements with critical foreign subcontractors also include clauses on governing law stipulating that Swedish law applies.

The majority of the participants in Bankgirot's Clearing and Settlement Service are companies that are subject to Swedish jurisdiction. Regarding the foreign credit institutions that participate via branches, in accordance with the Swedish Act on Foreign Branches etc. (1992:160) and Chapter 4 of the Swedish Banking and Financing Business Act (2004:297), all are registered within the European Economic Area and as such have implemented EU Directive 98/26/EC on settlement finality in payment and securities settlement systems ("Settlement Finality Directive").

Bankgirot's Clearing and Settlement Service

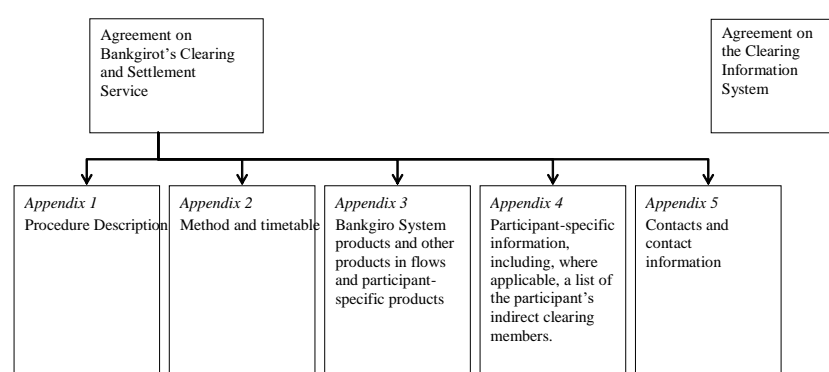


Figure 1 illustrates the agreement structure for Bankgirot's Clearing and Settlement Service.

The agreement is prepared under the supervision of Bankgirot's legal officers and business specialists, with the aid of independent legal consultants, meaning that Bankgirot's Clearing and Settlement Service is based on clear and well-founded agreements and supporting documentation that comply with all applicable legal requirements. The agreement, in its current form, has applied with only minor amendments since 2009 without any participant objecting to said agreement as unsatisfactory.

Any revisions of the agreement are submitted to the service's participants for review and feedback, in order to resolve any ambiguities and to ensure that the interests of the participants are duly met. Requests for clarifications are met and change requests are evaluated and decided upon. The formulation of the agreement is decided by Bankgirot in accordance with the decision-making rules adopted by the board, including the authorisation plan. The requirements for participation in Bankgirot's Clearing and Settlement Service have been decided by Bankgirot's board. The decision to admit a new participant is also made by Bankgirot's board.

Regarding the settlement finality of the transactions, Bankgirot complies with the Swedish Systems for Settlement of Obligations on the Financial Market Act (1999:1309), Section 13 of which stipulates that a transfer order is valid for a third party if the transfer order has been entered in Bankgirot's Clearing and Settlement Service before a decision on insolvency proceedings has been communicated. By law, a transfer order that has been duly entered cannot be stopped or reversed, by either Bankgirot or the payer, once the transaction is entered. However, settlement finality is not reached in Bankgirot's Clearing and Settlement Service, but in external settlement systems, namely RIX and TARGET2.

The agreement contains rules for how the flow is handled in normal situations as well as when deviations occur. For example, there are rules for contingency procedures in the case of disruptions at a settlement institute, rules for when a participant fails to create a settlement amount for a settlement time, rules for default management and rules for when Bankgirot's communication via SWIFT fails. The provisions of the agreement have been tried and tested in practice when incidents have occurred and the rules have proven to serve their purpose well.

The agreement's appropriateness and compliance with Swedish law have never been examined by a court or arbitration panel, but as described above the agreement has been prepared such that the agreement complies with applicable Swedish legislation and EU directives.

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.

Bankgirot's general objectives and key figures are designed such that critical components of Bankgirot's operations are measured and monitored to ensure the ability to continually maintain a correct, rapid and secure delivery. This is especially important as Bankgirot has an important role in society as regards the processing of retail payments. In cases where Bankgirot has outsourced operations to an external supplier, equivalent service levels (Service Level Agreements) form part of the agreement with the supplier.

The Riksbank, Sweden's central bank, oversees the systems that are considered critical to financial stability. The Riksbank's oversight is based, among other things, on international principles for stability and efficiency in the enterprises behind the infrastructure. The Riksbank's executive board has decided that Bankgirot is to be overseen by the Riksbank.

Bankgirot is a Swedish limited liability company whose executive and shareholder functions and governance are established in compliance with the Swedish Companies Act (2005:551). Consequently, Bankgirot's management and operations are conducted in compliance with the Swedish Financial Supervisory Authority's Regulation FFFS 2007:17. Governance and control of operations is conducted in compliance with FFFS 2005:1 and taking into consideration FFFS 2014:1–5 as being best practice.

The ownership structure of Bankgirot is as follows: Skandinaviska Enskilda Banken 33.1%, Swedbank 29.2%, Svenska Handelsbanken 25.4%, Nordea 10%, Danske Bank 1.7%, SkandiaBanken 0.3% and Länsförsäkringar Bank 0.1%. The composition of the board is regulated by the shareholder agreement entered into by the owners. Bankgirot's board currently has seven ordinary members including one employee representative. The CEO is not a member of the board.

The board and the CEO govern in accordance with a framework of corporate policies, guidelines and other governing documents established by the board and applying to operations, and all of which are available to Bankgirot's personnel via Bankgirot's intranet. Separate functions have been established for security, risk management and compliance. Internal audits are conducted in accordance with an auditing plan established annually by the board. The Internal Auditing function is outsourced to an auditing firm. The appointment and dismissal of the Chief Risk Officer are decided by the board.

Bankgirot's Clearing and Settlement Service is not a system operated by a central bank and, as such, issues regarding conflicts of interest between the operator and oversight functions for such systems are not applicable to Bankgirot.

The Swedish Financial Supervisory Authority and the Riksbank hold quarterly supervisory/oversight meetings with Bankgirot. At these meetings Bankgirot informs of changes to operations, the organisation, financial performance, and production, as well as of any disruptions.

The owners are represented on Bankgirot's board and thereby govern Bankgirot and as such have access to relevant information. The board decides on the principles of governance and the division of responsibility at Bankgirot and on the instructions for the CEO as regards the day-to-day management of the business. Bankgirot also has a management process established by the CEO. Bankgirot's owners are also participants in Bankgirot's payment systems.

Bankgirot's various participant forums provide the participants with information about issues concerning the governance of Bankgirot in cases where such issues concern the payment systems and are therefore relevant to the participants.

General information about Bankgirot also reaches the public via the information published at www.bankgirot.se.

The roles and responsibilities of the board, the board members and in particular the chair of the board are regulated in the rules of procedure for the board established annually at the board's constituent meeting. All board members and the deputy chair are expected to attend all meetings. Other elected deputies attend only in the absence of their respective ordinary board members.

The board has appointed a nominations committee within the board to assist and provide recommendations to the board on issues relating to the nomination of board members, the composition of the board and succession planning. The form the work of the nominations committee is to take is stipulated in a rules of procedure document established annually by the board. Three board members make up the nominations committee. In addition to the members, the CEO, the committee secretary and (as necessary) specially selected experts contribute to the work of the committee. The individual areas of expertise of the members of Bankgirot's board are evaluated in conjunction with board nominations and before the board is appointed at the annual general meeting. The expertise evaluation comprises a self-assessment using a standardised form graded one to four. The areas in which expertise is evaluated are those assessed to be of importance to board work at Bankgirot.

Unless otherwise decided, the board members do not have individual areas of responsibility but rather deal with all matters collectively. If a board member accepts, the board can – via a decision recorded in the minutes – delegate a mandate for dealing with a particular issue. In cases of delegation the board shall act with great care and regularly check whether the delegation can be maintained. Information may only be provided to the market/media by the chair or the CEO, or by a person appointed by one of the two aforementioned persons.

Before an individual is elected to the board, a check is conducted in accordance with the Swedish Financial Supervisory Authority's Regulation FFFS 2007:17 concerning

information on possible conflicts of interest. Bankgirot also has a policy for identifying and handling conflicts of interest that relates specifically to the conflicts of interest of board members.

In order to prevent conflicts of interest, Bankgirot complies, for example, with Chapter 8, Section 23 of the Swedish Companies Act. This means that a board member may not deal with matters concerning: (i) agreements between the board member and Bankgirot/BGC Holding AB; (ii) agreements between Bankgirot/BGC Holding AB and a third party if the board member has a considerable interest that could conflict with Bankgirot/BGC Holding AB; and (iii) agreements between Bankgirot/BGC Holding AB and a legal entity that the board member alone or together with another may represent. If there is a conflict of interest, the conflicted board member may not participate in preparations or decisions relating to the matter in question.

Board meetings are normally also attended by the CEO, the deputy chair and the board secretary. The board deals with all board matters collectively, including issues relating to risk, auditing, compliance and remuneration. Other than the aforementioned nominations committee, the board has no special committees as the board is of the opinion that a board of its size is better suited to deal with matters as a whole rather than for certain matters to be delegated to small committees. All board members have relevant expertise and extensive specialist knowledge within Bankgirot's areas of operations and within the financial sector in general. All board matters are prepared by the CEO.

Board matters concerning risk, auditing and compliance are also prepared by the Risk and Compliance Officers, as well as the internal and external auditors, before being put to the board for a decision. The board has, however, appointed the chair to review objective fulfilment and prepare proposals for any variable remuneration to executive management and other employees for whom this is possible, which the CEO submits to the board. The board then decides on the outcome. The chair prepares and presents proposals to the board concerning remuneration to the CEO, which is then decided by the board. All employees at Bankgirot are covered by an incentive scheme, with the exception of those who are entitled to individual variable remuneration based on individual performance. The board decides on any provisions for the incentive scheme.

The work of the board is continuously evaluated over the course of the year by the nominations committee. This evaluation is conducted in writing and/or in the form of individual in-depth interviews. The structure, size, composition and performance of the board are examined. The committee also examines the level of knowledge, experience and involvement in the board work of the board members (both collectively for the board as a whole and individually for each board member).

The tasks of the nominations committee also include seeking out, assessing and proposing one or more candidates for the position of chair of the board, leading the process of succession planning on the board and evaluating relevant corporate governance issues. The committee has an advisory role in relation to the board. The committee's analyses and proposed decisions are therefore considered by the board as a whole.

On the election of a member to Bankgirot's board, a management check is conducted in accordance with the Swedish Financial Supervisory Authority's Regulation FFFS 2007:17. The material is submitted to the Swedish Financial Supervisory Authority for

assessment. Furthermore, the board's annual evaluation includes an assessment of the board's collective abilities and expertise.

The board members are employees of the banks that own Bankgirot, are nominated by their employers (the owners) and are elected by the annual general meeting (apart from the statutory employee representatives nominated by the Finansförbundet Financial Sector Union of Sweden). Naturally, an owner will nominate a person they consider most suitable for the role of a member of the board of Bankgirot.

Bankgirot has no executive board members apart from the appointed employee representatives. The employee representatives are the only board members employed by Bankgirot. Nor is any board member a member of Bankgirot's management group. No fees are paid to the board members. Other than the employee representatives, no board member receives any other form of compensation from Bankgirot. As such, all of Bankgirot's board members (apart from the employee representatives) are independent as regards their relationship to both Bankgirot and Bankgirot's management.

According to the shareholder agreement signed by the banks which own Bankgirot, the board members are nominated by the owners (the banks). The five largest shareholders are each entitled to nominate one board member. The two smallest shareholders are together entitled to nominate one board member. Bankgirot has two board members who, in addition to being independent as regards their relationship to both Bankgirot and Bankgirot's management, are also independent in relation to Bankgirot's major shareholders (which are defined by Bankgirot as shareholders which directly or indirectly control at least ten per cent of the shares or votes in Bankgirot). However, Bankgirot has no board members who are completely independent in relation to all shareholders.

Bankgirot has published the fact that the members of Bankgirot's board are nominated by the owners (the banks) at www.bankgirot.se.

The roles and areas of responsibility of Bankgirot's management group are clearly defined. The board decides on the general organisation and general responsibilities of each area. Each year the board establishes instructions for the CEO. Bankgirot is organised into six areas: Payments, Digital Services, CIO/IT, Strategic Business Development, Finance and HR. The heads of the six areas of operations are members of the CEO's management group. The Communications Director and the Chief Risk Officer are also members of the CEO's management group. Responsibility for each area is defined and communicated internally.

Bankgirot has published an organisation chart at www.bankgirot.se showing the overall organisation.

The objective fulfilment of the CEO and the management group is prepared by the chair and continually evaluated and assessed by the board. The CEO and the management group have experience from different areas, such as banking, payment operations, IT operations, project management, accounting and auditing, etc. The CEO is appointed and removed by the board. Prior to the appointment of an area manager within the CEO's management group, the board decides whether such a resource should be granted. When appointing an area manager, the so-called grandfather principle is applied to the final selection. This means that the CEO submits the choice of candidate to the chair of the board for approval. The procedure for removing an area manager,

where necessary, is the same as for appointing an area manager, in other words the grandfather principle is applied. Bankgirot conducts regular skills surveys, aided by the HR department. Essential skills and dependencies on key personnel are analysed. Annual planning is conducted for succession and the replacement of critical expertise.

The board establishes a risk management plan for Bankgirot each year. The Chief Risk Officer is responsible for monitoring and controlling Bankgirot's risks. Bankgirot's instructions for Risk Management stipulate the organisation, roles and responsibilities, and management that apply to Bankgirot's risk exposure. Bankgirot has also established a policy for outsourcing agreements that regulates how outsourced operations are managed and how risks associated with such outsourcing are controlled and managed. Bankgirot also has functions for Compliance and Security. Risk Management and Compliance cooperate and lead, among other things, Bankgirot's regular risk workshops, which provide a basis for the annual risk management plan. The Risk and Compliance functions have both the right and the obligation to report directly to the board and they do so both at regular intervals and as necessary throughout the year. The Chief Risk Officer and the Chief Compliance Officer both report at all ordinary board meetings. Both functions are evaluated annually by an independent internal auditor on behalf of the board. In general, Bankgirot conducts its operations on the basis of established internal regulations. This means that Bankgirot complies with the Swedish Financial Supervisory Authority's regulations and general guidelines for risk identification, risk management and risk minimisation. Bankgirot's agreement for participation in Bankgirot's Clearing and Settlement Service includes participation requirements that support work to continually minimise risks in the service. This is supplemented by Bankgirot's ongoing work to continually improve critical processes and continuous monitoring of Bankgirot's quality assurance objectives. These are followed up on a monthly basis and reported directly to the board.

The fulfilment of Bankgirot's internal control objectives is also reported monthly to the board. Compliance reports to the board monthly and otherwise as necessary. Independent internal auditing monitors and evaluates the risk and compliance work and reports directly to the board.

Each year Bankgirot evaluates all participants in Bankgirot's Clearing and Settlement Service in accordance with the established participation requirements. Bankgirot uses the participation requirements to review and evaluate the participants' procedures for technical security and risk management. Great emphasis is placed on the evaluation of the participants' technical security (including contingency procedures and business continuity plans) and risk management procedures. The aim is to minimise the operational risks in Bankgirot's Clearing and Settlement Service.

In the event of a crisis, Bankgirot initiates special processes and escalation procedures. Bankgirot's Clearing and Settlement Service has an incident management process that follows Bankgirot's general process for incident management and escalation. Major incidents with substantial customer impact are escalated to Bankgirot's crisis management team, where the chair of the crisis management team leads the work and reports directly to the CEO and the board. The crisis management team is granted special powers in conjunction with escalation, and special procedures are in place for managing extraordinary events (such as a participant defaulting).

Each year, Risk Management prepares Bankgirot's risk management plan, which is decided upon by the board. Risk Management and the chair of the crisis management

team are also both responsible for forwarding documentation to the Compliance function for the function's reporting of events of material significance to the Swedish Financial Supervisory Authority. The governing documents for the Risk function are the risk management policy adopted by the board, the instructions for Risk Management and the guidelines for the reporting of significant events.

Bankgirot has chosen to outsource the Internal Auditing function to an external party. Internal Auditing acts directly on behalf of the board and conducts audits in accordance with the annual auditing plan established by the board. The auditing plan is established in consultation with Bankgirot's functions for Compliance and Risk. The Risk Officer acts as a coordinator between operations and the Internal Auditing function.

Through its agreement for participation in Bankgirot's Clearing and Settlement Service, Bankgirot has minimised liquidity and credit risks (see Principle 4 and Principle 7). Bankgirot's risk work has identified the risks associated with the technical infrastructure that is part of Bankgirot's Clearing and Settlement Service. As previously mentioned, the agreement for Bankgirot's Clearing and Settlement Service includes specific requirements for the participants concerning the level of technical security and the participant's risk management procedures. Each year Bankgirot reviews and evaluates all participants in Bankgirot's Clearing and Settlement Service. The ISO 27001 standard is used to monitor Bankgirot's IT security.

At the ordinary quarterly meetings with the supervisory and overseeing authorities, Bankgirot regularly presents its regulations and risk management, as well as business development and the fulfilment of Bankgirot's objectives, including internal quality objectives and larger deviations (incidents). Bankgirot also presents the outcome of annual business continuity exercises relating to Bankgirot's own operations and such exercises as are conducted together with critical suppliers. The review of Bankgirot's tools and methodology for risk management forms a continuous element of the Internal Auditing function's reviews.

The Clearing Forum is used for consultations with the participants, with regular meetings held four times a year. All participants are invited to the meetings, at which issues of common interest are discussed. Proposals for changes to and the development of Bankgirot's Clearing and Settlement Service are also presented to the participants at these meetings. Bankgirot keeps minutes of the meetings and copies are sent to all participants in Bankgirot's Clearing and Settlement Service, even those participants that were not represented at the meeting. There is only one forum for participants in Bankgirot's Clearing and Settlement Service, the Clearing Forum, which is also open to the participants in the PRT Settlement Service. The reason for this is that the same participants are active in both forums.

The participants in Bankgirot's other payment systems have access to separate forums for each payment system. The Bankgiro System includes the Management forum, various product advisory groups (one for each product group) and bank working groups that are appointed as necessary.

Potential conflicts of interest between Bankgirot and different stakeholders in the payment systems are governed by Bankgirot's policy for identifying and handling conflicts of interest. Bankgirot regulates the relationship between participants in Bankgirot's Clearing and Settlement Service, and the relationship between Bankgirot and each participant, via provisions in the agreement for Bankgirot's Clearing and

Settlement Service. The agreement is formulated in accordance with the principles of open access and neutrality and is therefore applied in the same manner to all participants. The agreement for Bankgirot's Clearing and Settlement Service is embodied in bilaterally identically-worded agreements entered into between Bankgirot and each participant. The terms and conditions are the same for all and full transparency between participants is in place as regards the rules and regulations for participation. Any conflicts between Bankgirot and one or more participants are resolved in accordance with the agreement either separately between appointed contact persons for Bankgirot and the participant or, in matters that concern several participants or are of general interest, in the Clearing Forum. Should a conflict of interest arise and prove irresolvable in this manner, the matter can be escalated to Bankgirot's CEO and, if necessary, the board.

Bankgirot has communicated the participation requirements to the participants in Bankgirot's Clearing and Settlement Service. These participation requirements were decided by Bankgirot's board. The participation requirements are published on Bankgirot's website, www.bankgirot.se. They are also communicated via the forums in which the participating banks are members.

Other information about Bankgirot's Clearing and Settlement Service is communicated to the participants in the Clearing Forum. Other major news outside of this field about Bankgirot as a company is made public via press releases and the company'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 and other risks.

As Bankgirot defines its operations as financial infrastructure, the minimisation of risks and quality control measures are of the utmost importance. The agreement with the participants and its regulations are intended to minimise Bankgirot's other risks.

Bankgirot initiates settlement directly in the settlement system by sending settlement instructions. In the RIX settlement system this takes place on the basis of powers of attorney (proxies) from the settlement participants. As such, this settlement method is termed the proxy method (for settlement in SEK). For settlement in EUR, Bankgirot sends settlement instructions to the settlement participants, who then initiate settlement themselves in TARGET2. As such, this settlement method is termed the remitting bank method. In both these settlement methods the participants' own liquid funds held at the central bank are used for settlement. All payments that are authorised and entered in Bankgirot's Clearing and Settlement Service will be settled.

Liquidity risk

Bankgirot has endeavoured to minimise the liquidity risk in the system; settlement between the participants takes place directly at settlement institutes using funds held at the central bank. Only if the participant cannot secure liquidity at the settlement institute before the settlement institute closes does a default arise and the payments concerned from the defaulting participant are stopped. If settlement cannot be made, no associated payments from the defaulting participant will be executed. Unsettled payments are returned to the initiating party (debtor bank or payer depending on the payment product).

Credit risk

Bankgirot has endeavoured to minimise the credit risk in the system by settlement taking place directly between the participants using funds held at the central bank and by Bankgirot's Clearing and Settlement Service offering no credit facilities. As all settlement takes place at the RIX settlement institute using only the participants' funds held at the central bank, Bankgirot is not exposed to any credit risk of its own in this part of the infrastructure. For settlement in EUR, Bankgirot sends settlement instructions to the settlement participants, who initiate settlement in TARGET2 themselves and use their own funds held at the central bank for settlement.

Operational risks

Bankgirot has endeavoured to minimise its operational risks. Bankgirot's definition of operational risk is as follows: "The risk of losses resulting from inappropriate or failed internal processes, human error, faulty systems or external events."

Operational risks are divided into eight types of event (in accordance with Basel II, which has been used for comparison):

Internal Fraud; External Fraud; Employment Practices and Workplace Safety; Clients, Products, & Business Practice; Damage to Physical Assets; Business Disruption & Systems Failures; Execution, Delivery, & Process Management; as well as external events.

Compliance risks

Bankgirot has endeavoured to minimise compliance risks. Bankgirot's definition of compliance risk is as follows: "Risks of legal sanctions and financial or reputation-based losses as a result of the company failing in its compliance with laws, regulations, codes of conduct and generally accepted practices."

Bankgirot assesses the compliance risks in Bankgirot's Clearing and Settlement Service as low, given that the agreement's rules and procedures for the service are well defined and well established among the participants.

The Compliance function also leads the work to review how well the participants in Bankgirot's Clearing and Settlement Service comply with the participation requirements. Similar reviews are also conducted of the participation requirements for Bankgirot's other payment systems.

Principle 15 includes a detailed description of Bankgirot's other business activities and the risks associated with these other business activities. The other business risks posed by each business/activity are described in greater detail in Principle 15. As presented in detail under Principle 15, all of Bankgirot's business models strictly limit risks.

Bankgirot runs its overall operations on the basis of applicable laws and regulations, as well as international principles. This means, among other things, that Bankgirot complies with the Swedish Financial Supervisory Authority's regulations for risk identification, risk management and risk minimisation. In the formulation of its agreement for participation in Bankgirot's Clearing and Settlement Service, Bankgirot has defined participation requirements that support work to continually minimise risks in Bankgirot's operations. This is supplemented by Bankgirot's ongoing work to continually improve critical processes and continuous monitoring of Bankgirot's quality assurance objectives. These are followed up on a monthly basis and reported directly to the board.

Bankgirot has a risk management policy established by the board that includes instructions for operational responsibility and risk analysis methods. Bankgirot's risk management method assesses the risks on the basis of probability and consequences, using an agreed scale.

Bankgirot continually refines its risk management processes. This is done together with the participants and the settlement institute RIX. Bankgirot reviews each year – or as necessary – its risk management (governing documents, processes and tools) based on its organisation, technology advances, the application of new standards and amended legislation or agreements. The Risk function continuously monitors risks and proposes changes to the board.

A constant element of the independent review, which is conducted by Internal Auditing on behalf of the board, is an annual evaluation of the Risk and Compliance functions. As

part of this evaluation, Internal Auditing also checks Bankgirot's risk management processes, procedures and governing documents.

Bankgirot reviews each year – or as necessary – its risk management (governing documents, processes and tools) based on its organisation, technology advances, the application of new standards and amended legislation or agreements. These reviews also take into account market fluctuations and other external changes that entail an increase in Bankgirot's risk exposure.

The participants in Bankgirot's Clearing and Settlement Service receive regular information about their participation and any deviations. Under the agreement with Bankgirot, all participants must also have a tool that enables the participant to follow its own commitment at the settlement institute and also to see how the other participants comply. Bankgirot therefore offers the Clearing Information System (CIS) tool to the participants, although participants can also use their own tools.

Participation in Bankgirot's Clearing and Settlement Service entails a number of obligations. If a participant considerably neglects its obligations under the agreement for Bankgirot's Clearing and Settlement Service, Bankgirot has the right to terminate the agreement. Aside from the day-to-day management, and thereby obligation to ensure the necessary liquidity at the settlement institute in all settlement sessions, participation also entails the ongoing obligation to comply with Bankgirot's participation requirements at any given time.

Potential risks for the participants

Only the participants in the multilateral settlement have a potential credit risk in the event of a defaulting participant, due to the loss-sharing mechanism to which the participants have agreed.

The participants' potential additional liquidity requirement and credit risk in the case of a defaulting participant in the multilateral settlement process have been simulated by Bankgirot in calculation models. These calculation models are revised annually. The calculation models take into account the participants' shares in the amounts in each flow. By simulating the default of the largest and second-largest participants, the additional settlement amount (liquidity) that each participant needs in order to be able to settle is calculated, and thereby also the credit exposure that arises for each non-defaulting participant.

If a participant considerably neglects its obligations in Bankgirot's Clearing and Settlement Service, Bankgirot is entitled to terminate the agreement in order to minimise the risk for the system and for other participants.

Bankgirot continually monitors any major risks stemming from Bankgirot's various material dependencies. The monitoring of the different payment flows takes place in close collaboration with the participants and with RIX. Fundamental to this analysis is to minimise all identified risks in Bankgirot's Clearing and Settlement Service. Bankgirot, as part of the financial infrastructure, is the central party for society's management of the payment flow and it is therefore important that both internal and external dependencies are identified. Dependencies can be found in the management of the entire payment flow and include the RIX settlement system, the participants in Bankgirot's

Clearing and Settlement Service and the subcontractors which Bankgirot considers critical to its own operations.

The largest identified operational risk in Bankgirot's Clearing and Settlement Service concerns the actual handling of settlement instructions. In this respect all participants have, in accordance with the agreement for Bankgirot's Clearing and Settlement Service, and as previously mentioned, an obligation to maintain sufficient levels of technical protection, business continuity plans and contingency procedures. The same also applies to the Bankgiro System, which has redundancy for all services and a business continuity plan that is continually tried and tested.

The flows through Bankgirot generally constitute a relatively small proportion of the banks' total financial flows. The agreement for Bankgirot's Clearing and Settlement Service has been drawn up in such a way that it aims to provide a strong incentive for each participant to be cautious in its liquidity management and any credit risk associated with this management. Unless an agreement for Bankgirot's Clearing and Settlement Service has been entered into with Bankgirot, or an agreement has been entered into with a participant in Bankgirot's Clearing and Settlement Service to be an indirect participant, the participant does not have the right to participate in the Bankgiro System, and as such cannot make payments for itself or its customers via the Bankgiro System. Nor can the participant settle transactions in the other flows cleared and settled by Bankgirot's Clearing and Settlement Service, such as Dataclearing (interbank account transfers), Bankomat (ATMs), Visa and MasterCard. The participant thereby loses the ability, or the larger part thereof, to act as a payment provider for consumers, companies and organisations.

The participants' primary commitment under the agreement for Bankgirot's Clearing and Settlement Service is to ensure that the necessary settlement amount exists at each settlement time. If a participant, due to a lack of liquidity, cannot create a settlement amount in its account at the settlement institute before the settlement institute closes, and thereby defaults, the agreement for Bankgirot's Clearing and Settlement Service with the participant automatically ceases to apply. Once a default is declared, the participant is removed from Bankgirot's Clearing and Settlement Service the same day (bank day).

A participant in Bankgirot's Clearing and Settlement Service acting as an agent for indirect participants does so at its own risk and on its own behalf. As such, it is liable to Bankgirot and other participants for any damages one of its indirect participants causes them.

Risk management tools

Bankgirot has special participation requirements regarding technical security and risk management procedures for Bankgirot's Clearing and Settlement Service. One such special requirement concerns external dependencies and deliveries. One such participation requirement is that all participants continually confirm that they conduct single point of failure (SPOF) analyses.

According to Chapter 19, Section 9 of the Swedish Securities Market Act (2007:528), a clearing organisation shall, through its equity, a guarantee or insurance or some other means, be satisfactorily prepared to comply with the type of payment liability that can

fall to the organisation as a result of its clearing operations. The size of the company's equity is assessed on a regular basis by Bankgirot's board.

The general business risks for Bankgirot that Bankgirot has identified comprise scenarios such as significant economic downturns and competition from other organisations, bankruptcies among participants and customers and liability risks in current operations. All of Bankgirot's business models either minimise or limit risks. This is always taken into consideration when negotiating new agreements or new business transactions. New agreements and business transactions require the all-clear from the manager concerned and, depending on the value of the agreement, from Bankgirot's business management, management group, CEO and board. More significant agreements and business transactions must also be examined by the Risk and Compliance functions. This entails a comprehensive approach to the effects of the agreement/business transaction on the company in general. Consequently, the company continually monitors new agreements/business transactions based on the effects on equity.

Bankgirot's board establishes an ongoing plan for recapitalisation in accordance with Bankgirot's recovery plan, the General Business Risk & Recovery Plan.

For Bankgirot's Clearing and Settlement Service, Bankgirot has identified a number of scenarios concerning critical processes and services. There is a general plan that takes into account scenarios where one of Bankgirot's two geographically distant hosting sites or another separate support system fails completely. Bankgirot therefore has redundancy in all parts of the critical infrastructure that supports Bankgirot's operations (see the detailed description in Principle 17). Under agreements, all participants agree to have equivalent management systems, all with the aim of minimising the risks in Bankgirot's Clearing and Settlement Service.

The risk of a participant not fulfilling its commitments in Bankgirot's Clearing and Settlement Service is considered to require focus and constant preparedness. In order to minimise possible spreading of risks through the service should a participant considerably neglect its obligations under the agreement for Bankgirot's Clearing and Settlement Service, Bankgirot has the right to terminate the agreement. In order to avoid default due to technical disruptions, there is also a set of extensive manual contingency procedures that are regularly analysed and tested as regards risk.

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.

Bankgirot has no credit exposure of its own because Bankgirot never acts as a counterparty in the settlement in any flow or currency. Bankgirot does not need its own liquidity or its own securities in order to manage settlement, as settlement takes place bilaterally between the participants using the participants' funds held at the central bank.

In the event that a settlement cannot be confirmed by the settlement institute, the associated payments from the initiating participant concerned will also not be made. Unsettled payments are returned to the initiating participant. This means that there is no credit risk for either the receiving participant or Bankgirot.

Bankgirot has nevertheless identified two situations under the agreement for Bankgirot's Clearing and Settlement Service in which a participant can be exposed to a credit risk.

- If the settlement institute suffers disruption and Bankgirot considers that the settlement institute switching to manual contingency procedures affects the ability to conclude the current processing day in its entirety before 7.30 pm in Bankgirot's Clearing and Settlement Service. In this scenario, Bankgirot's credit instruction to the receiving participant will be significantly delayed. Consequently, the participants' customers will not be able to have their incoming payments registered to their bank accounts and reporting will not be available for reconciling accounts receivable. At the unanimous request of the participants, Bankgirot can in this case deviate from the normal procedure and send credit instructions to participants before settlement is confirmed. Credit risk may arise if Bankgirot sends credit instructions to receiving participants before settlement takes place. It should be emphasised that Bankgirot only acts in this way if all participants explicitly agree and have decided on this course of action.
- In the event of a default of a participant in the multilateral settlement process, participants may be exposed to a credit risk. In the case of a default in the multilateral settlement process, an agreed loss-sharing mechanism comes into effect. Under the agreement for Bankgirot's Clearing and Settlement Service, the participants must step in to provide liquidity so that settlement can take place. The participants will receive information from Bankgirot about the new settlement totals before this special settlement session takes place for this purpose.

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.

Bankgirot does not need any liquidity for settlement because settlement takes place using the participants' funds held at the central bank. Bankgirot never acts as a counterparty in the settlement of any flow or currency. Therefore Bankgirot does not need its own liquidity in order to manage in terms of settlement. As a consequence of this, Bankgirot has no need for liquidity to manage Bankgirot's Clearing and Settlement Service.

In all flows it is the participants who are responsible for ensuring sufficient funds prior to each settlement session. Bankgirot never provides liquid resources to prevent participants from defaulting. As such, there is no need for Bankgirot to calculate or have any arrangements in place for financing possible liquidity requirements to ensure settlement.

The participants' primary commitment under the agreement for Bankgirot's Clearing and Settlement Service is to have sufficient funds, for their own needs and those of the indirect participants for which they act as agents, in their Riksbank accounts (BGC-LOM) for SEK and their accounts in TARGET2 for EUR prior to each settlement session. LOM is the name of a subsidiary account in the RIX system. The LOM account is used for the specific Execution processes (for optimising liquidity) in which the RIX participant participates. BGC-LOM is the bank's subsidiary account for the settlement of payments via Bankgirot, which is one of several execution processes in which RIX participants can participate. The participants can track their liquidity requirements prior to each settlement session in the Clearing Information System provided by Bankgirot. The participant can also themselves track the amounts in the flows the participant sends to Bankgirot (pre-debited) and the amounts in the flows where Bankgirot sends a debit inquiry to the participant.

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.

Bankgirot has prepared the agreement for Bankgirot's Clearing and Settlement Service together with independent legal experts to ensure that it complies with the applicable legislation. Each time the agreement is updated, the settlement participants are able to submit opinions on the amendments. The Settlement Finality Directive governs the processing of transactions.

The requirement is that settlement shall take place the same day once the *authorised transaction* is entered in Bankgirot's Clearing and Settlement Service (in other words has been given the status *entered transaction*). This requirement is fulfilled because transactions, whether they are pre-debited or to be checked for debiting, are settled in RIX or TARGET2 on the payment day. The only exception to this requirement is when one or more participants default owing to a lack of liquidity (see Principle 13). The regulations for this are found in the agreement for Bankgirot's Clearing and Settlement Service.

In the agreement for Bankgirot's Clearing and Settlement Service, Bankgirot has established a number of terms to clarify "Point of settlement finality".

Authorised transaction

An "*authorised transaction*" is a transaction that fulfils the requirements stipulated in the applicable agreement for each product in the payment systems that use Bankgirot's Clearing and Settlement Service. The latest delivery time for transactions is indicated in the applicable product description.

Entered transaction

Under the Swedish Systems for Settlement of Obligations on the Financial Market Act (1999:1309), a transfer assignment is considered to have the status "*entered transaction*" in Bankgirot's Clearing and Settlement Service when an *authorised transaction* has passed the point in time for the transaction to be recalled or altered. Thereafter the transaction is processed in Bankgirot's Clearing and Settlement Service in accordance with the terms of the agreement for Bankgirot's Clearing and Settlement Service. An *entered transaction* is therefore an *authorised transaction* that is irrevocable and cannot be changed. Bankgirot makes no exceptions for recalling or changing an *entered transaction*.

Entered transactions in Bankgirot's Clearing and Settlement Service become final once they have been settled at the settlement institute in RIX or TARGET2. Bankgirot confirms completed settlement when a status notification is received from the settlement institute.

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 minimize and strictly control the credit and liquidity risks arising from the use of commercial bank money.

Settlement only takes place using the participants' funds held at the central bank. The participants' primary commitment under the agreement for Bankgirot's Clearing and Settlement Service is to create the required funds for settlement for their own needs and those of the indirect participants for which they act as agents. This liquidity must be available in the participant's BGC-LOM Riksbank account for SEK and its account in TARGET2 for EUR prior to each settlement time.

All flows processed through Bankgirot's Clearing and Settlement Service use liquid funds held at the central bank. Bankgirot is never a party in the settlement and has no liquidity risk in Bankgirot's Clearing and Settlement Service. Settlement always takes place at a settlement institute.

Settlement takes place between the participants' accounts at the settlement institute, which means the funds held there are immediately available after each settlement session.

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.

Bankgirot has clear and well-defined internal processes that describe roles and responsibilities at Bankgirot in relation to default management. This is documented in Bankgirot's handbook for default management. The agreement for Bankgirot's Clearing and Settlement Service defines when a default is deemed to have occurred and how it is to be managed by the participant and Bankgirot, as well as which obligations the parties have in the event of a default.

As of 1 February 2016, Sweden has new rules for the handling of crises at banks, other credit institutions and securities companies (institutions), through the Swedish Act on Resolution (2015:1016). The resolution authority is responsible for applying the new regulations, which in large part replace the previous bank support legislation. Internal procedures and the agreement for Bankgirot's Clearing and Settlement Service are therefore being adapted to the new legislation during 2016.

Bankgirot does not act as a counterparty in the settlement service in any flow or currency. Bankgirot has no credit or liquidity risks in Bankgirot's Clearing and Settlement Service. The description under Principle 13 below concerns the rules and procedures that apply to participants in Bankgirot's Clearing and Settlement Service.

Technical disruptions at the participant or another participant are not to be considered a financial default and the contingency procedures described in the agreement for Bankgirot's Clearing and Settlement Service or the equivalent regulations at the settlement institute for SEK or EUR shall apply.

The liquidity in the participants' accounts at the settlement institute is not managed by Bankgirot. Settlement only takes place using the participants' funds held at the central bank. The accounts which the participants in turn hold for their customers are managed in their entirety by each participant, and not to any extent by Bankgirot.

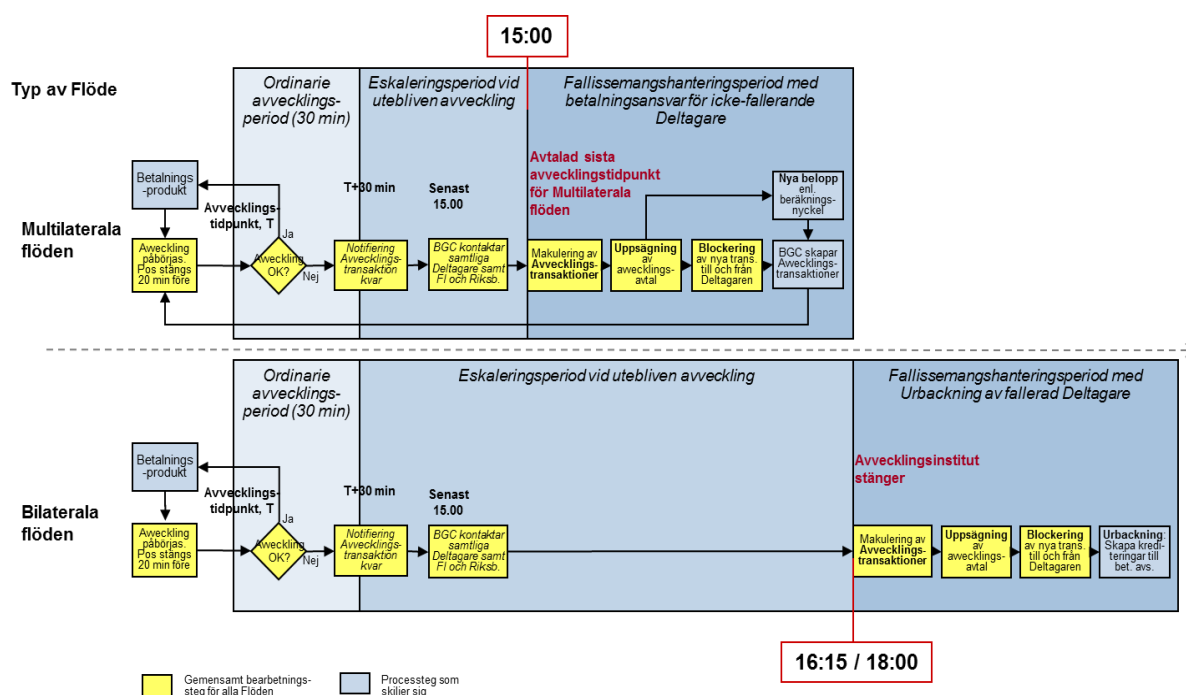


Figure 2 illustrates the process for default by participants in Bankgirot's Clearing and Settlement Service.

In the event of a defaulting participant, no processes or procedures are instigated other than those described in Bankgirot's Clearing and Settlement Service (see Figure 2 above, which illustrates the default management procedure). A confirmed default results in blocking, deletion and recalculation of multilateral amounts encompassed by the default, as well as termination of the agreement for Bankgirot's Clearing and Settlement Service for the defaulting participant. The information to be sent to the participant and the authorities is established.

The agreement clearly indicates which transactions are encompassed by the default and all transactions are treated equally. The procedure description indicates which manual procedures apply when a default process is initiated and the steps and measures taken throughout the default process. The procedure description applies to how Bankgirot shall manage a defaulting participant and it should be noted that Bankgirot never acts as a counterparty in the settlement of any flows or currencies. Bankgirot is therefore not exposed to any risk in the management of a defaulting participant.

In the event of bankruptcy or when the participant otherwise fails to fulfil the agreement for Bankgirot's Clearing and Settlement Service, Bankgirot has the right to terminate the agreement with the participant with immediate effect, at which time the participant is blocked and excluded from the system.

If settlement could not be made during the ordinary settlement period (within 30 minutes after the agreed settlement time) the escalation period is initiated. No later than when the escalation period is initiated, the clearing manager at the participant is informed via the agreed method of communication, such as telephone or fax. The escalation period continues until 3 pm for multilateral flows, while for bilateral flows it continues until the settlement institute closes. Bankgirot informs the other participants' clearing managers, the Swedish Financial Supervisory Authority and the Riksbank about the situation that has arisen.

If settlement is not made during the escalation period, a default is declared and the default management period is initiated. The escalation period continues until the settlement institute closes, with the exception of multilateral flows.

As part of the default management process, Bankgirot blocks all incoming not yet *entered transactions* to or from defaulting participants. A block means that the participant is stopped in all payment flows for transactions that have not yet been entered. *Entered transactions* are not covered by the block and are instead subject to deletion or recalculation, depending on the settlement method. A block must be implemented for all flows within 120 minutes.

Bankgirot uses annual internal exercises to verify that IT systems and procedures work well for managing defaults. This is complemented by exercises and training together with the participants so that the participants gain a clear understanding of the consequences of defaulting. The last time more extensive exercises and training took place with the participants was in 2014. New exercises are planned for 2017.

The agreement for Bankgirot's Clearing and Settlement Service is published at www.bankgirot.se.

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.

Bankgirot's long-term strategy and objectives are established annually by Bankgirot's board. The long-term objectives are translated into financial terms in a plan spanning three to five years. The first year of the long-term plan provides the basis for the budget for the coming year. The budget, which also includes cash flow, is adopted by the board annually. It is complemented by Bankgirot's general objectives in a so-called scorecard. The outcomes of Bankgirot's annual objectives in the scorecard are followed up monthly and projections are prepared each month to secure Bankgirot's financial performance. The scorecard outcome, together with the outcome of all of Bankgirot's business, current risks and general trends, is compiled in a report that is presented to the board each month.

Bankgirot has eliminated Bankgirot's credit and liquidity risks via the agreement for participation in Bankgirot's Clearing and Settlement Service. Bankgirot therefore cannot suffer losses due to a participant defaulting, as this risk is completely eliminated.

The general business risks that Bankgirot has identified comprise scenarios such as significant economic downturns and competition from other organisations, bankruptcies among participants and customers, and liability risks in current operations. All of Bankgirot's business models either eliminate or severely limit risks. This is always taken into consideration when negotiating new agreements or new business transactions. As previously mentioned, Bankgirot has an internal control structure, with new agreements and business transactions requiring an all-clear.

Bankgirot's board establishes an ongoing plan for recapitalisation in accordance with Bankgirot's recovery plan, the General Business Risk & Recovery Plan. The total amount calculated in accordance with Bankgirot's recovery plan, in other words the amount of available liquid net assets funded by equity and required in case of losses due to general business risks and liability risks in the calculated scenario, is SEK 100 million.

The plans for recovery and an orderly wind-down under Principle 15 (General Business Risk & Recovery Plan) were completed in mid-2013 and since then have been updated and adopted by the board each year. The General Business Risk & Recovery Plan includes different scenarios, such as an orderly wind-down or disposal of Bankgirot's business activities encompassed by subsidiary business licenses and a plan for an orderly wind-down of all of Bankgirot. Furthermore, the plan includes the quantification of risks associated with the financial processes, which have been identified in Bankgirot's annual risk review.

The scenarios that Bankgirot describes in its General Business Risk & Recovery Plan have a longer time span for operating expenses than the six months required under this principle. These operating expenses are included in the calculations of Bankgirot's total amount for liquid net assets funded by equity. The calculation for an orderly wind-down also uses a longer time span than six months to calculate operating expenses. The amounts calculated in the plan to cover general business risks and a recovery plan total SEK 100 million for 2016, which is covered by existing liquid net assets funded by equity at Bankgirot.

The assets held to cover general business risks are of high quality and are sufficient to manage current and future operating expenses, even in the case of an extremely adverse market situation. Bankgirot never manages the participants' assets. Bankgirot's investment policy (which is part of Bankgirot's finance policy) is risk-minimising, in line with Bankgirot's general risk strategy. The investment policy ensures that liquid assets are invested in high-quality securities or obligors. The investment policy is published in Bankgirot's public annual report.

The equity requirement can, according to the plan adopted by Bankgirot's board, be covered by a shareholders' contribution from Bankgirot's parent company in cases where this cannot be budgeted for the coming year. If at any time the size of liquid net assets funded by equity drops below the lowest level calculated by Bankgirot and Bankgirot's projections do not foresee restoration within a reasonable period, Bankgirot shall raise additional equity via a shareholders' contribution in order to restore equity and liquid net assets to adequate levels. In cases where Bankgirot's equity does not exceed the necessary equity stipulated in this principle by more than 10%, the calculation of necessary equity shall be updated immediately. If this updated calculation shows that there is a risk during the coming year of equity falling below the calculated necessary equity, Bankgirot must be provided with a shareholders' contribution to restore its equity to an adequate level. The shareholders' contribution is provided by Bankgirot's parent company and is financed by the parent company through loans. The plans for recovery and an orderly wind-down in accordance with Principle 15, including the plan for shareholders' contributions, are updated and adopted by Bankgirot's board annually.

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.

Bankgirot never manages the participants' assets. Investments of Bankgirot's own assets may be made in accordance with Bankgirot's finance policy. Any custodian must be a Swedish bank with a Standard & Poor's rating of A or A-.

In the case of holdings at custodians, the terms and conditions that apply between the custodian and Bankgirot are agreed and documented, with the stipulation that the custodian holds Bankgirot's assets on behalf of Bankgirot and that Bankgirot has access to its assets at short notice. Since Bankgirot's financial risk is eliminated in Bankgirot's Clearing and Settlement Service, Bankgirot has no need for fast access to its assets if a participant defaults. Bankgirot has good knowledge of custodians via annual meetings with its custodian(s).

Bankgirot's investment policy (which is part of Bankgirot's finance policy) is risk-minimising, in line with Bankgirot's general risk strategy. The investment policy ensures that liquid assets are invested in high-quality securities or obligors. The investment policy is published in Bankgirot's public annual report.

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.

Bankgirot has secured procedures for managing operational risks. Bankgirot also has the following processes and policy documents for managing operational risks:

- Risk management policy
- Security policy
- The process for managing settlement instructions in Bankgirot's Clearing and Settlement Service
- The Incident and Problem process

These are supplemented by the ongoing performance of:

- Risk analyses
- Threat analyses
- Business intelligence and contact with other organisations
- Exercises
- Security analyses

To ensure compliance, Bankgirot works with risk management at the first, second and third lines of defence. Where the first line comprises operations, this line also has operational responsibility. The second line comprises control functions such as Risk and Security, as well as Compliance. The third line is internal auditing.

The process for managing settlement instructions in Bankgirot's Clearing and Settlement Service is central from an operational perspective. In this respect, all participants have an obligation under their agreement to maintain sufficient levels of technical protection, business continuity plans and contingency procedures. In this manner, Bankgirot has minimised its operational risks.

In its agreements with participants, Bankgirot has identified operational risks as the primary risk in Bankgirot's Clearing and Settlement Service. Bankgirot conducts an annual review of the participants' compliance with the participation requirements. This includes, among other things, requirements for technical infrastructure and contingency procedures. The agreement for Bankgirot's Clearing and Settlement Service includes specific participation requirements for participation. The participation requirements include requirements for the participant's management of risk control related to Bankgirot's Clearing and Settlement Service as well as the management of technical risks

and contingency procedures for maintaining the service. The ISO 27001 standard is applied to information security. As regards national standards, Bankgirot follows the recommendations issued by, among others, the Swedish Bankers' Association and the Financial Sector Private-Public Cooperation (Finansiella Sektorns Privat-Offentliga Samverkan, FSPOS).

Bankgirot has well-functioning procedures and processes for managing information security and cybersecurity, as well as physical access to Bankgirot's premises, which are based on continuous risk and threat assessments. Information security is guided by the ISO 27001 standard and NIST's guidelines on cybersecurity for critical infrastructure (see www.nist.gov).

Continual checks on operational management take place in different arenas, such as in forums with the participants, supplier meetings, exercises for a defaulting participant and documented contingency procedures, for example.

Bankgirot has clear quality objectives that are continuously monitored and which are a direct consequence of the applicable processes and policies.

Bankgirot conducts regular follow-ups to check future volume projections. This takes place on a daily basis. If necessary, system capacity is increased. In the event of temporary large increases in volumes, central functions will be prioritised. Bankgirot also has contingency procedures that can be used if system capacity is overloaded. Bankgirot's architectonic work is carried out in such a way that the solutions are scalable in relation to known volume projections.

Bankgirot has continuity plans that are continuously monitored. These are also tested using practical exercises. The maximum permitted downtime for Bankgirot's Clearing and Settlement Service is two hours. The service has technical and manual contingency procedures. The contingency procedures also include escalation to manual processing in the case of extreme events. Bankgirot also has access to a secondary hosting site. This provides Bankgirot with procedures to ensure settlement at the end of the day in the event of system disruptions.

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.

Bankgirot's participation requirements are designed to ensure that Bankgirot's Clearing and Settlement System is stable and that both integrity and the system's effectiveness are maintained. The participation requirements include financial requirements, technical requirements, risk management requirements, organisational requirements and product requirements. The current participation requirements have been in effect since 1 August 2010 and are available on Bankgirot's website. The participation requirements are constantly revised in line with new or amended legal requirements or otherwise when necessary.

The participation requirements in the agreement for Bankgirot's Clearing and Settlement Service are designed to ensure system stability and integrity in that every participant has sufficient protection against the relevant risks. Some of the participation requirements are not risk-based but the result of legal requirements.

Every year Bankgirot reviews each participant's compliance with the participation requirements. Bankgirot's board decides on participation in Bankgirot's Clearing and Settlement Service, as well as on suspension and orderly exit from said service. Bankgirot only enters into agreements for Bankgirot's Clearing and Settlement Service with direct participants. Every year Bankgirot reviews each participant's compliance with the participation requirements.

The agreement for Bankgirot's Clearing and Settlement Service regulates the agreement period and premature termination. The agreement also contains provisions concerning the suspension and orderly exit of a participant as well as cases where a participant or Bankgirot gives notice to terminate the agreement for another reason.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements. This principle should be reviewed in the context of Principle 14 on segregation and portability, Principle 18 on access and participation requirements, and other principles, as appropriate.

Bankgirot enters into agreements for Bankgirot's Clearing and Settlement Service with the direct participants and conducts an annual review of the participants' compliance with the participation requirements. These agreements are bilaterally identically worded. Each participant has the right and opportunity, at its own risk and on its own behalf, to enter into agreements to act as an agent for indirect participants. A direct participant enters into separate agreements with its indirect participants. Bankgirot is never a party to settlement.

Under the agreement for Bankgirot's Clearing and Settlement Service, it falls to the participant to create funds for settlement for both its own payments and those of its indirect participants. Via the Clearing Information System, which is provided by Bankgirot, the participant receives information about the funds for settlement required for both the participant and its indirect participants.

Bankgirot has no contractual relationship with indirect participants or with the participants' customers in Bankgirot's Clearing and Settlement Service.

Bankgirot provides a daily report that enables participants, both those acting as settlement agents and indirect participants, to monitor funds for settlement required. In Bankgirot's Clearing and Settlement Service the sum of all indirect participants' settlement amounts is less than 10% of the total settlement amount per day. There is no indirect participant with a settlement amount that is large in relation to the settlement amount of its agent.

Bankgirot introduced an analysis tool in May 2015 and since 1 January 2016 has monitored on a monthly basis the percentage of the amount settled by settlement agents for their indirect participants. This analysis is performed for each participant and is reported at bilateral annual follow-up meetings.

The analysis result for the period 1 Jan to 31 Aug 2016 shows that indirect participants account for 1–6% of the total settlement value settled by settlement agents at the settlement institute.

Bankgirot considers that if a settlement agent settles a percentage larger than 10% for its indirect settlement participants, there are grounds for Bankgirot to initiate a discussion about this with the participant. Bankgirot considers that the current indirect participants' percentage of the amount settled constitutes a small risk for the 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. This principle should be reviewed in the context of Principle 17 on operational risk, Principle 18 on access and participation requirements, Principle 22 on communication procedures and standards, and other principles, as appropriate.

Through consultations and dialogues with the participants, Bankgirot ensures that Bankgirot's Clearing and Settlement Service meets the changing needs of the participants and the market. Meetings are held in the Clearing Forum four times a year and at these the participants are able to give their views and suggest changes.

The clearing and settlement process at Bankgirot is a fully automated function. Bankgirot has 29 settlement sessions each day split between different payment flows and payment products.

Bankgirot's generic process for accumulating payments provides efficiency in the payment process by reducing the number of debit and credit transactions that the participants need to process. Aggregation in the settlement process reduces the participants' transaction costs at the settlement institutes and can also reduce the banks' liquidity requirements in the RIX system.

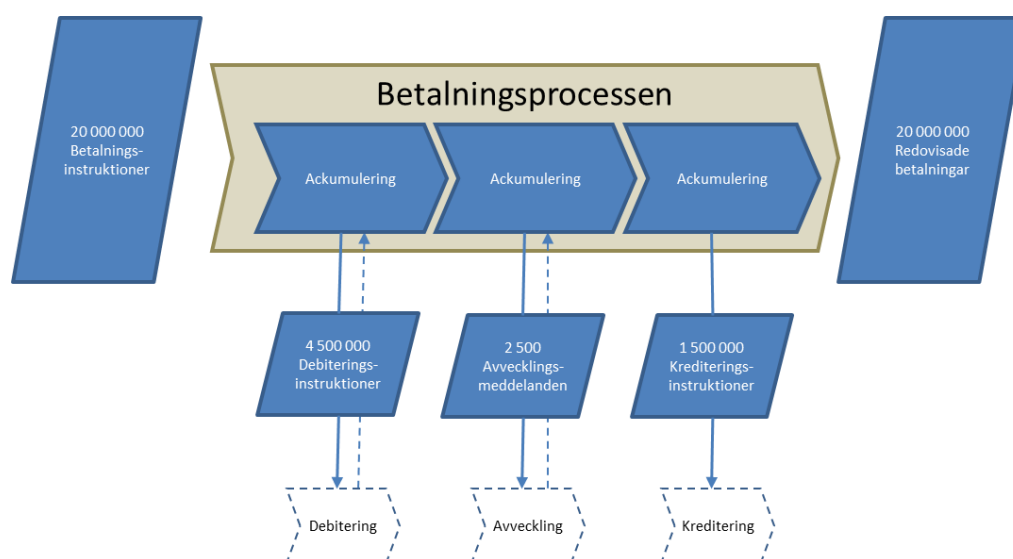


Figure 3 shows the sizes at the different steps in the payment process.

At the end of the payment day each participant receives files from Bankgirot for the automatic reconciliation of all processed transactions in the different process steps shown in Figure 3. This enables discrepancies in the participants' bookkeeping to be discovered at an early stage and as soon as processing takes place.

Bankgirot has a number of quality objectives established by the board that are reviewed each month. The outcome of Bankgirot's Clearing and Settlement Service is also reported to the supervisory authorities (Riksbanken and Finansinspektionen) at supervisory meetings.

Bankgirot's objective is to always ensure that Bankgirot fulfils the established quality objectives in Bankgirot's Clearing and Settlement Service. Bankgirot performs active monitoring to ensure that all defined settlement sessions take place at the right time, which contributes to Bankgirot's long history of fulfilling the quality objectives.

Ongoing analysis is performed on volume trends and behavioural changes for different payment products in order to adjust and optimise the payment process.

To ensure the integrity of the transactions and the information processed by Bankgirot, Bankgirot uses a separate, independent component, which monitors and reconciles the different steps of the payment process. This ensures that no transactions are lost or improperly altered.

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.

Bankgirot supports a number of different communication procedures for settlement institutes, participants and participants' customers.

For communication with settlement institutes and financial institutions within the process for Bankgirot's Clearing and Settlement Service, Bankgirot makes exclusive use of SWIFTNet and SWIFT MT messages, which can be considered the prevailing international standard.

For communication with participants and participants' customers within the Bankgiro System payment process and within pre-systems to Bankgirot's Clearing and Settlement Service, Bankgirot has several different communication solutions, which are all to be considered standard.

Physical communication can also take place in a number of different ways, from a leased line to communication over the internet, according to the participant's preferences.

Bankgirot has a well-defined and functioning message catalogue/format description of the interfaces used for communication with participants and participants' customers. This applies to the message formats used with both Bankgirot's Clearing and Settlement Service and the Bankgiro System.

For communication with settlement institutes and financial institutions within Bankgirot's Clearing and Settlement Service process, Bankgirot uses two alternatives. *SWIFTNet FIN* with *FIN copy* is used for settlement in SEK, as Bankgirot is a participant in RIX. *SWIFTNet Fin Inform* with *FIN copy* is used for settlement in EUR, as Bankgirot is not connected to TARGET2 and instead uses the participant's connection to TARGET2.

Within Bankgirot's Clearing and Settlement Service process, financial institutions (e.g. banks) are identified with the aid of the participant's *BIC* for settlement at the settlement institutes RIX (SEK) and TARGET2 (EUR). Indirect participants are identified using the same method.

Bankgirot's Clearing and Settlement Service does not have its own interface with the participants. The interfaces are instead in the various payment services within the framework of the Bankgiro System and the other payment flows that use Bankgirot's Clearing and Settlement Service.

Bankgirot's product *Bg Settlement instructions* settlement service, which handles settlement for various external payment systems, is based on the ISO 20022 standard. Financial institutions are identified by the participant's *BIC*.

Within the Bankgiro System in general, Bankgirot uses a national message format for communication with financial institutions. This message format was agreed many years ago and is well established among the participants in the Bankgiro System. The format is specified in the document *The Banking Sector Common Layouts*, which Bankgirot administers.

Financial institutions are identified with the aid of the national standard for BBAN with clearing numbers and bank account numbers.

Bankgirot only processes payments in the Swedish market. Bankgirot therefore has no operational systems, or processes and procedures, for communication concerning cross-border payments.

A need to convert or translate international standard formats from other organisations has not been expressed or identified.

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.

Bankgirot has clear participation requirements with which all participants in Bankgirot's Clearing and Settlement Service must comply. In order to become a participant in Bankgirot's Clearing and Settlement Service, the participant must enter into an agreement for Bankgirot's Clearing and Settlement Service. The participant receives information about the service in this agreement.

There are also procedure descriptions for participants in Bankgirot's Clearing and Settlement Service, which describe non-routine, foreseeable events and how each party is to act in such situations.

The participation requirements in the agreement for Bankgirot's Clearing and Settlement Service are published on Bankgirot's website, along with the agreement for Bankgirot's Clearing and Settlement Service.

The agreement for Bankgirot's Clearing and Settlement Service includes stipulations on the participants' rights and obligations in relation to each other and Bankgirot. The aforementioned agreement also contains information about the design and function of the clearing and settlement system. So far, Bankgirot's assessment has been that the only parties, other than the participants, that should be provided with information about the system's rules and operations are the supervisory and oversight authorities. The basis for Bankgirot's position is that from a risk perspective Bankgirot does not want to publicly disclose its security arrangements. For the same reasons, Bankgirot has not published or otherwise disclosed the degree of discretion it can exercise over decisions taken that may affect the operation of Bankgirot's Clearing and Settlement Service. However, Bankgirot informs the participants in the systems of decisions that affect them. Bankgirot also informs the Swedish Financial Supervisory Authority about decisions related to significant events.

Bankgirot conducts annual reviews of the participants' compliance with the participation requirements for Bankgirot's Clearing and Settlement Service. The participants are also obligated to inform Bankgirot if, for example, an event occurs that affects compliance with the participation requirements.

Several times a year Bankgirot holds meetings with participants in order to ensure that the participants understand the implications of the agreements, have functioning procedures in place, and are familiar with the clearing and settlement system and their obligations in it. Bankgirot has also informed the participants about the liquidity risk and credit risk that each participant in the multilateral flow in Bankgirot's Clearing and

Settlement Service is exposed to in relation to other participants in the event of a defaulting participant. When connecting new participants to Bankgirot's Clearing and Settlement Service, Bankgirot conducts a review of the content of the agreement and the participation requirements together with the new participant.

Meetings are also held regularly when a participant has failed to create sufficient funds for settlement in time. On such occasions Bankgirot has also requested a written report on the event and answers concerning which measures the participant has taken to prevent recurrence. In cases where a participant shows signs of not understanding the obligations they have or otherwise through their actions shows a lack of understanding of their use of Bankgirot's Clearing and Settlement Service, Bankgirot contacts the participant in question.

Participants in Bankgirot's Clearing and Settlement Service pay a participant fee, according to a price list distributed to the participants annually. No prices are disclosed to the general public. The participants in the Bankgiro System also receive a price list each year. The price list issued to each participant includes the price for the products and services in the Bankgiro System the participant has chosen to use and the price for the transaction volume the participant has estimated for the coming calendar year. This means that the price list each participant receives is specific to that participant (even though the same pricing is always applied for equivalent services), and is therefore not disclosed to the other participants or the general public. The price list does, however, include the price ladder that is used in the same way and in accordance with the same principles for every participant.

In the participant forums established via the agreed rules and procedures, as well as in the individual meetings held with each participant, Bankgirot applies clear and extensive transparency as regards operation, management and support, as well as the development of new products and services.

Bankgirot's annual report is also published on Bankgirot's website, www.bankgirot.se. As of the first quarter of 2016, statistics are reported monthly on Bankgirot's website containing details of debits in the Bankgiro System, amounts processed in the Bankgiro System and distribution by debit type.