



## ■ Assessment of Bankgirocentralen BGC AB's payment system 2010

This assessment has been conducted in accordance with the agreement between the Riksbank and Finansinspektionen on cooperation regarding financial stability. The authorities have cooperated in the planning of the direction of the assessment and in the collection and review of the information provided by BGC. The conclusions from the assessment are supported by both the Riksbank and Finansinspektionen.

In Sweden, Bankgirocentralen BGC AB (BGC), is the main intermediary of retail payments between payment service providers. The Riksbank and Finansinspektionen have therefore assessed BGC's payment system for compliance with the Bank for International Settlements' "Core Principles for Systemically Important Payment Systems" (CPSIPS). CPSIPS is an international standard that consists of ten principles with which systemically important payment systems should comply.

### Assessment and recommendation

The assessment of the Riksbank and of Finansinspektionen is that BGC's payment system complies with the principles, in accordance with the list below. As not all Bankgiro products and Dataclearing have migrated to VocaLinks' platform, the Riksbank and Finansinspektionen have chosen not to carry out an evaluation of Core Principle VIII which deals with the efficiency of the system.

Assessment	Core Principle with this assessment
Observed	I, II, III, IV, VI, IX, X
Broadly observed	V, VII
Partly observed	-
Not observed	-
Not applicable	

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## Bank-owned clearing organisation

BGC is a bank-owned clearing organisation, established in 1959, which owns and operates a general payment system, the Bankgiro. In its capacity as a clearing organisation, BGC also provides a clearing and settlement service, which, together with the Bankgiro, constitutes BGC's payment system. Through BGC's payment system, retail payments, mainly credit transfers and transfers between accounts, are made between its participants. This means that both proprietary Bankgiro products and product with external owners are processed in BGC's payment system. BGC also offers other services not related to payments, such as electronic identification and electronic invoices.

The majority of payment products are cleared and settled on a bilateral gross basis, that is to say, between two participants; the remainder are cleared and settled on a multilateral net basis, that is to say, between several participants. All types of payment have one or more predetermined settlement times a day. Payments are settled in SEK or EUR.

### Ownership structure

Bankgirocentralen BGC AB is a wholly owned subsidiary of BGC Holding AB, which is owned by SEB (33.1%), Swedbank (29.2%), Svenska Handelsbanken (25.4%), Nordea (10.0%), Danske Bank (1.7%), Skandiabanken (0.3%), Ålandsbanken (0.2%) and Länsförsäkringar Bank (0.1%).

### Legal status and supervision

Finansinspektionen has granted BGC a license to conduct clearing operations in accordance with the Swedish Securities Market Act (2007:528). Accordingly, BGC is supervised by Finansinspektionen. In accordance with the law, in addition to its clearing operations, BGC may only carry out such activities that are closely connected therewith. Operating the Bankgiro is deemed to be closely connected with clearing operations. However, the Bankgiro is also a general payment system in accordance with the definitions in the Swedish Banking and Financing Business Act (2004:297) and the Swedish Payment Services Act (2010:751) respectively. Finansinspektionen has granted BGC a license to conduct secure identification (PKI services) and electronic invoicing operations as ancillary services.

BGC's settlement system has been approved by Finansinspektionen in consultation with the Riksbank and notified to the European Commission in accordance with the provisions of the Swedish Act on Systems for Settlement of Obligations on the Financial Market (1999:1309). Settlement systems are systems for the netting and settlement of transfer orders between the system's participants regarding financial instruments and payment means. It therefore relates to operations which are mainly conducted by clearing organisations and central securities depositories.

For a more detailed insight into the laws applying to BGC's operations and the rules which BGC applies towards its participants, see Principle I.

### Participants

As Bankgiro is a general payment system, BGC is obliged, in accordance with the Swedish Payment Services Act (2010:751), to provide access to the system for payment service providers who are legal entities and who fulfil BGC's participant requirements. However, this does not apply to access to payment systems in accordance with the Swedish Act on Systems for the Settlement of Obligations on the Financial Market (1999:1309). This means that BGC does not need to provide access to its clearing and settlement service for payment institutes and registered payment service providers. BGC therefore has different participant requirements for access to the Bankgiro and the clearing and settlement service respectively. The types of participants allowed to participate in the clearing and settlement services is set out in the Swedish Securities Market Act (2007:528) and the Swedish Act



on Systems for the Settlement of Obligations on the Financial Market (1999:1309). Common to both the Bankgiro and the clearing and settlement service is that, in addition to legal requirements, a participant must also fulfill BGC's participant requirements. Participation in the Bankgiro as well as in the clearing and settlement service can be director indirect. In order to use the clearing and settlement service, payment service providers who are not banks or other institutions in accordance with the Swedish Act on Systems for the Settlement of Obligations on the Financial Market (1999:1309), must have an agent who is a direct participant in this service.

At the end of 2010, the Bankgiro had 22 direct and 62 indirect participants, and the clearing and settlement service had 14 direct and 19 indirect participants.

### Operations

BGC provides a payment system for retail payments with products and services aimed at facilitating and streamlining Swedish companies' payment processing operations. BGC is the main intermediary in Sweden for arranging payments and providing payment information between its participants and their customers, and is the only giro system in Sweden which handles all types of payments.

*BGC's payment system consists of a technical platform. Both the Bankgiro, which handles BGC's own payment products which are called the Bankgiro products, and BGC's clearing and settlement service are processed on the system platform. The Bankgiro products consist of a range of payment products for companies on the domestic payment market. The clearing and settlement service handles incoming payments and creates settlement documentation to be sent to the Riksbank's settlement system (RIX) where the final settlement occurs. The clearing and settlement service is used by the Bankgiro and its Bankgiro products, but also by payment products with external owners. Within the framework of the Bankgiro, BGC also provides bank branch products which facilitate the participants' handling of the payment products which the system operates. In addition to this, BGC offers ancillary services, such as e-products.*

## BGC's payment system

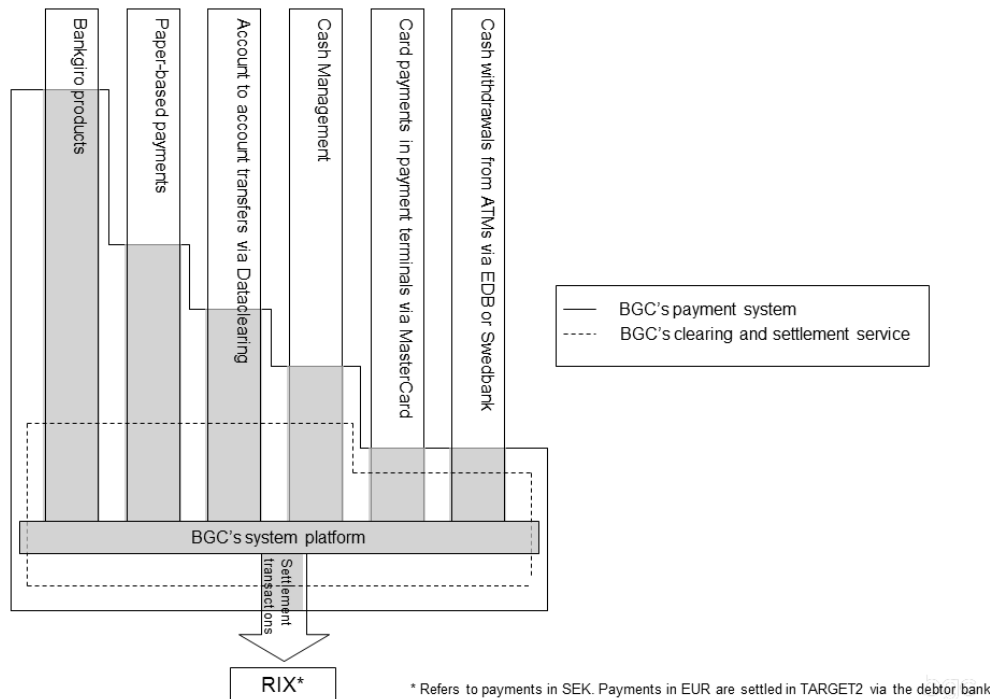


Figure 1: BGC's payment system

BGC's payment system processes a number of different types of payments and then sends them to RIX where the final settlement of the transactions occurs. Figure 1 shows a simplified view of the extent to which the Bankgiro and its Bankgiro products and the various payment products not owned by BGC, uses BGC's clearing and settlement service. The white portions of the bars represent those portions of the payment products processed in any external payment system. The Bankgiro products are to a certain extent also processed outside BGC's payment system, such as payments via Internet banks, supplier payments and direct debits that are processed in the banks' systems before being transferred to BGC's payment system. For a more in-depth description of the flow of payments in BGC's payment system, please refer to Appendix 1.

### BGC's clearing and settlement service

BGC's clearing and settlement service conducts clearing operations and creates settlement documentation which is sent via SWIFTNet to the Riksbank's RIX system, which handles the settlement in SEK. For payments in EUR, BGC sends a payment instruction to the paying bank which is responsible for ensuring settlement is carried out in the ECB's settlement system TARGET2.

All payments between bank, except payments settled directly in RIX, use BGC's clearing and settlement service. BGC's clearing and settlement service is therefore used by several payment products, of which the Bankgiro and its Bankgiro products constitute the largest part.

*Clearing* itself consists of a compilation of the participants' debts and claims under the payment orders received by BGC. Each participant's payments are merged to aggregated gross positions. As no netting takes place between the participants, there is no direct dependency between them. With regard to cards and ATMs, clearing is carried out on a multilateral net basis, which creates a direct dependency between the participants.



In connection with *settlement*, BGC sends gross positions and multilateral net positions to RIX in the form of settlement documentation. The payments are then settled in the participants' accounts in RIX for payment orders in SEK. As regards payment orders in EUR, each paying bank receives settlement documentation from BGC, subsequently forwarding this to TARGET2, either directly or via its custodian bank. BGC is subsequently responsible for matching and confirming that the settlement has been effected. The participants must connect to the Clearing information system or equivalent. This is a functionality of the clearing and settlement service which gives participants access to information on settlement totals and the settlement status. This also enables the participants to follow their positions and thus their liquidity requirements in real time. As an alternative to the Clearing information system, participants can create a solution which provides them with the corresponding information. The various Bankgiro products have one or more predetermined settlement times per day (see Principle IV).

### The Bankgiro

The Bankgiro is a general payment system only used by Bankgiro products. The Bankgiro handles payments from Bankgiro products, approves payments, debits payers, credits payment recipients and sends payment information to the relevant participants. The payments are taken from the payer's account and are implemented and entered in BGC's clearing and settlement service as soon as delivery checks have been carried out. The Bankgiro is dependent on BGC's clearing and settlement service to clear Bankgiro products and to create settlement documentation for these.

### Bankgiro products

Bankgiro products are used in a number of different payment situations in the retail payment market. A few examples of Bankgiro products include direct debit payments, supplier payments, salaries and Bankgiro deposits. These products are first debited through the Bankgiro and then through BGC's clearing and settlement service, after which they are recredited through the Bankgiro.

As regards Bankgiro products, BGC is responsible for authorisation, clearing and creating settlement documentation, and for payment information to the sending and receiving institutions. In addition, BGC provides payment information to the payer and payment recipient for most of the Bankgiro products. BGC's *authorisation* of payment orders issued and received via Bankgiro products includes checking the payment order is correct and that the documentation has been created by the participants. This is to enable them to control the presence of sufficient funds in the payers' accounts in a so-called cover check.

Bankgiro products require access to a Bankgiro number. The Bankgiro number indicates an underlying account. As the number is not an account number, the customer has the option of changing the account it is linked to without having to change the Bankgiro number.

Other financial institutions act as resellers of Bankgiro products to their customers who represent the respective product's target group. To also make Bankgiro products available to business customers, BGC has established cooperation, and in certain cases partnerships, with a large number of suppliers of software to business and financial systems in Sweden. The most important Bankgiro products are described below.

### *Direct debit*

Direct debit enables automatic payment from a payer's account to a payment recipient's account. The payment recipient obtains a written consent from the payer authorising money to be withdrawn from the account on payment day.



The current Direct debit system was introduced in 1992 and consists of two products Autogiro Privat and Autogiro Företag. BGC is currently planning to merge these two products into one single product. This is partly to facilitate BGC's own services in the form of management, development, customer services and product documentation, and partly to make the system easier for the providers of the product and for the payers and payment recipients using the product.

#### *Issuer payments*

Issuer payments simplify and streamline the central securities depository's processing of payments from issuers of financial instruments by ensuring that an electronic payment order is submitted to BGC. Issuer payments can either be an account deposit or a cash payment in SEK. Currently only Euroclear Sweden uses this Bankgiro product.

#### *Bankgiro Deposits*

Bankgiro Deposits supplies information to various companies on their customers' deposits. This is a entirely electronic process and includes all available information on the payments. The product provides the option of reconciling the accounts receivable ledger in a cost-effective manner by minimising costly manual work. The company can choose if it wishes to receive payment information once or several times a day.

#### *Deposit information via Internet*

Deposit information via the Internet is available for all companies that receive payments. The service is used to identify outstanding accounts receivable manually or as a supplement to Bankgiro deposits to identify those deposits which it was not possible to identify automatically.

The company obtains information on its deposits via an online function which means it does not have to wait until the next day to receive the information by post. The information is available the same day the bank enters the payments in the account.

#### *Supplier Payments*

The purpose of Supplier Payments is to simplify and rationalise a company's payment processing system by enabling the company to submit a payment order to BGC electronically instead of submitting physical payment orders. The company can delivery a number of different types of payments, e.g. tax payments and supplier payments, both in SEK and EUR.

#### *Salaries*

The purpose of the Salaries product is to simplify and rationalise the processing of a company's salary payments to its employees. The company submits a payment document to BGC electronically instead of sending physical payment documents or submitting salary lists to the bank. Salary payments are made in SEK.

#### *Outgoing Payments Bank*

Outgoing Payments Bank is based on the bank submitting payments to BGC which have already been checked and approved. This means that BGC does not need to check that there is liquidity in the accounts the payment is taken from. BGC sends settlement documentation to RIX three times per day and the bank can submit multiple files until the respective settlement occasion is closed.



### Bank Branch Products

■ BGC provides a number of different Bank Branch Products to facilitate the participants' handling of payment products. These are described in more detail below:

#### *BG Invoice*

BG Invoice provides the bank with online updating to handle end-customers' invoicing. Invoicing, bank and customer prices and various types of reports are examples of matters BGC handles on the bank's behalf with the aid of BG Invoice.

#### *BG Agreement*

BG Agreement is a web-based function for the contract management of Bankgiro products. The function enables the bank branch to process their customers' payments securely and swiftly. BG Agreement manages a number of different functions, such as Bankgiro number, Direct debit permissions, cash payments and cheque barring.

#### *BGC's SWIFTNet Service Bureau*

BGC acts as a reseller of Biveroni Batschelet Partners AG's Service Bureau for SWIFTNet to Nordic SWIFT participants. The service enables BGC to provide the necessary infrastructure to participants on the financial markets who need to communicate with their counterparties via SWIFTNet. Customers apply for membership in SWIFT themselves; BGC is responsible for customer contracts and support.

#### *BGC Alert*

BGC Alert performs automated checks and reconciliations of flows between the bank, BGC and the Riksbank. Automated checks and alarm functions enable the bank to replace manual routines thereby reducing costs and operational risks. Instead of monitoring each settlement time, the bank only needs to act when an error occurs and the bank receives an alarm.

#### *The Banks' Blocked List*

The Banks' Blocked List is owned by the Swedish Bankers' Association which has engaged BGC to manage the operation and administration of the service. The Banks' Blocked List is a service which enables affiliated banks, where necessary, to block cheques and other forms on behalf of their customers. The blocks are registered by officials at the bank or by BGC on behalf of the bank. BGC updates the banks with one blocking file per day and can also, where necessary, deliver a complete blocking file. BGC also provides a voicemail service which an agent can call to check whether a cheque or other form is blocked. The voicemail service is provided by Voice Provider on behalf of BGC.

### Other payment products which use BGC's clearing and settlement service

BGC's clearing and settlement service is also used by payment products with external owners. A common feature of these payment products is that authorisation and, in some cases, portions of the clearing are carried out in external payment systems for which BGC is not responsible. These payment products, which are described below, are dependent upon the functionality of BGC's clearing and settlement service.



### Account-to-account transfers via Dataclearing

The Dataclearing (hereafter DCL) is a general payment system and a so-called mass transaction system that is mainly used for account-to-account transfers that do not use Bankgiro numbers. DCL consists of rules, regulations, and format standards and is aimed at achieving a rational, rapid and secure system for account-to-account transfers. This system includes the notification of credit entries, salary transfers, telephone transfers, cheques, bank money orders and bank drafts, as well as any corrections to such transactions. The system used for DCL is based on the exchange by participants of standardised information regarding client transactions, enabling such transactions to be conducted between the banks. Participants sign a multilateral agreement regarding the types of transaction to be exchanged with the corresponding participants in DCL. It is also presumed that all participants are direct participants in RIX or have entered into agreements with a direct participant in RIX, although they need not be participants in the Bankgiro.

Since its start in 1975, BGC has been responsible for the operation and administration of the system on behalf of the system owner, the Swedish Bankers' Association (Svenska Bankföreningen). The participants in DCL enter into a business agreement to ensure that banks with operations in Sweden are able to obtain basic transaction services from other banks on behalf of their clients.

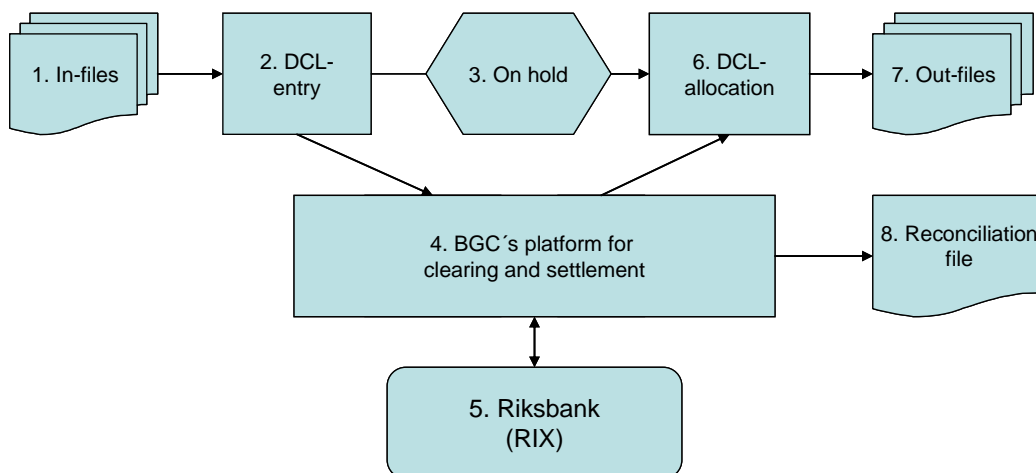


Figure 2: Dataclearing's flow

Transactions for DCL are processed on BGC's system platform and, subsequently, in RIX, where the final settlement occurs four times per day. The flow in DCL takes place in the following manner:

1. Issuing participants in DCL submit in-files with unique in-file identification.
2. These files are entered into the DCL system, following which a receipt file is issued to inform the sender that the in-file has been received.
3. The transactions approved for entry into DCL are placed on hold and recalculated as debit and credit totals. Following this, DCL supplies debit and credit totals to BGC's system for clearing and settlement.
4. BGC's system calculates the net amount of the debit and credit transactions for each participant.
5. The transactions are then forwarded to RIX for settlement.



6. In the DCL allocation, the settled debit and credit transactions are matched with the approved debit and credit totals placed on hold and the allocation and delivery of settled transactions takes place to the receiving participants.
7. Delivery to receiving participants takes place either on an ongoing basis, following which the newly-settled debit/credit files are released from settlement, or by way of the collected issuance of all settled transactions for the day. In conjunction with this, BGC allocates a unique out-file identification.
8. Once per banking day, BGC issues a reconciliation file to each participant. This file is of a general nature and, in addition to information regarding DCL payments, includes information regarding the other products utilising BGC's clearing and settlement service. As DCL has several settlement times per day, it is possible for a client to make an account-to-account transfer between two banks, which both debits the payer and credits the recipient on the same day.

### Form payments via Privatgiro

The Privatgiro, which is owned by BancTec AB, is a supplier of paper-based payment services, with the primary assignment of scanning, interpreting and verifying paper-based documents.

The Privatgiro service provides Swedish banking clients with the option of making payments using forms. The giro service is marketed under various names: Privatgiro, SEB Betalservice, Girobetalning, Skandiagiro and ICA Brevgiro. The services BG Direkt and Skattegiro can be added to this list. Bankgiro and Plusgiro payments made at a bank branch are managed either by Privatgiro AB or by the individual bank. The Bankgiro payments processed under the Privatgiro are credited to the recipient on the same day that the order is processed. With regard to PlusGiro payments, these are credited to the recipient on the banking day following that on which the Privatgiro processes the order.

Each year, the Privatgiro produces and mediates approximately 95 million paper-based payments. In addition to this, electronic payments in the form of Internet payments are also mediated.

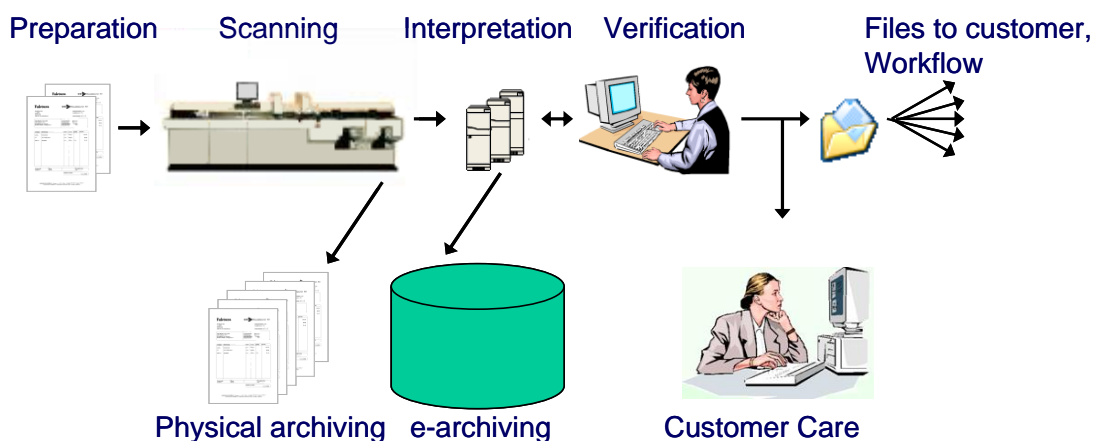


Figure 3: Document scanning flow

The Privatgiro receives the incoming documents and opens, scans and archives them. The content in the document is interpreted and this data is then stored; 99 percent of all data is interpreted in this process. The next phase is the verification of the interpreted data and the interpretation of any data not processed in the previous check. The Privatgiro then sends the payment orders on to BGC in the form of data files. BGC manages the clearing and production of settlement documentation for payment orders in a manner corresponding to that used for electronic payments.



### *Withdrawals from cash dispensers via EDB and Swedbank*

■ The company EDB (formerly CEKAB) carries out the authorisation and clearing of cash withdrawals from ATMs linked to EDB. BGC receives a summary from EDB of each participant's total debt to and total claims from other participants. BGC also receives a similar summary from Swedbank, based on withdrawals from ATMs. After registering this documentation, the BGC system calculates each participant's net debt to or net claim from other participants in the respective flow. Accordingly, the clearing of these flows takes the form of multilateral netting and not bilateral gross. BGC then forwards the settlement documentation to RIX, where the respective participant's net debt or net claim in respect of other participants in the respective flows is settled via BGC's RIX account.

### *Card payments via MasterCard*

BGC processes MasterCard transactions on behalf of Nordea in its role as settlement agent. The card transactions are authorised and cleared by MasterCard. MasterCard then sends a summary of each participant's total debt to and total claims from other participants to BGC. This information comes in the form of multilateral net positions and BGC is responsible for registering the respective MasterCard participant's position as well as sending the settlement documentation to RIX. The card transactions are then settled on a multilateral net basis, which means that the respective participant's net debt or net claim in respect of other participants in the MasterCard flow is settled via BGC's RIX account.

### *Cash management*

When the Riksbank receives old banknotes and coins, new banknotes and coins are provided, and when the banks buy and sell cash between each other, liabilities and receivables arise between the banks and in relation to the Riksbank. BGC supplies the banks and the Riksbank with a special cash management product which contributes to the settlement of these debts and claims. Information concerning the payment orders is sent to BGC several times a day, after which BGC clears and then sends on the settlement documentation to RIX, where the payments are settled.

### E-products

With E-products, BGC provides services which are not based on participation in BGC's payment system. The E-products provide IT infrastructure within e-services for the financial market, and develops solutions for securing and improving the efficiency of digital business transactions.

### *E-invoice*

The E-invoice service deals primarily with providing invoice information in electronic format instead of paper format. The purpose of the service is to improve invoicing efficiency for parties issuing invoices and invoice management for parties receiving invoices. In the first step, it is not the payment transaction in itself which is mediated by the solution, but the document in the form of invoice information which is required to enable the customer to carry out the payment transaction. BGC then mediates both the payment transaction and payment information, partly for the recipient of the invoice and partly for the original issuer of the invoice.

### *Scanning Solution*

BGC Scanning Solution is a supplement to E-invoice which enables companies to receive invoices in electronic form. The product is outsourced to the Privatgiro which scans paper invoices and converts them to an electronic format. The company then receives the invoice directly in its electronic invoice management system.



### *PKI Services*

■ BGC provides a service within the framework of PKI Services for e-identification and secure identification via the company Finansiell ID-teknik BID AB. PKI Services is a supporting infrastructure which enables BGC to provide secure services, for example in the field of electronic invoicing. This service is also part of the infrastructure for the e-identification BankID which the banks use in its products and services for secure identification. In addition to this, PKI Services is used by BGC to guarantee the origin of payers and recipients.

### Clearing and settlement

The majority of the payment products mediated via BGC are cleared as gross amounts and then settled via the participants' accounts in RIX. The settlement of payments in RIX is based on gross settlement in real time. This means that payments are settled immediately, one by one, on the condition that the payer has sufficient liquidity in its account. If this is not the case, the payment is placed in a queue until sufficient liquidity has been obtained. In order for settlement to proceed smoothly, the participants have the opportunity to cover their liquidity requirements against approved collateral by borrowing from the Riksbank during the day.

A small number of payment products (MasterCard and ATM) are cleared as multilateral net amounts. These payment products are not merged but are managed independently in different settlement occasions. The settlement takes place in RIX according to the principle "in their entirety or not at all", also known as "concurrent batch". This implies that the entire multilateral flow is only settled if all participants have sufficient liquidity at the settlement time. If, on the other hand, one or several participants in the multilateral flow cannot fulfill their payment obligations, none of the participants' transactions in the multilateral flow are settled. There are predetermined settlement times for each payment product and, for certain payment products, there are several settlement times per day (see CP IV).

For transactions settled in RIX, BGC utilises the proxy method, which entails the participant giving BGC the authority to send the settlement transaction to RIX for their account. As regards payment orders in EUR, each paying bank receives settlement documentation from BGC, subsequently forwarding this to TARGET2, either directly or via its custodian bank. BGC and the receiving bank are notified when TARGET2 has settled the transactions. BGC is subsequently responsible for matching and confirming that the settlement of the payment order in EUR has been effected.

### *Failure of settlement*

The term *ordinary settlement period* refers to the period of time starting at the planned settlement time and finishing 30 minutes later. If a participant fails to contribute sufficient liquidity during the ordinary settlement period, an *escalation period* is initiated. The escalation period finishes when settlement transactions are cancelled or settled by a transfer of liquidity to the account. For the bilateral flow, settlement transactions are cancelled upon closure of the settlement institution. For the multilateral flow, these transactions are cancelled at the final contractual settlement time, i.e. 15.00, or at the point in time at which a participant is considered to have defaulted. In such a case, the escalation period turns into a *failure management period*, which is the period of time in which default procedures are applied, in accordance with failure management in SEK or EUR. Appendix two gives a detailed view of the multilateral- and bilateral flows.

### *Handling of defaults for bilateral flows*

Payment products cleared bilaterally in gross have an ordinary settlement period of 30 minutes. If it has not been possible to effect a settlement during the 30 minutes of the ordinary settlement period, an escalation period is initiated, which lasts until such settlement has been confirmed, the settlement



■ institution (RIX) closes or BGC is informed that a default has occurred. During this period, the participant may contribute sufficient liquidity to enable settlement to be effected. Failure to do so on the part of the participant implies that the participant is considered to have defaulted.

If a default is identified, the settlement transactions are cancelled and the participant's settlement agreement is revoked. In conjunction with this, BGC blocks all incoming, unregistered transactions to or from the defaulting participant within 120 minutes. *Reversal* is applied to any registered transactions belonging to the defaulting participant that cannot be settled according to ordinary routines. This means that transactions that could not be settled are removed from the clearing and settlement system and that defaulting participants are provided with the opportunity to recredit funds to the accounts of previously charged clients. All stages in default management are implemented on the same day that the participant defaults.

#### *Handling of defaults for multilateral flows*

For ordinary settlement periods, the same stages of treatment are applied to payment products cleared multilaterally on a net basis as are applied to products cleared bilaterally on a gross basis. For multilateral flows, the clearing calculations are made in external payment systems for which BGC is not the principal. These are then forwarded to BGC, which sets up settlement transactions. An obligation to pay then arises for each participant towards the collective group of participants. In multilateral settlement, settlement transactions are processed as one unit and can only be settled "in their entirety or not at all".

An escalation period is also initiated here, in the event that a participant fails to settle in time. In contrast to bilateral flows, the escalation period here is concluded at a final contractual *settlement time*, which is 15.00 hrs or at the point in time at which a participant is considered to have defaulted. After this time, default management is applied, with blocking and revocation of the agreement, together with a new attempt to settle, with responsibility to pay for non-defaulting participants. This is implemented through the calculation by BGC of the non-defaulting participants' share of amounts on the basis of a previously determined model. This model is based on the proportion of the flow provided by each participant. A participant with a greater share of the flow takes a greater share of the loss and vice versa.

Subsequently, each remaining participant pays its share of the multilateral flow, in addition to the calculated share that the participant is liable to pay for the defaulting participant's settlement total. The flow is processed in a separate settlement occasion that is only utilised in default management. In the event that a participant is unable to implement the extra settlement, this participant will also be considered to be defaulting, with a further default management consequently being initiated until RIX closes. Following this, no further recalculations will be made, with the settlement documentation, instead, being returned to the appropriate pre-system.

## Payment statistics

The number of payments in BGC's payment system is increasing at a rate well above that of previous years when the rate of increase was slightly reduced due to the less favorable economic climate. In 2010, a total of 861 million payment transactions were mediated through BGC's payment system, an increase of approximately 7 per cent compared with 2009. This figure can be compared to the average increase of 9 per cent for the period 2003-2010.

The number of payments implemented via Bankgiro products increased by an average of 11 per cent per year during the period 2003-2010. Payments via Dataclearing increased by an average of approximately 5 per cent per year during the equivalent period. The number of payments via Privatgiro has however decreased by an average of 2 per cent per year during the same period. The diagram indicates that the number of payments from Privatgiro and Dataclearing is relatively low compared with those mediated via Bankgiro products.

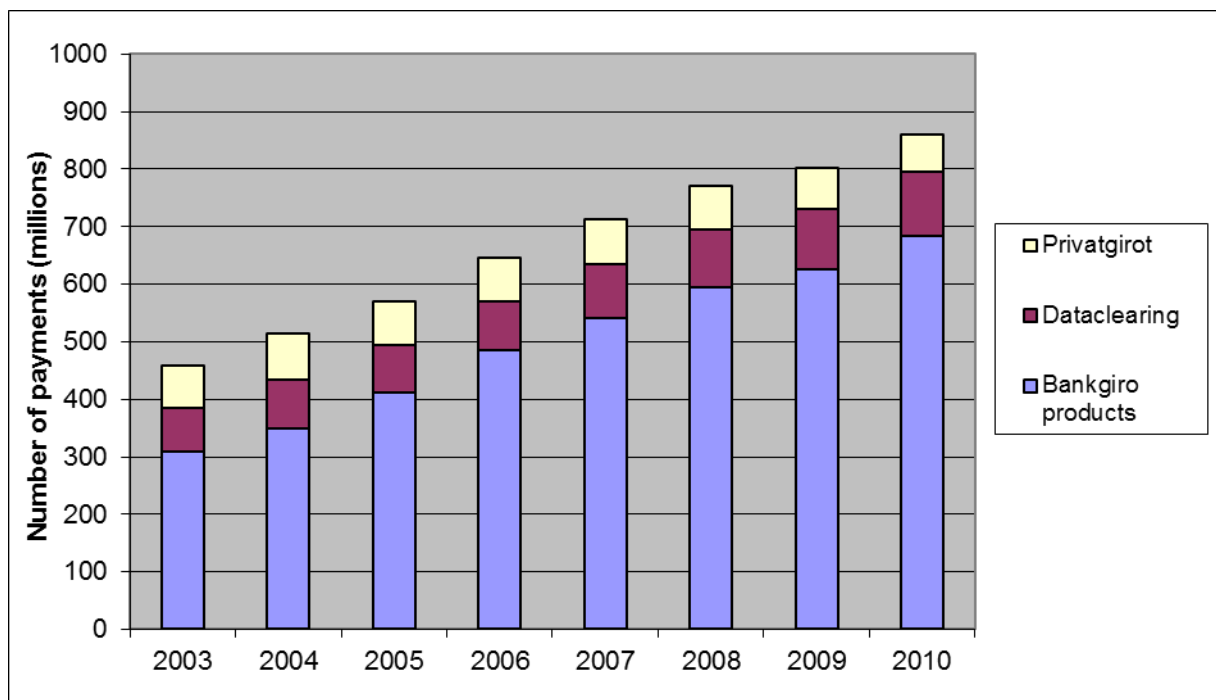


Diagram 1: Number of payments mediated through BGC's payment system 2003-2010

Diagram 2 shows that the upward trend was interrupted in 2009 and the total value of payments mediated through BGC's payment system decreased for the first time since measurements began in 2003. According to BGC this was due to reduced production and consumption due to the less favorable economic climate. The total value of the payments processed through BGC's payment system during 2010 amounted to SEK 9927 billion. This was an increase of 8 per cent compared to 2009 and an increase of 6 per cent compared to 2008, which indicates a temporary reversal of the current trend during 2009.

Diagram 2 indicates that the value of payments via Bankgiro products and Dataclearing has increased by an average of approximately 8 percent per year during the period 2003-2010. The value of the payments processed by Privatgiro is declining every year and has declined by a total of approximately 64 per cent during the equivalent period. The diagram also indicates that Bankgiro products constitute the greatest value, followed by Dataclearing, and that the Privatgiro's share of the total value is very small.

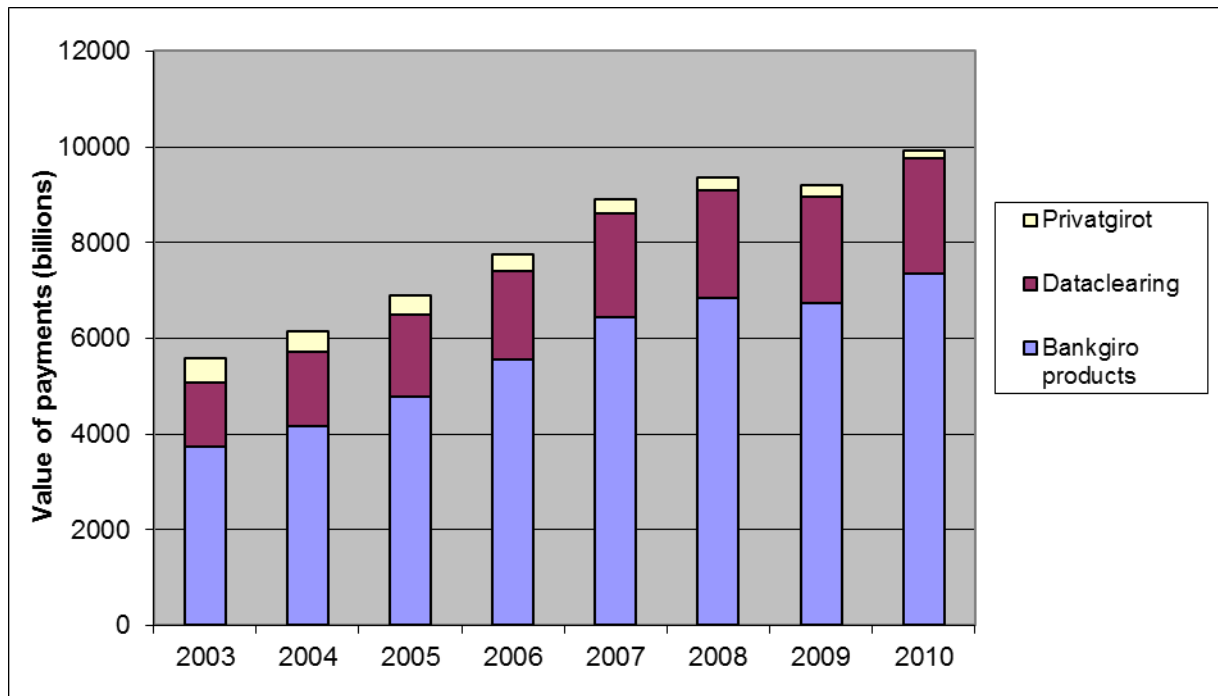


Diagram 2: Value of payments mediated through BGC's payment system 2003-2010

## Development

During 2010 the focus has been on the Scandium project which has been initiated to handle the migration of Bankgiro products and Dataclearing to VocaLink's platform.

### Outsourcing of operations to VocaLink

In 2007, BGC decided to enter into a cooperation agreement for Bankgiro products and Dataclearing with VocaLink in the UK, whose activities include operating the British retail payment system, BACS. The purpose of this cooperation is to offer Bankgiro products at a lower price and to meet market demand for new payment products. BGC will retain its current role in relation to the banks, their clients, and authorities.

In May 2008, BGC and VocaLink signed a Master Services Agreement (MSA) to regulate the outsourcing of Bankgiro products and Dataclearing to VocaLink, initiating the migration program. In its capacity as supplier, VocaLink will manage the IT operations of the Bankgiro products and of the Dataclearing.

The Dataclearing is affected by this cooperation, as it requires a new technical platform to maintain current levels of functionality. In 2009, BGC and the Swedish Bankers' Association signed an agreement to develop the functionality of Dataclearing on VocaLink's platform and for the operation



and administration of the new system. The migration of Dataclearing will take place after stage 2, once all Bankgiro products are migrated to and up and running with VocaLink.

### Developments in 2010

In February 2010, parts of stage 1 of the Scandium project, i.e. issuer payments, were implemented. A number of performance issues had to be addressed for the new Direct debit service. After this, client migration to the VocaLinks platform will take place in autumn 2011.

The remaining Bankgiro products, such as Bankgiro deposits, Deposit information via the Internet, Salaries, Supplier payments, etc. will be migrated during stage 2. After migration of these products, a separate migration of Dataclearing will take place. No date for the migration of stage 2 has been decided yet, as there is disagreement between BGC and VocaLink on the quality of the project and the service so far delivered.

### *Subsequent work*

The migration programme for the Bankgiro products and Dataclearing has been carried out continuously during 2010, but delays have led to the postponement of milestones. As a consequence of this, the start of operations on VocaLink's platform, which should have taken place in two stages has been postponed. The postponement of stage 1 and stage 2 is due to the failure to attain the quality required for the project to proceed to the next milestone.

In advance of each start of operations, both a test phase and a phase of parallel processing of Bankgiro products are planned into the programme. The parallel processing will be conducted using both the old components of BGC's payment system and the new components with VocaLink. The parallel processing is conducted in order to check that all portions of the new system are functioning and producing comparable results.

The rules in the MSA regarding operations will be applied in conjunction with the start of operations in February 2010. As of this point in time, the operation of issuer payments will be conducted by VocaLink, and at the same time the project work in Scandium will continue until all Bankgiro products and Dataclearing have been migrated.

The relationship between BGC and external systems linked to BGC's payment system will not be affected by the transfer of IT operations to VocaLink. Privatgiro is currently responsible for inputting change forms in the Direct debit product. In the new Direct debit product, forms are not used to implement updates. This means that the inputting of Direct debit forms by Privatgiro will decrease in step with the client migration to the new Direct debit system and will eventually stop altogether.

### **SEPA**

In 2002, the European banking industry formulated a vision of a common market for payment services - the Single Euro Payments Area (SEPA). SEPA has the greatest impact on countries within the euro-area, but banks from all countries within the EU/EES, as well as Switzerland and Monaco take part in SEPA cooperation.

On the whole, SEPA regulates three payment services: account transfers (SEPA Credit Transfer), direct debits (SEPA Direct Debit) and card payments (SEPA Cards Framework). On 1 January 2008, SEPA Credit Transfers was introduced. For Sweden's part, these affect cross-border payments denominated in EUR. SEPA Direct Debit started on 1 November 2009, but, as there is no direct debit service in Sweden for payments denominated in EUR, direct debiting in Sweden is not affected.





The concept behind SEPA is that it should be possible to execute account transfers to another bank in any of the participating countries in the same uncomplicated and cost-effective manner as would be the case, for example, between accounts in two Swedish banks. The same applies to direct debits between companies and customers in different countries. The prerequisite for the implementation of account transfers and direct debits in this manner is that the bank account numbers and bank address are stated in IBAN format and as a BIC address, respectively. These abbreviations stand for International Bank Account Number and Bank Identifier Code, respectively, and are based on an international standard. For a payment notice to be SEPA-compatible, it must also be based on the ISO 20022 standard in XML format.

As SEPA will only have an effect on payments made in EUR, no national payments in Sweden will be affected, generally speaking. Payments that will be affected will be those made in EUR between Sweden and one of the EMU countries, or vice versa. BGC's payment system handles payments in SEK and domestic EUR payments. However, no cross-border payments are handled by this system. In other words, the initial impact of SEPA on BGC will be very slight.

## Method

The assessment is based on questions presented to BGC by the Riksbank and Finansinspektionen. These questions have been formulated using the Core Principles for Systemically Important Payment Systems as a starting point.

The international standard Core Principles for Systemically Important Payment Systems (CPSIPS) has been produced by the central banks of the G10 countries within the framework of the Bank for International Settlements (BIS). The principles consist of ten recommendations with which systemically important payment systems are expected to comply. These principles are the generally accepted criteria applied in evaluating such systems and they are used by central banks all over the world.

The Principles have mainly been developed for large-value payment systems. They can, however, also be applied to retail payment systems that are extensively used and where there are few alternative systems. Another important aspect is the risk that, should the system crash, confidence in the payment system as a whole may be seriously damaged. The criterion that "the system is to be used extensively" and the condition that "few alternative systems are available" are fulfilled by BGC's payment system, as is the statement that it may "damage confidence in the payment system as a whole".

The Core Principles which have been assessed are I, II, III, IV, V, VI, VII, IX and X. As not all Bankgiro products and Dataclearing have migrated to VocaLink's platform, the Riksbank and Finansinspektionen have chosen not to evaluate Core Principle VIII which deals with the efficiency of the system.

The compliance of BGC's payment systems with the Core Principles in accordance with which they are assessed is the current focus of the ongoing oversight and supervision conducted by the Riksbank and Finansinspektionen, in addition to the work of this assessment. The Riksbank and Finansinspektionen are also following the Scandium project by examining monthly and weekly reports and participating in quarterly meetings with BGC.



## Core Principle I

“The system should have a well founded legal basis under all relevant jurisdictions.”

### Assessment

The Riksbank and Finansinspektionen assess that CP I is observed.

### Considerations

The Swedish Securities Market Act (2007:528) specifies the rules governing BGC's operations as a clearing organisation in general. The Swedish Act on Systems for Settlement of Obligations on the Financial Market (1999:1309) includes provisions regulating the point in time at which a payment order may no longer be revoked, which is defined as the point in time at which it is entered into the system. BGC's Settlement Agreement and routine description include rules detailing the point in time at which a payment order will be considered to have been entered into the system and thus cannot be revoked, either by participants or by a third party. The provisions of the Swedish Act on Systems for Settlement of Obligations on the Financial Market (1999:1309), together with BGC's Settlement Agreement and routine description, respectively provide clarity for participants in the system as regards the point in time at which a payment order may or may not be withdrawn.

The provisions of the Swedish Act on Systems for Settlement of Obligations on the Financial Market and BGC's Settlement Agreement stipulate that Swedish law is to be applied to the system. The definition and determination of jurisdiction enables the participants to understand with which country's regulations they are to comply.

In the assessment of the Riksbank and Finansinspektionen, Swedish legislation provides an adequate basis for the operations undertaken by BGC.

### Description

#### *National legislation*

##### *The Swedish Securities Market Act (2007:528).*

BGC has been granted license by Finansinspektionen to conduct clearing operations in accordance with the Swedish Securities Market Act and is, thereby, under the supervision of the authority. In addition to its clearing operations, BGC may only carry out such activities that are closely connected therewith. Operating the Bankgiro is deemed to be closely connected with clearing operations and does not therefore require a specific license. However, the Bankgiro is also a general payment system as defined in the Swedish Banking and Financing Business Act (2004:297) and the Swedish Payment Services Act (2010:751) respectively. This has led to separate participant requirements for the Bankgiro and the clearing and settlement service respectively. Finansinspektionen has granted BGC a licence regarding ancillary services, such as secure identification (PKI services) and electronic invoicing operations, including the Scanning Solution.

In accordance with the Swedish Securities Market Act, BGC must conduct its operations honestly, fairly and professionally and must apply the principles of free access and neutrality. This implies that each party fulfilling the conditions presented in the VpML and BGC's participant requirements for the clearing and settlement service may become participants. BGC is also obliged to apply its regulations in an uniform manner towards all participants.

BGC must have appropriate rules for the way in which clearing operations are conducted. This is to be controlled both during the authorisation process and as a part of the current supervision.

Finansinspektionen supervises whether BGC is conducting its operations in accordance with the Swedish Securities Market Act, other statutes regulating BGC's operations, the articles of association, as well as by-laws, regulations or internal instructions based on statutes regulating BGC's operations. BGC also has a statutory obligation to disclose information to Finansinspektionen.

As a part of its supervision, Finansinspektionen may conduct on-site inspections, appoint one or more auditors to participate, together with other auditors, in the audit of BGC and convene the Board of Directors. Finansinspektionen may also require the Board of Directors to call an extraordinary general meeting.

In addition to these powers, Finansinspektionen conducts current supervision of BGC, including such elements as regular supervisory meetings, at which operations, organisation and organisational changes, financial development, new products, operating situation, systems issues, disruptions etc are addressed.

*The Swedish Act on Systems for the Settlement of Obligations on the Financial Market (SFS 1999:1309)*

BGC's settlement system has been approved by Finansinspektionen, in consultation with the Riksbank, and has been notified to the European Commission in accordance with the Swedish Act on Systems for the Settlement of Obligations on the Financial Market. This Act is based on Directive 1998/26/EC of the European Parliament and the European Council concerning payment and securities settlement systems (the Settlement Finality Directive).

A settlement system shall have satisfactory joint rules and standardised arrangements to execute payment orders. The settlement system shall also include rules stating that Swedish law is applicable to the system.

According to the Swedish Act on Systems for the Settlement of Obligations on the Financial Market, payment orders remain applicable to third parties even if a collective bankruptcy proceeding has been initiated as regards a participant in a notified settlement system. This assumes that such an order has been entered into the system before the announcement of the decision to initiate bankruptcy proceedings. A payment order may not be revoked by a participant in a notified settlement system or by a third party after the time stipulated in the system's rules.

Participants in the system must be able to feel confident that no other participant or external party can prevent the settlement of a payment order. The Swedish Act on Systems for the Settlement of Obligations on the Financial Market does not regulate the validity of the underlying transaction. It cannot be excluded that a participant or third party, such as a receiver, may have the right to recall or otherwise prevent a transaction from reaching the final recipient, even if revocation of a payment order is no longer possible under the system's rules. Such a revocation may not lead to the prevention of a settlement in the system, although a subsequent reversal of the settlement may be implemented. It is, therefore, the settlement in the system that is to be protected, rather than the transaction as such.

The agreement on BGC's clearing and settlement service, with pertaining appendix/routine description, stipulates when a payment order is considered to have been entered into BGC's payment system and when such a payment order can no longer be revoked.

*The Swedish Financial Instruments Trading Act (SFS 1991:980) (LHF)*

The LHF stipulates that the settlement of obligations between two or more participants in a notified settlement system applies to bankrupts and their creditors if such settlement has been made in



accordance with the rules of the system. These rules are to be examined by the authority in each country with responsibility for the designation and notification of settlement systems. In Sweden, this authority is Finansinspektionen. This provision of the LHF also applies to the system operated by BGC.

#### *Payment Services Act (2010:751)*

European Parliament and Council Directive 2007/64/EC of 13 November 2007 on payment services in the internal market has been implemented in Swedish law through the incorporation of the Payment Services Act which came into force on 1 August 2010. In accordance with this act, the party responsible for a payment system, such as BGC is for the Bankgiro, must ensure that the rules on access to the payment system are objective, non-discriminatory and proportional. The regulations may not prevent access above and beyond what is necessary to protect against specific risks, such as settlement risk, operational risk and business risk, and to protect the payment system's financial and operational stability.

The requirement for objectivity, non-discrimination and proportionality means, inter alia, that BGC

- may not place requirements on payment service providers which restrict their practical participation in other payment systems,
- may not introduce rules which discriminate between licensed payment service providers or between registered payment service providers in matters relating to rights, obligations and authorisations, and
- that access to payment systems may not be restricted on the basis of the institution's status.

A payment service provider who is a legal entity may not be denied access to a payment system if the payment service provider fulfills such requirements for access to the payment system as are set forth in accordance with the law and BGC's participation requirements.

The provisions on access to payment systems shall not apply to payment systems referred to in the Swedish Act on Systems for the Settlement of Obligations on the Financial Market.

Bankgiro is a general payment system in accordance with the definitions in the Swedish Banking and Financing Business Act (2004:297). General payment systems are systems for mediating payments from a large number of independent payers intended to reach a large number of independent final payment recipients.

The provision on access to general payment systems does not mean that access is automatically granted; system owners may impose the necessary requirements and conditions for capital strength, internal risk management processes and other measures required to protect the stability of the system. In connection with the application of the Payment Services Act, BGC has introduced new participation requirements for the Bankgiro which imposes requirements within the aforementioned sense. BGC has also amended the participant requirements for the clearing and settlement service. As indicated above, the regulations on access to payment systems do not include those payment systems covered by the Swedish Act on Systems for the Settlement of Obligations on the Financial Market, which is why a payment institution may not be granted access to the clearing and settlement service. Payment service providers that are not banks will utilise the clearing and settlement services as indirect participants, i.e. they need to enter into an agreement with a direct participant who undertakes on their behalf to ensure that clearing and settlement occurs and who will be responsible for the indirect participant as for their own account in respect of BGC and the collective participant group.



### *Bankgiro rules and regulations*

■ The Bankgiro rules and regulations consist mainly of bilateral agreements between BGC and the participants. A direct participant signs the Bankgiro's Main Agreement, which sets out the basis provisions, the Product Agreement, Service Agreement and Operation Agreement. The Product Agreement specifies the Bankgiro products utilised by each participant. The Operation Agreement states delivery times, quality, emergency routines, follow-up, etc. The Service Agreement specifies the level of service, such as response times and the content of various services. Participation in the clearing and settlement service requires the signing of an agreement on BGC's clearing and settlement service (the Settlement Agreement). The Settlement Agreement is included in the Bankgiro's rules and regulations. The Settlement Agreement describes how clearing and settlement will occur under normal circumstances or in the event of disruptions, and the allocation of responsibility in the event of disruptions or default. In addition to the agreement, there are a number of other rules and regulation documents which do not materialise in agreement form but which are nonetheless included in the regulations and must be adhered to by all participants. These documents may, for example, contain descriptions of routines. A direct participant in the Bankgiro who acts as an agent for an indirect participant enters an agreement on adherence of the indirect participant. Agreements stipulate that they are to be interpreted and applied in accordance with Swedish law.

For participants in the Bankgiro, BGC acts as sub-contractor for the Bankgiro products provided and accordingly, do not have any contractual relationship with the private individuals or companies using the Bankgiro's payments services.

### *Rules and regulations for the clearing and settlement service*

BGC also manages payment products which are not Bankgiro products and where authorisation and, in some cases, parts of the clearing are carried out in external payment systems. Participants using these payment products must participate in the clearing and settlement service at BGC. Direct participants in the clearing and settlement service enter the Settlement Agreement, the Agreement on the Clearing Information System and the Operating Agreement. A direct participant in the clearing and settlement system can act as an agent for another institution which then becomes an indirect participant. This is agreed between the direct participant and BGC in an appendix to the Settlement Agreement.

### *External regulations*

With regard to payment products with external owners using BGC's clearing and settlement service, the participant and the external party, who is the product or system owner, enter a specific agreement regulating the respective payment product.

## Core Principle II

"The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it."

### Assessment

The Riksbank and Finansinspektionen assess that CP II is observed.

### Considerations

The Settlement Agreement, with associated appendix/routine description, describes the prerequisites for the process of clearing and the procedure to be followed when a participant demonstrates a lack of liquidity. One risk factor in the settlement of multilateral flows arises when a net debt/net claim is generated between the participants. The settlement is performed in accordance with the "concurrent batch" principle, which implies that the entire multilateral flow is only settled if all participants have sufficient liquidity at the settlement time. Should this not be the case, and should the participant lacking liquidity be unable to generate any, that participant shall be considered to have defaulted. The remaining, non-defaulting participants subsequently assume payment liability for the defaulting participant's share. This is regulated in an appendix to the Settlement Agreement, the routine description. The most prominent risk is therefore the liquidity risk in the multilateral flows. See CP V for a more detailed description of the multilateral flow and the risks which may occur.

With regard to the Bankgiro, the system is constructed in such a way as to minimise operational risks. Liquidity and credit risks are borne by the participants themselves and do not derive from participation in the system. Direct participants in the Bankgiro acting as agent for an indirect participant do so at their own risk and for their own account, and as such are responsible in respect of BGC and other participants for any claims the indirect participant may incur. The Main Agreement contains regulations on division of responsibility and disclaimers, including BGC's general disclaimer.

### Description

The rules and regulations which participants must be aware of to judge the financial risks they are exposed to through participation in BGC's payment system are the Settlement Agreement, containing the routine descriptions, the Main Agreement and the Product Agreement, including the product descriptions. If there are conflicts between the Main Agreement and the Settlement Agreement, the Settlement Agreement takes precedence. For a more in-depth description of BGC's regulations, see CP I.

BGC has held meetings with the participants in the clearing and settlement service to ensure that they understand the significance of the agreements and functioning procedures and are aware of the system and their obligations to it. The objective has also been to raise awareness of the risk that problems may spread to other participants in the event of lack of compliance with rules and regulations regarding matters such as format and timing. Another objective was to raise awareness of compliance and risk issues in the system, particularly in the clearing service. The meetings have been conducted at regular intervals as some participants in the clearing and settlement service have been unable to find timely settlement headroom. On these occasions, BGC has also requested a written statement of the event and an account of the measures the participant has implemented so that the disruption does not occur again.

In conjunction with the admission of new participants to Bankgiro or to the clearing and settlement service, BGC has carried out a review of the rules and regulations with the admitted participant.

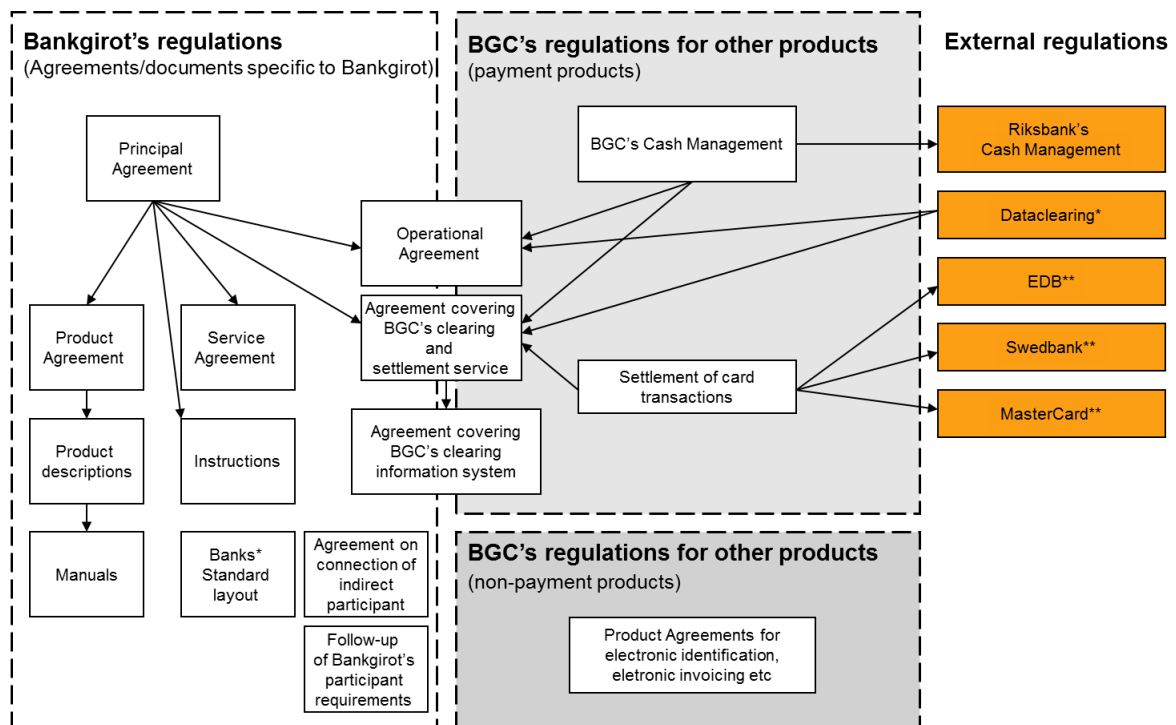


Because the group of participants granted access to the Bankgiro has expanded as the Payment Services Act has come into force, BGC has amended its participation requirements for the Bankgiro. In connection with this, BGC also decided to review the participation requirements for the clearing and settlement service. In view of the new participant requirements for both the Bankgiro and the clearing and settlement service, BGC has held meetings with the participants to provide information on this.

BGC will amend its annual follow-up service to ensure that all participants in the Bankgiro and the clearing and settlement service meet the participation requirements. The participants will be required to answer questions and describe how they are fulfilling the participation requirements. Based on the descriptions submitted by the participants, BGC will assess how the participation requirements are being met. This differs from previous years when only a written confirmation was required from the respective participants indicating that the conditions for participation had been met.

The participants also have a disclosure obligation towards BGC if, for example, events affecting the participation requirements should occur.

BGC's agreements qualify participants to understand the financial risks arising from participation in the Bankgiro or in BGC's clearing and settlement service. However, BGC should more clearly explain the risks inherent in the multilateral settlement.



\* In addition to Operational and Settlement Agreements, participants sign an agreement with the "product owner" of the Dataclearing; the Swedish Bankers' Association

\*\* Agreement between system/product owner and participating banks

Figure 4: Outline of regulatory framework





### Core Principle III

“The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.”

#### Assessment

The Riksbank and Finansinspektionen assess that CP III is observed.

#### Considerations

Even though the payment flows via the BGC usually constitute a relatively small part of the banks' total flows, the Settlement Agreement provides an incentive for the participants to be cautious in their liquidity management. The Agreement explicitly requires participants to have sufficient liquidity in their RIX accounts. Participants can see the gross amounts they are to pay and receive, in the Clearing Information System, CIS, or corresponding system, at least 15 minutes before the agreed settlement time. Should the participant fail to make this liquidity available, an escalation period is initiated, followed by a failure management period. The Settlement Agreement thereby allows a participant who cannot meet its obligations due to liquidity problems a limited amount of time to complete settlement.

If the participant cannot fulfill its obligations, the consequences may be serious, as the participant's Settlement Agreement is then automatically revoked. Without the Settlement Agreement, the participant no longer has the right to participate in BGC's clearing and settlement service. Consequently, participants cannot effect payments on behalf of themselves or their clients via Bankgiro or for other flows covered by the Settlement Agreement, such as, for example, Dataclearing, ATM and MasterCard.

As major portions of the flow are settled using the bilateral gross amount method, and as failure management routines have been established, credit risks are of a highly limited nature. The RIX system also provides liquidity-saving and effective settlement by means of a function that continually searches for transactions for settlement, as well as also providing the possibility of reserving liquidity for a specific settlement, thus contributing to a low liquidity risk.

#### Description

The majority of the payment products mediated by BGC is cleared using the bilateral gross amount method and settled through the participant's account in RIX, if in SEK, or, alternatively, directly or via its custodial bank in TARGET 2, if in EUR. The RIX system also provides the possibility of conducting settlement in a resource-efficient manner in which participants need not provide more liquidity than necessary. If a participant is unable to fulfill its obligations within the specified period of time, a failure management period is initiated. The procedure is implemented the same day the participant defaults.

A small number of payment products (Master Card and ATM) are cleared using the multilateral net amount method according to the principle 'in its entirety or not at all' and are settled via the BGC's account in RIX. If a participant is unable to fulfill its obligations within the specified period of time, a failure management period is initiated. The Settlement Agreement includes regulations specifying the allocation of losses in this type of situation. This procedure is also implemented the same day the participant defaults. For more in-depth information regarding the aforesaid default management routines, please refer to the introductory section and the chapter "Clearing and Settlement".

## Core Principle IV

“The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.”

### Assessment

The Riksbank and Finansinspektionen assess that CP IV is observed.

### Considerations

CP IV requires that settlement be made on the same day as the system has received and accepted the payment order for settlement. The definition of an accepted order is one that has been approved by the system’s control mechanisms. In situations where the system applies control mechanisms prior to the settlement day, for instance for pre-debited payment orders, CP IV concedes that the minimum requirement for settlement on the same day applies from the opening of the system on the actual settlement day.

BGC implements clearing and settlement for the bilateral and multilateral flow on the same day that the payment order receives a positive response to a coverage checking inquiry. Pre-debited payments are cleared and settled no later than on the day following coverage checking and approval by one of the external payment systems. Any defaults are also handled on the same day in accordance with the established default management routine. All types of payment product that are processed through BGC thus meet the demand for settlement on the same day as the payment is received and registered for settlement. This is an important precondition for maintaining a low level of liquidity and credit risk in the system.

### Description

Payment flows mediated through BGC are settled at least once a day. The number of daily settlement occasions for the different payment products is stated below. If settlement is in EUR and/or as multilateral net settlement, this is stated in brackets. If there are no brackets, this indicates bilateral gross settlement in SEK.

#### *Once per day:*

Bankgiro payments (supplier payments, salaries, direct debits, etc.)  
Bankgiro payments (EUR) (supplier payments)  
ATMs (multilateral net)  
MasterCard (multilateral net)  
ATMs (formerly Minuten) (multilateral net)

#### *Three times per day:*

Bankgiro payments (form payments via Privatgiro)  
Bankgiro payments (Internet bank payments)  
Bankgiro payments (EUR) (Internet bank payments)

#### *Four times per day:*

Bankgiro payments (issuer payments)  
Bankgiro payments (EUR) (issuer payments)  
Dataclearing



#### ■ *Five times per day:*

BGC's cash handling product, which also has a sixth settlement occasion and is only intended for transactions in which the Riksbank is the paying party.

#### *Settlement*

The settlement times for the various payment products are evenly distributed throughout the day between 07.15 and 16.20.

Payment products that are cleared on a bilateral gross basis are settled via the participants' account in RIX, in the case of SEK, or either directly or via the participant's custodian bank in TARGET2, in the case of EUR. Payment products that are cleared on a multilateral net basis are settled via BGC's RIX account – for participants with net debts, liquidity is transferred to BGC's RIX account and, at the agreed settlement time, settlement is effected in its entirety in accordance with the principle 'in its entirety or not at all'.

#### *Cover check*

Prior to settlement, a cover check is conducted for most of the payment products, in which BGC sends debiting data to the payers' banks to check that the payers have sufficient liquidity in their accounts. During the cover check, the participant has the possibility of stopping the entire payment order or certain individual payments. Payment which BGC calls "Outgoing Payments Bank" are 'pre-debited' and thus do not require any special cover check prior to settlement.

#### *Latest transfer time*

The latest transfer time to BGC is defined per payment product. Payment products for which BGC conducts both a cover check and debiting are delivered between 17.00 and 23.00 at latest, one banking day before the settlement day. Wage payments are an exception. For these, the order must have been received by BGC no later than 19.00, two banking days before the settlement day. On the settlement day, BGC conducts cover checks, clearing and settlement of all payments.

Pre-debited payment products are cover checked and approved by one of the external payment systems one banking day before the settlement day. On the settlement day, the payments are processed by BGC's clearing and settlement service. For certain pre-debited payment products, it is also possible to conduct both cover checks and settlement on the same day, i.e. on the settlement day.

#### *Default management of bilateral gross settlement*

All stages in default management are implemented on day 1, that is to say on the same day that the participant defaults. For more in-depth information regarding the default management routines of bilateral gross settlement, please refer to the introductory section and the chapter "Clearing and Settlement".

## Core Principle V

“A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation.”

### Assessment

The Riksbank and Finansinspektionen assess that CP V is broadly observed.

### Considerations

Default management for the multilateral net flow is handled on the same day. This implies that BGC can provide liquidity and thereby conclude the settlement of the flow by no later than the end of the settlement day. This procedure is in compliance with CP V, the minimum requirement of which is that systems handling multilateral net flows are to complete settlement on the same day, even if the largest participant defaults.

The multilateral flow from Europay/MasterCard has increased strongly between 2007 and 2010 from a previously low level. During one weekend with a high volume of transactions, total turnover increased by almost 100%, from a total amount of approximately SEK 357 million in 2007 to approximately SEK 688 million in 2010. During one weekend with high volume, the flow from the participant with the greatest net liability as regards card transactions from Europay/Mastercard has increased by a factor of more than seven, from SEK 76 million to SEK 565 million, between 2007 and 2010.

No pool of collateral exists to secure settlement. Neither do there exist any limits for the gross positions of the participants towards one another. This means that, regardless of the amount of the defaulting participant's debt, and irrespective of how many participants default, the other participants in the multilateral flow are assumed to be able to contribute the missing liquidity.

It is therefore important to clarify the function and obligation of all parties with regard to the clearing and settlement of transactions from Europay/Mastercard. For this reason, BGC, in collaboration with Nordea in its role as settlement agent, should provide a clear description of this arrangement and distribute this to all participants.

Due to the increased multilateral flow, relating to card transactions, BGC should clarify its information on the liquidity risk respective participants face. Each participant should be properly aware of the size of the liquidity they are expected to contribute in the event of the default of the largest participant. BGC should also inform participants of alternative default arrangements for the multilateral flow which may reduce this liquidity risk.

### Description

The settlement of the multilateral flows from Europay/MasterCard is carried out via BGC's RIX account on behalf of Nordea. Participants who have a net debt in relation to other participants in the flow pay to BGC's RIX account. Those participants having a net claim in relation to other participants in the flow receive payment from BGC.

If a participant is unable to meet its obligations, an agreed default management routine is applied. In this, the remaining participants share the defaulting participant's debt in accordance with an agreed procedure. For more in-depth description of this routine, please refer to the introductory section, under the chapter “Clearing and Settlement”.



## ■ Core Principle VI

“Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.”

### Assessment

The Riksbank and Finansinspektionen assess that CP VI is observed.

### Considerations

Assets utilised for settlement are claims on the Riksbank or the European Central Bank (ECB).

### Description

All of BGC's payment products are settled in central bank money. Payments are settled in RIX or in Target2.

## Core Principle VII

“The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing.”

### Assessment

The Riksbank and Finansinspektionen assess that CP VII is broadly observed.

### Considerations

The migration of the operation, management and development of Bankgiro products and Dataclearing to VocaLink has been cancelled several times which means that the project is currently over a year behind time. This delay has brought with it a number of operational risks to BGC's existing operations. These risks tend to increase the longer the end date for the migration is postponed.

BGC is forced to continue to operate the Bankgiro products and the Dataclearing until they are migrated to VocaLink. To facilitate the migration to VocaLink, BGC has chosen not to introduce new or further development of the services and products affected. This may lead to these products and services being neglected. It may also cause BGC to look for temporary system solutions to support these products and services which may entail risky manual procedures.

BGC's mechanisms for securing redundant systems and existing continuity solutions have been described in previous assessments. It is vital that these continuity solutions are maintained and not dismantled before the entire migration process to VocaLink has been completed. Improper handling of this issue may result in high systemic risks.

In conjunction with BGC's decision to transfer large parts of its operations to VocaLink, the decision was also taken to outsource the systems development department to an external company. In addition to this, certain part of BGC's payment system are dependent on third-party licenses which must be extended as the project is delayed. This means that BGC is highly dependent on a number of external players for the continued operation of its existing systems.

The significantly delayed migration to VocaLinks system platform is increasing the resource requirement burden at the expense of reduced resources for product development. The ongoing costs are high with the result that stipulated cost targets are being missed. This means that there is a great risk that the cost savings BGC promised to the participants be pushed back.

In summary these operational risk are causing problems of confidence for BGC. BGC should therefore impose strict requirements on VocaLink and the project organisation controlling the project. To retain the confidence of owners, participants and other stakeholders, it is vital that a sustainable timetable which both parties can adhere to is presented as soon as possible.



## Description

■ Work on the project to migrate the Bankgiro products and the Dataclearing to VocaLink's system platform has been ongoing since the autumn of 2009, but delays have meant that the timetable has been pushed back. As a consequence of this, the start of operations on VocaLink's system platform, which should have taken place in two stages in May and November 2009, has been postponed. There are still currently certain performance problems for stage 1 and no date has been set for when the migration has to be completed.

Even though the project is seriously delayed, BGC retains the strict requirements imposed on VocaLink. Both the banks and BGC consider that it is vital that quality is not compromised and that all sub-contractors are carefully vetted. In conjunction with the start of operations, the systems will also be run in parallel to ensure increased operational safety and to leave open the option of returning to the old system if errors occur. Operations for Bankgiro products and the Dataclearing will be started on two separate occasions to provide an extra alternative system for processing payments if any of the systems crash in connection with the migration.

For more in-depth information on the migration to VocaLink, please refer to the introductory section and the chapter "Development".



## Core Principle IX

“The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.”

### Assessment

The Riksbank and Finansinspektionen assess that CP IX is observed.

### Considerations

BGC's operations as a clearing organisation are regulated by the Swedish Securities Market Act. According to this Act, a clearing organisation must apply the principles of free access and neutrality. These principles are applied in relation to the clearing and settlement service. With regard to access to BGC's general payment system, the Bankgiro, the regulations set out in the Swedish Payment Services Act, which stipulate that participant requirements must be objective, non-discriminatory and proportional, shall apply. Potential participants who are denied access to the Bankgiro or to the clearing and settlement service may appeal to the Swedish Competition Authority. There is thus a regulatory framework supporting “open and fair access”, as well as an instance to which complaints can be made regarding disparity. BGC has never denied anyone access to the Bankgiro or to the clearing and settlement service to any party fulfilling the participation requirements.

BGC is obligated in accordance with the Swedish Securities Market Act and the Swedish Payment Services Act to treat all participants equally. This work is performed by various working groups. If deficiencies in competition are suspected in any of the working groups, the chair, also a BGC employee, will report directly to BGC's Board of Directors. BGC has produced Competition Guidelines for Customer Consultation within the Bankgiro System, a work instruction used in every form of cooperation between BGC and Bankgiro participants. Corresponding guidelines are also applied to contact with participants in the clearing and settlement service.

The fulfillment by a participant of the participation requirements forms a condition for access to the Bankgiro or to the clearing and settlement service. After having been admitted, a participant must fulfill the participation requirements on an ongoing basis. The participant has the obligation of informing BGC if this should not occur.

### Description

Participation in Bankgiro can take different forms. There are direct and indirect participants. The indirect participant signs an agreement with the direct participant who, in turn, signs an agreement on indirect connection with BGC. The direct participant is responsible for the indirect participant as regards BGC and other participants. Expenses for participation in the Bankgiro are only paid by direct participants. The direct participant, in turn, debits the indirect participant.

A direct participant in the Bankgiro can, in turn, be a direct or indirect participant (*clearing member*) in the clearing and settlement service. Payment institutions and registered payment service providers can only participate via an agent, as they are not included in the group which a clearing organisation, in accordance with the Swedish Securities Market Act and the Swedish Act on Systems for the Settlement of Obligations on the Financial Market, may accept as participants.

A direct participant in the clearing and settlement services is a RIX participant and thus performs settlement via its own RIX account, while an indirect clearing participant performs settlement via the RIX account of a direct participant.



### *Participation requirements*

■ In order to become a direct participant in the Bankgiro, an institution must meet the following requirements:

- be a legal entity and payment services provider in accordance with Chapter 1, paragraph 3 of the Payment Services Act,
- participate in BGC's clearing and settlement service, either directly or through an agent,
- fulfill the capital requirements as required by legislation and the regulations that apply at any time to the institution in question.
- have fidelity insurance with an insured amount of at least SEK 200 million and liability insurance, including insurance for pure economic loss, with an insured amount of at least SEK 30 million.
- be able to connect in technical terms to the Bankgiro system
- have adequately secure technical systems which fulfill BGC's requirements,
- implement risk management routines required for the system which fulfill BGC's requirements,
- have an organisation with defined roles and personnel able to fulfill the technical requirements, personnel trained in the Bankgiro's rules and regulations and services, and personnel who can fulfill the risk management requirements
- provide accounts to customers wishing to use Bankgiro products
- identify accounts by clearing number
- be able to be identified through BIC
- receive account deposits
- be able to receive transactions in SEK
- be able to comply with and fulfill Bankgiro's regulations on an ongoing basis

In order to become a direct participant in BGC's clearing and settlement services, an institution must meet the following requirements:

- be an institution in accordance with Chapter 21, Section 1 of the Swedish Securities Market Act and Section 8 of the Swedish Act on Systems for the Settlement of Obligations on the Financial Market, have the right to participate in clearing operations and settlement systems
- BGC provides a Clearing Information System for participants in the clearing and settlement service so they can access settlement totals for themselves and, where appropriate, for their indirect participants. For participants, admission to the Clearing Information System (or corresponding system) through the signing of an appropriate agreement is a prerequisite for using the clearing and settlement services.
- fulfill the capital requirements as required by legislation and the regulations that apply at any time to the institution in question.
- be able to connect in technical terms to BGC's clearing and settlement service,



- have adequately secure technical systems which fulfill BGC's requirements
- • implement risk management routines required for the system which fulfill BGC's requirements,
- have an organisation with define roles and personnel able to fulfill the technical requirements, personnel trained in the rules and regulations for the clearing and settlement service, and personnel who can fulfill the risk management requirements
- be able to settle in SEK or EUR.

Participants in both the Bankgiro and the clearing and settlement service must meet the participation requirements on an ongoing basis and have an obligation to notify BGC of any changes to their operations which may impact the control of participation requirements. BGC will perform an annual follow-up to ensure all participants meet the requirements. For this BGC will use assessments of the descriptions of how the participation requirements are met, which the participants submit to BGC annually.

#### *Entry and withdrawal*

Entry into the Bankgiro and the clearing and settlement service is at the discretion of BGC's Board of Directors. Upon entry, the new participant pays for resources expended by BGC. This fee is to cover BGC's costs for connection, including the adjustment of BGC's own systems. From 2010 onwards, an annual fee will be charged by participants in the Bankgiro. The fee is currently SEK 150,000 and is intended to cover ongoing and recurring administrative costs, such as updates to rules and regulatory agreements, pricing services and the follow-up of participant requirements. There is no annual fee for participants in the clearing and settlement service.

Withdrawal or exclusion from the Bankgiro can be effected by giving notice of termination of the Main Agreement and is also at the discretion of the Board of Directors. A participant in the Bankgiro can be excluded by BGC rescinding the Main Agreement in whole or in part. Participants in the Bankgiro who do not meet the participation requirements or contravene an essential provision of the Bankgiro's rules and regulations can be excluded if they do not take remedial action within 90 days of receiving a written notification. BGC also retains the right to immediately exclude participants who go into liquidation, petition for bankruptcy, stop payments, become the subject of composition proceedings, company restructuring or similar, or who BGC can reasonably consider to be insolvent or in a precarious financial position. The same also applies to participants who have not begun to use the Bankgiro within one year of admission to the system.

For the clearing and settlement service, withdrawal and exclusion is effected by termination of the Settlement Agreement. The conditions which apply to the Bankgiro and which are set out above also apply to the clearing and settlement service. After receiving written notification from BGC that BGC intends to terminate the agreement, a participant has 30 days to provide an explanation and take remedial action. BGC has the right to terminate the agreement with immediate effect for participants who no longer meet the requirements set out in the Swedish Securities Market Act or the Swedish Act on Systems for the Settlement of Obligations on the Financial Market, or whose participation in RIX is blocked or who for some other reason no longer have a RIX account.

## Core Principle X

“The system’s governance arrangements should be effective, accountable and transparent.”

### Assessment

The Riksbank and Finansinspektionen assess that CP X is observed.

### Considerations

As a limited company, BGC is subject to both provisions on association and accounting regulations that control the company’s governance and responsibility. Internal rules and routines also affect the assessment of this principle. The company’s management and governance, as well as its structure, are transparent in that the information is clear and easily available. The owners actively exercise their ownership through their participation in the Board of Directors.

In the evaluation, no studies have been made of how BGC actually manages different matters. Only the organisational conditions have been examined.

### Description

#### *BGC’s Board of Directors*

BGC is governed in accordance with the Swedish Companies Act (2005:551), the articles of association and other applicable laws and regulations, including Finansinspektionen’s general guidelines, FFFS 2005:1, regarding governance and control of financial undertakings. The Board of Directors appoints a managing director. In accordance with the Swedish Companies Act, the Board of Directors each year adopts a written set of rules of procedure as regards its work. The Board of Directors also prepares a set of written instructions specifying the division of duties between the Board of Directors and the managing director. When voting, each member of the board has one vote, and decisions are taken by a simple majority. At present, the board includes representatives of Danske Bank, Länsförsäkringar Bank, SEB, Svenska Handelsbanken and Swedbank.

Information on the members of the board and the company management is available on BGC’s website. Detailed information on ownership, operations and auditor’s reports can also be found in the Group’s Annual Reports, which can be ordered from BGC or downloaded from BGC’s website.

#### *Independent review*

KPMG has been appointed by BGC to carry out the external audit and Ernst & Young are responsible for the internal audit. The internal audit acts as an independent auditing function and works on behalf of the Board of Directors. The internal auditors draw up an annual audit plan in consultation with the Board of Directors and BGC’s management. The scope of the internal audit includes the following:

- Routines for risk management, control and follow-up
- Internal controls
- Compliance with Finansinspektionen’s regulations
- Handling of outsourced operations
- IT security



### Consultation

■ A specific forum, the Clearing Customer and Market Forum, is available for participants in the clearing and settlement service. This is a forum for discussions between BGC and the participants with regard to the development of BGC's clearing and settlement service. Meetings in this forum are held four times per year.

The instruction "Work plan for consultation within the Bankgiro" sets out the client consultation options available within the Bankgiro. They currently consist of three forums. BGC convenes and presides at all these forums, and also sets the agenda and takes the minutes.

*Bankgiro customer and market forum:* This is a forum that addresses the Bankgiro's strategic orientation and the extent of any new development or further development of Bankgiro's products and services. It furthermore addresses BGC's marketing of the Bankgiro and its products. Meetings are held four times per year.

*Product guidelines:* collaboration with regard to functionality within a specific product group or product. Meetings are held two to four times per year and product group.

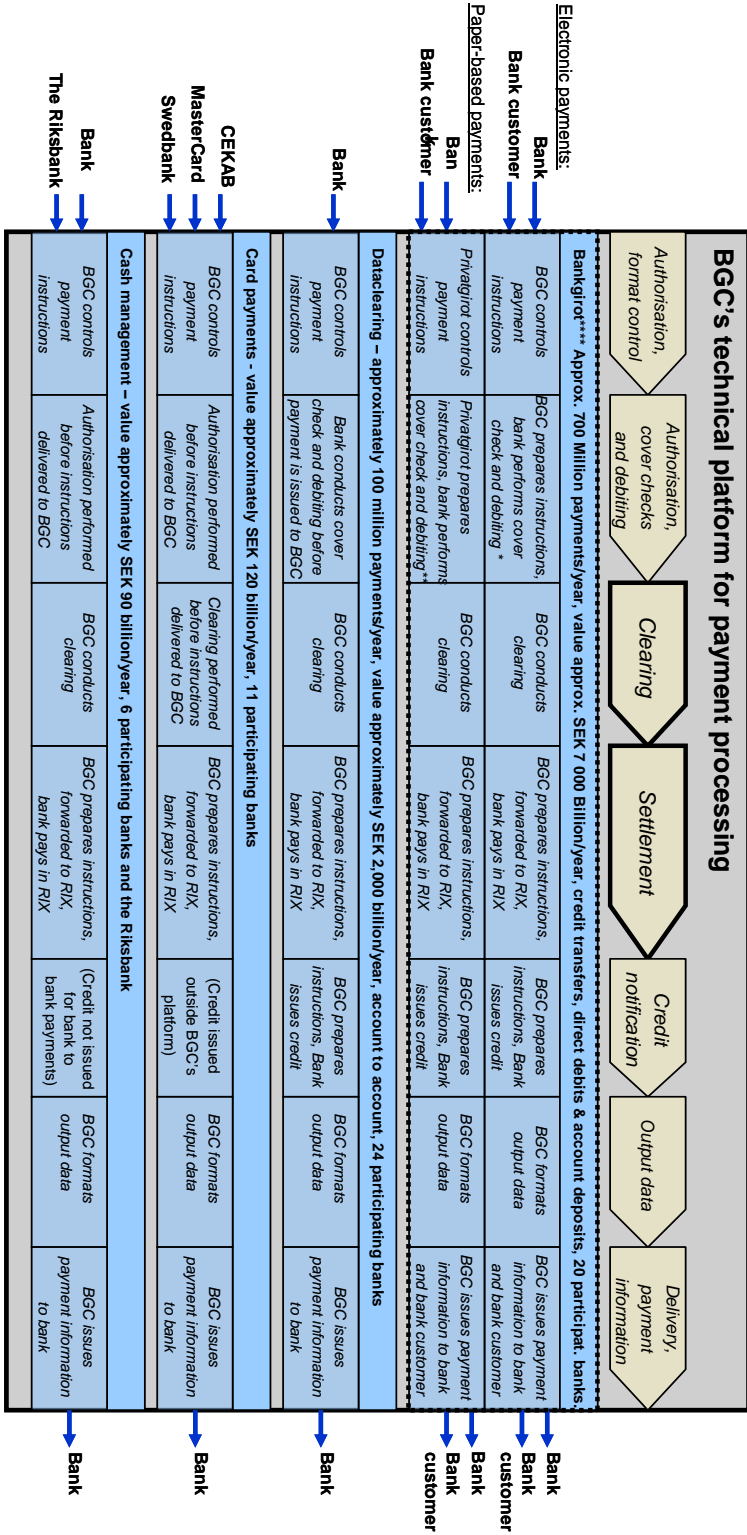
*Bank working groups:* collaboration within specific development projects and a channel for BGC's information to participants and vice-versa.

These three forums are open to all participants in the Bankgiro. BGC chairs all forums and is responsible for ensuring the rules in the instruction are followed. As chair, BGC is also responsible for ensuring that competition regulations are complied with during or in connection with the meetings. In the event of any suspected breach of the competition regulations, the chair must terminate the meeting and report directly to the BGC's Board of Directors.

Competition Guidelines for Customer Consultation within the Bankgiro System is available as a supplement to the instruction. These guidelines must be adhered to in relation to any form of cooperation between BGC and the participants in the Bankgiro. Corresponding guidelines are also applied to contact with participants in the clearing and settlement service, and in the Clearing Customer and Market Forum. The guidelines state that information exchange between BGC and the participants at meetings must be limited to the information which is absolutely necessary for cooperation. The guidelines also contain a list of information which it is forbidden to discuss when BGC meets representatives of the participants.

BGC invites participants in the Bankgiro to a long-term development planning meeting to ensure that the Bankgiro's development plan is based on the participants' requirements.

Appendix 1: BGC's technical platform for payment mediation



\* Does not apply to Internet bank payments delivered to BGC after cover check and debiting.  
 \*\* Applies to payments from companies. So-called domestic payments are delivered to Privatgirot after cover check and debiting.  
 \*\*\* The clearing and settlement function is regulated in the agreement covering BGC's clearing and settlement service, as regards RIX participants.  
 \*\*\*\* Bankgirot has special regulations with a Main Agreement and Product Agreement, among others. The agreement covering BGC's clearing and settlement service is also included.

Appendix 2: Multilateral- and bilateral flows

