LATVIJAS BANKA

OVERSIGHT OF THE PAYMENT SYSTEM IN LATVIA

Riga 2004

CONTENTS

INTRODUCTION

A national payment system is an arrangement consisting of payment instruments, banking operations, the interbank and retail payment systems that ensures money circulation. Safe and efficient operation of the payment system facilitates the development of the national economy. According to internationally accepted practice, the central banks are responsible for the oversight of the national payment system. The payment system oversight in Latvia is recognised in the Article 9 of the Law "On the Bank of Latvia", stipulating that the Bank of Latvia shall promote smooth operation of payment systems in the Republic of Latvia.

The Bank of Latvia has set forth the principles of the payment systems oversight in the document "The Bank of Latvia's Payment System Policy". In accordance with the oversight principles, the Bank of Latvia performs the oversight of 1) systemically important payment systems; 2) retail payment systems and 3) payment instruments.

Systemically important payment systems is an essential component of the financial infrastructure, and their efficient operation ensures rapid and secure interbank transfers. The oversight of systemically important payment systems helps to reduce operation disruptions within a system which might trigger further disruptions amongst the system participants. Oversight of payment systems facilitates their continuous operation and contains systemic disruptions within the whole financial system.

Along the large-value interbank payment system, retail payment systems also represent an important component of a national payment infrastructure. The oversight of such systems is a topical issue mostly due to the large number of their users. Disruptions in retail payment systems is not the major source of the systemic risk; however, they may affect a large part of the general public and decrease its trust in the overall payment system.

The Bank of Latvia ensures the oversight of payment instruments used in Latvia in order to promote their development and reduce the related risks. Carrying out its oversight function, the Bank of Latvia compiles statistical data on the development of electronic payment instruments in Latvia and develops recommendations with the aim of timely reduction of risks related to electronic payment instruments.

The Bank of Latvia would like to provide information to the public on the payment system oversight results. Chapter 1 describes the oversight of a systemically important payment system – the Bank of Latvia's interbank automated payment system (hereinafter, the SAMS); Chapter 2 is dedicated to the oversight of the retail payment system – the Bank of Latvia's electronic clearing system (hereinafter, the EKS); Chapter 3 deals with the day-to-day oversight of the SAMS and the EKS, and Chapter 4 provides an insight into the oversight of payment instruments.

1. OVERSIGHT OF SYSTEMICALLY IMPORTANT PAYMENT SYSTEMS

The Bank of Latvia mostly performs oversight of systemically important payment systems, thus considerably reducing risks throughout the payment system and ensuring a safe and efficient payment environment for its participants and the entire financial system.

The Bank of Latvia ensures the operation of the SAMS, a large-value payment gross settlement system. According to international standards, the SAMS is classified as a systemically important payment system; hence, the Bank of Latvia performs its oversight in line with the Core Principles for Systemically Important Payment Systems published by the Bank for International Settlements and acknowledged internationally (hereinafter, the Oversight Core Principles). In 2003, the Bank of Latvia conducted an assessment of the SAMS, concluding that the SAMS generally complies with the Oversight Core Principles, thus ensuring a safe and efficient payment environment for its participants and the entire financial system.

1.1 Importance of the SAMS in Latvia's payment infrastructure

According to international standards and practices, systemically important payment systems are those where operation disruptions may negatively affect numerous participants of the payment system, as well as transmit shocks across the financial system. A system is likely to be systemically important if it meets at least one of the following criteria:

1) the system is the only large-value payment system in the country;
2)the system handles mainly payments of high individual value;
3) the system is used for settlements of monetary operations and net settlements of retail payment systems.

The SAMS is the only large-value payment system in Latvia where large-value interbank payments account for most of the system's turnover and which is used for settlements of monetary operations, net settlements of retail payment systems and securities settlement systems and DVP (*delivery versus payment*) cash settlements of securities settlement systems (see Chart 1).

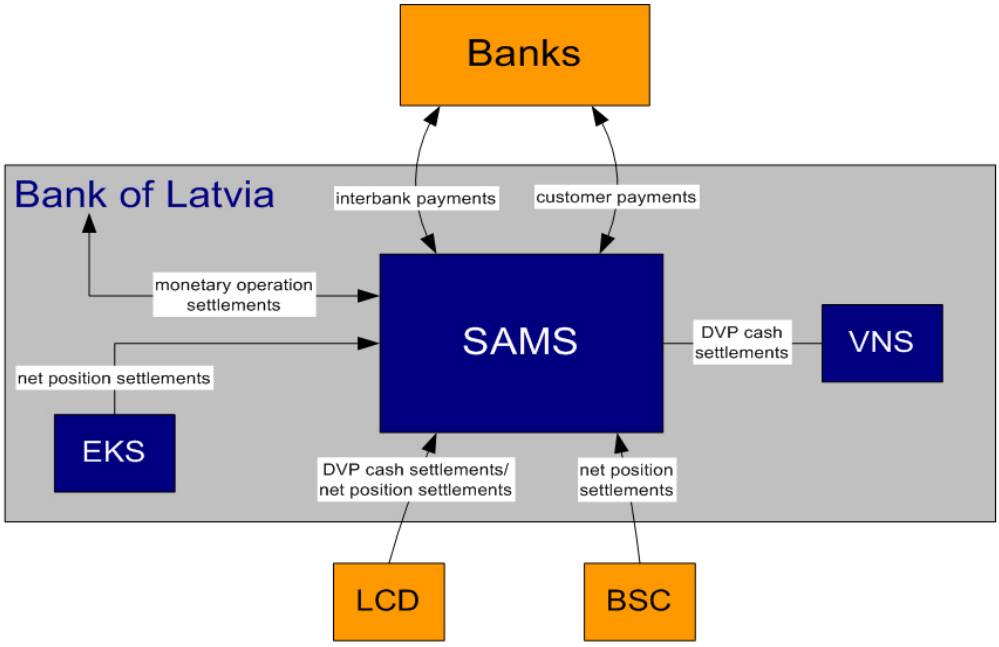


Chart 1. **SAMS payment flows**

The goal of the SAMS is to ensure rapid, convenient and secure transfers. Since it serves a wide range of the financial system's participants, the SAMS is an essential component of Latvia's financial infrastructure. Banks use the SAMS mostly for interbank payments and urgent customer payments. As both the system's operator and its participant, the Bank of Latvia ensures settlements of monetary policy operations and cash settlements of other payment or securities settlement systems. The EKS, the card payment system of the limited liability company *Banku servisa centrs* (hereinafter, the BSC) and the securities net settlement system of the Latvian Central Depository (hereinafter, the LCD) use the SAMS for net position settlements. Whereas the VNS, the Bank of Latvia securities settlement system and the LCD securities gross settlement system use the SAMS for DVP cash settlements.

Interbank payments, including the settlements of the Bank of Latvia's monetary operations, are the most important part of the settlements handled by SAMS, and these payments comprise the largest part of the system's totals by value. In 2003, interbank payments, including the settlements of the Bank of Latvia's monetary operations, accounted for 35.5% of total volume of payments and 74.4% of their total value (see Charts 1.1 and 1.2). Customer payments processed within the SAMS in 2003 accounted for 52.7% and 19.8% of total volume and value of payments, respectively. Customer payments account for the major share of settlements within the SAMS by volume, but the value of these payments is relatively small. The share of final settlements and DVP cash settlements of other settlement systems within the SAMS is comparatively less significant (11.8% and 5.8% of total volume and value of payments in 2003, respectively).

Chart 1.1

BREAKDOWN OF PAYMENTS HANDLED BY THE SAMS
(In 2003; volume; %)

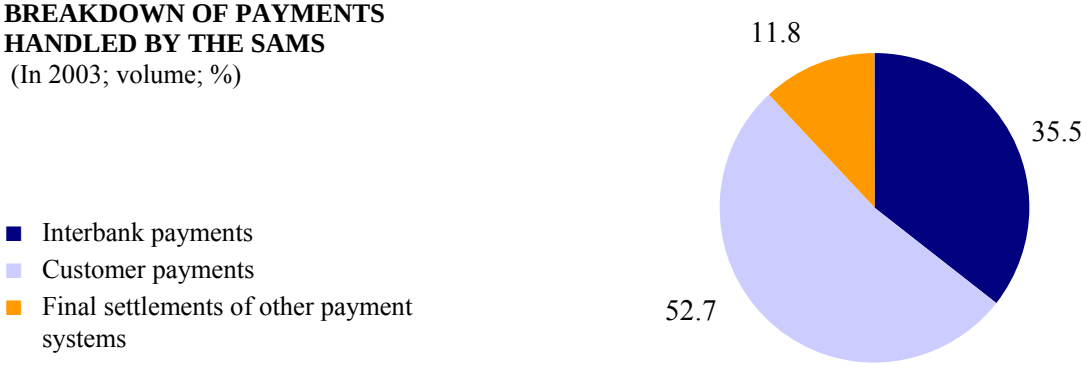
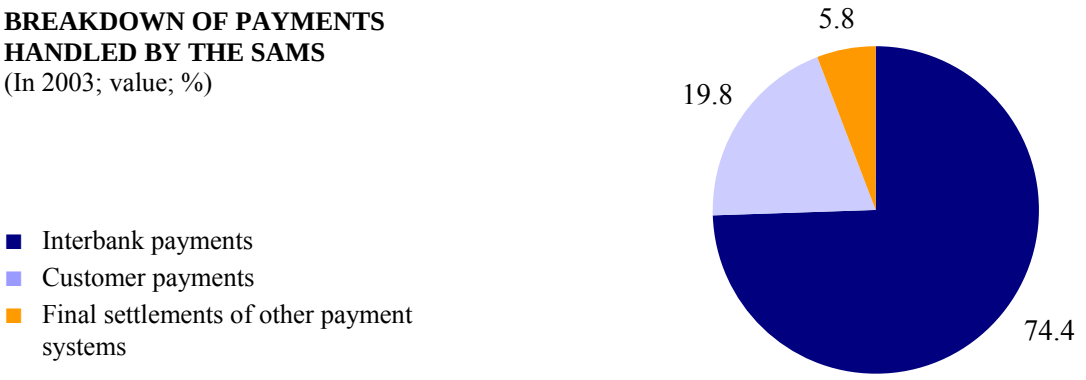


Chart 1.2

BREAKDOWN OF PAYMENTS HANDLED BY THE SAMS
(In 2003; value; %)



The SAMS is the only large-value payment system in Latvia ensuring large-value interbank settlements and cash settlements of a wide range of the financial system's participants. Such payment systems and their participants are associated with significant risks, including the risk of a domino effect. Hence according to internationally accepted standards the SAMS shall be considered a systemically important payment system. Pursuant to the "Bank of Latvia's

Payment System Policy", the oversight of systemically important systems shall be performed by assessing their compliance with the Oversight Core Principles.

1.2 Assessment of the SAMS according to the Oversight Core Principles

In 2003, the SAMS was assessed as generally compliant with the Oversight Core Principles. As a result of the assessment, several shortcomings were identified and comments on the required improvements of the SAMS Regulations and procedures were provided. Some of the drawbacks were eliminated as the Council of the Bank of Latvia approved the revised "Regulation for Interbank Settlements Effected by the Bank of Latvia" on September 18, 2003 (hereinafter, the Regulation for Interbank Settlements) where:

– additional participation criteria in the SAMS have been stipulated, requiring the participants to submit a sound legal opinion on the bank's capability to comply with the system's security requirements;

– a procedure has been set forth whereby the Bank of Latvia ensures continuous operation of the system in an emergency, e.g., switching to the SAMS backup system or using the SWIFT backup connection;

– cases have been specified when and for how long the payment order receipt in the SAMS may be extended.

The assessment of each oversight core principle (hereinafter, the Core Principle) contains the identified shortcomings (if any) and the correction measures (if any). The SAMS has been assessed, stating the system's degree of compliance with each Core Principle (full compliance; compliance; partial compliance; non-compliance; not applicable to this system). The SAMS complies with Core Principle VIII and fully complies with Core Principles I–IV, VI, VII, IX and X, while Core Principle V is not applicable to this system.

Core Principle I. The system should have a well founded legal basis under all relevant jurisdictions.

The following legislation of the Republic of Latvia forms the legal basis for the SAMS operation: the Laws "On the Bank of Latvia", "On Credit Institutions", "The Civil Law of the Republic of Latvia" and the Law "On Settlement Finality in Payment and Financial Instrument Settlement Systems".

– Article 9 of the Law "On the Bank of Latvia" stipulates that the Bank of Latvia shall promote smooth operation of the payment systems in the Republic of Latvia. The Law also stipulates that the Bank of Latvia shall organise and ensure the operation of the interbank payment system in Latvia.

– The Law "On Credit Institutions" defines the procedure of the establishment, supervision, insolvency, bankruptcy and liquidation of credit institutions. The Law "On Credit Institutions" stipulates that where intensified supervision is applied, the Financial and Capital Market Commission is entitled to request the Bank of Latvia to suspend the credit institution's settlements which are executed via the settlement accounts with the Bank of Latvia.

– The Law "On Settlement Finality in Payment and Financial Instrument Settlement Systems" provides for the netting and settlement finality, their legal power in the systems and the right to dispose, at their own discretion, of the collateral which has been provided

in relation to their participation in the system or transactions with the central bank, including in the case of insolvency proceedings of a system participant.

"The Civil Law of the Republic of Latvia" also regulates the procedure of establishing, changing and terminating contractual relations in the Republic of Latvia.

The SAMS operational procedures are regulated by the following Bank of Latvia's regulations: Regulation for Interbank Settlement, the agreement "On the Participation in the Bank of Latvia's Interbank Automated Payment System" and the "Functional Specification of the SAMS" (hereinafter jointly referred to as the SAMS Regulations). The Bank of Latvia's "Regulation for Granting Lombard Loans" regulates granting of intraday overdraft limit and automatic Lombard loans.

– The "Regulation for Interbank Settlements" stipulates the settlement procedure in the SAMS: the Bank of Latvia executes payments in lats among the banks, participants of the SAMS, which have opened settlement accounts with the Bank of Latvia. A payment order is irrevocable and the settlement made on the basis of the above payment order is final as of the moment the beneficiary's bank account within the SAMS has been credited.

– The "Functional Specification of the SAMS" provides for the SAMS framework, message types, procedure for payment processing, as well as describes the SAMS operation in detail.

– The Bank of Latvia's "Regulation for Granting Lombard Loans" stipulates the procedure for granting the cash account intraday overdraft limit and automatic Lombard loans. This Regulation stipulates that the Bank of Latvia shall grant the cash account intraday overdraft limit and automatic Lombard loans to banks only against an unencumbered securities collateral held by the respective bank, as well as provides for the execution of collateral rights. In such a case, the Bank of Latvia acts as the pledgee, whereas the system participant is the pledgor. Where the system's participant fails to fulfil its obligations, the Bank of Latvia as the pledgee has the right to dispose of the collateral, taking possession of the pledged securities by debiting the respective securities from the bank’s collateral account and crediting them to the Bank of Latvia's securities account.

The Republic of Latvia legislation pertaining to the sphere of payment and settlement systems has been harmonised with the European Union legislation: 1) Directive 98/26/EC of the European Parliament and of the Council on settlement finality in payment and securities settlement systems and 2) Directive 97/5/EC of the European Parliament and of the Council on cross-border credit transfers.

Assessing the legislation regulating the SAMS operation, it was identified that the laws, system regulations and the agreements concluded in line with the Bank of Latvia regulations form a stable and relevant legal basis for the SAMS operation in the Republic of Latvia. The SAMS thus fully complies with Core Principle I.

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.

To ensure safe and efficient functioning of a payment system, the regulations and procedures shall enable its participants to understand and manage the risks incurred through the participation in the particular system. Credit risk and liquidity risk are the most essential risks which may directly affect payment systems and their participants. There is no credit risk in the SAMS since the system operation is based on the gross settlement principle and payments are executed only within the limits of funds available on the system participant's settlement

account. Liquidity risk within the SAMS is reduced to minimum, enabling the SAMS participants to receive intraday overdraft limit with the Bank of Latvia and ensuring payment queue management procedures. Furthermore, the SAMS participant may monitor the inflow and outflow of payments and the balance of its settlement account with the Bank of Latvia in real time.

The SAMS Regulations set forth the general operational and settlement execution principles of the system (incl. its legal basis), the system's operation time, requirements for joining, suspending or terminating the participation in the system, as well as risk management procedures and the system's operation in an emergency.

Each participant concludes an agreement with the Bank of Latvia "On the Participation in the Bank of Latvia's Interbank Automated Payment System" stipulating the rights and obligations of the system participants (including the Bank of Latvia). The agreement is an integral part of the SAMS Regulations, and by signing the agreement the system's participants confirm that they are familiar with the SAMS Regulations and undertake to comply with them. The SAMS Regulations are publicly disclosed on the Bank of Latvia's website.

Participants in the system are informed on the amendments to the SAMS Regulations, and all amendments are agreed with the Association of Latvian Commercial Banks, which represents banks registered in the Republic of Latvia, prior to their approval by the Board of the Bank of Latvia.

Assessing the SAMS, it was identified that the SAMS Regulations should stipulate the system operator's commitment to ensure continuous operation of the SAMS. At this stage the section "The SAMS operation in an emergency " of the "Regulation for Interbank Settlements" has been supplemented with the procedure whereby the Bank of Latvia ensures the system's continuous operation; hence the Regulations for the SAMS operation are clear and understandable and consistent with the current operation of the system; the SAMS also fully complies with Core Principle II.

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.

The SAMS is a real-time gross settlement system, i.e. settlement for each payment order is executed on an order-by-order basis; the sending bank's settlement account is debited prior to crediting the receiving bank's settlement account and payments are executed only within the limits of funds available on the sending bank's settlement account; hence, the system participants in the SAMS are not subject to credit risk. A payment order is irrevocable and the settlement made on the basis of the above payment order is final as of the moment the beneficiary's bank account within the SAMS has been credited.

The SAMS liquidity risk is reduced, ensuring wide-scale liquidity risk management possibilities for the SAMS participants:

– granting the bank intraday overdraft limit in the form of settlement account overdraft against a security collateral;

– where a bank's cash account has overdraft at the end of the settlement day, automatic Lombard credit is granted in the respective overdraft amount;

– the system participants are offered efficient payment queue management facility. Where the sending bank's settlement account balance is insufficient to effect settlement, the payment orders submitted to the SAMS are included in the payment queue. To reduce the risk of blocked payment queues, a system participant may change the priority level of a payment order in the queue or cancel the payment order. At the end of the settlement day all unsettled payments in the queue are rejected;

– the payment queue gridlock resolution has been installed for the system, initiated automatically by the SAMS in the event conditions indicating queue blocking set in;

– the system participants are offered the possibility to monitor the payment inflow and outflow and their settlement account balance in the SAMS in real time.

Assessing the SAMS, it has been identified that the procedures for the SAMS credit risk and liquidity risk management have been clearly defined in the SAMS Regulations, explicitly stating the responsibility of the parties in containing risks; hence the SAMS fully complies with Core Principle III.

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.

The SAMS is a real-time gross settlement system implying that settlements are effected individually for each received payment order on an order-by-order basis within the limits of funds available on the settlement account and in line with the Regulation for Interbank Settlements, crediting the beneficiary account in the SAMS in real time; they are final and irrevocable.

Where the settlement account balance of the sending bank in the SAMS is insufficient to effect settlements, payment orders are placed in the payment queue. As soon as sufficient funds for settlement are available on the sending bank's account, the payment is accepted in the system by debiting funds from the sending bank's account and immediately crediting them to the beneficiary's account.

The SAMS operates each business day from 8.30 to 17.00. The cut-off time for processing participant customers' payment orders in the SAMS is 16.00, and interbank payment orders are processed in the SAMS by 16.30. The SAMS automatically rejects those payment orders which have not been executed by the stipulated time and are in the queue. The SAMS rejects the submitted payment orders also in those cases where they have not been prepared in compliance with SWIFT standards or duplicate another payment. Rejecting a payment order, the SAMS sends a notification of payment rejection (MT019 *Abort Notification*) to the sending bank, indicating the reason for rejecting the payment order.

The SAMS is opened and closed manually, and the system operator is responsible for that. Each working day the system operator fills in the SAMS task journal where the system operations are laid out in detail (e.g. the beginning of the operation time, the end of the operation time for customer payment orders, the end of the operation time for interbank payment orders, etc). The system's operation time is strictly complied with and deviations are permitted only in the cases stipulated by the system Regulations.

Assessing the SAMS, it was identified that the system Regulation does not stipulate precisely when and for how long the system's operation time may be extended. At this stage section "The SAMS operation in an emergency" of the system Regulation stipulates more precisely the cases when and for how long the system's operator may extend the time of payment order

receipt in the system, thus correcting the identified shortcoming. The SAMS thus fully complies with Core Principle IV.

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.

The SAMS is a gross settlement system, hence Core Principle V does not apply to this system.

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.

Core Principle III features the SAMS settlement principle. Settlements in the SAMS are effected through settlement accounts of the SAMS participants with the Bank of Latvia, hence settlements in the SAMS are executed in the national currency.

The SAMS thus fully complies with Core Principle VI.

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.

SWIFT *FIN Copy* service in mode Y is used in the SAMS data transmission, and it is an integral part of the SAMS, ensuring that payment exchange is possible exclusively among users registered in the system. Double authentication is performed for the payment orders to be transmitted, ensuring the following:

– mutual electronic keys;

– PAC (*Proprietary Authentication Code*).

The SAMS uses the following SWIFT message formats: MT202 and MT205 for interbank payments, MT102 and MT103 for customer payments. Net position settlements (EKS, BSC, LCD net positions) are executed using the account transfer facility.

Settlements in the SAMS are fully automated and the key task of the SAMS operators is monitoring the system operation, as well as opening and closing of the system.

The SAMS operational reliability and continuous operation is ensured by two independent system installations: the main system and the backup system, located in separate buildings. All data between the main and the backup systems are copied in real time *(data mirroring)*; hence in the event the main system operation is disrupted, the backup system ensures the SAMS operation. In an emergency, upon the SAMS reconnection from the main system (main server) to the backup system (backup server), complete operation can be restored approximately within an hour. In compliance with the procedures, problem situation simulation and restoration of the system operation in the backup system is tested twice a year.

Each year, the system's availability ratio (reflecting the efficiency of the SAMS operation) has improved. In 2003, the SAMS availability ratio was 99.8%. The system operation disruptions were temporary (mostly SITA x.25 network problems), without causing essential damage to the system operation.

Uninterrupted operation of the SAMS is regulated by the "Action Plan of the Payment System Department in an Emergency", and its goal is to ensure interbank funds transfers in an emergency.

The Bank of Latvia has concluded an agreement with *LogicaCMG* on servicing the SAMS *(Service Level Agreement)*, installation of new versions, problem solution, etc. In the event of system problems the SAMS operators can contact *LogicaCMG* 24 hour help desk. The most important SAMS operational problems are reported to the relevant institutions (*LogicaCMG*, SWIFT) who are responsible for examining causes of the problems and, if necessary, take measures to prevent such problems and mistakes.
All changes related to the SAMS hardware and software are at first discussed at the working group comprising representatives of the Payment Systems and Information Systems Departments of the Bank of Latvia. Prior to their final introduction and usage by the SAMS participants the upgraded versions of the system are thoroughly tested and improved if necessary.

Pursuant to the "Regulation for the Security of the Bank of Latvia Information Systems", the Bank of Latvia conducts information systems risk analysis on an annual basis. Risk analysis contains information on the system's availability, recovery time of the system operation, process of the backup data processing, level of confidentiality, potential system threats and their prospective impact on the system's safety, as well as on the required improvements of the information systems.

Assessing the SAMS, it has been identified that the system ensures a high degree of security and operational reliability in standard situations, as well as in an emergency , thus the SAMS fully complies with Core Principle VII.

Core Principle VIII. The system should provide a means of making payments which is practical for its users and efficient for the economy.

The goal of the SAMS is to ensure rapid, secure and efficient interbank settlements, the Bank of Latvia's monetary operations and urgent customer payments.

The SAMS structure prevents any participant credit risk, ensures efficient liquidity management for them, as well as increases trust in the overall financial system. The system's Regulation is clear and understandable, developed in cooperation with its participants and the Association of Latvian Commercial Banks, providing the system's participants an understanding of the SAMS participants' rights and obligations.

Each business day customer payment orders are processed in the SAMS from 8.30 to 16.00, and interbank payment orders are processed by 16.30. The Bank of Latvia's payment orders related to granting automatic Lombard loans are processed from 16.30 to 17.00. At the close of the settlement day the Bank of Latvia notifies the SAMS participants of their settlement account balances at the end of the settlement day as well as of the payments executed during the day.

Balanced price policy is one of the key rules of an efficient payment system. When introducing the SAMS, the Bank of Latvia discussed the system's operational principles and costs arising from the participation in the respective system with the system's potential participants. The SAMS charges no regular fee for participation in the system, and participants are not charged any entry fee.

A system's participant is charged per payment order depending on the number of payment orders submitted per month: for the first 100 payment orders – LVL 0.80, from 101st to 1

000th payment orders – LVL 0.50, and beginning with the 1 001st payment order – LVL 0.20; charge for an execution of a payment cancellation order – LVL 0.50. In addition, the SAMS participants cover all costs related to the installation and maintenance of the SAMS participant workstation, as well as those pertaining to the use of SWIFT network, incl. message transmission fees. Currently the charge for payments executed in the SAMS only partly covers the SAMS maintenance costs – it is mostly caused by the high software maintenance costs.

When assessing the SAMS it was identified that the commission for the SAMS payment orders does not reflect directly the system maintenance costs. Nevertheless, in general the SAMS ensures efficient way of payment execution – real-time gross settlement. The SAMS ensures service which meets the interests of its participants and demand on the Latvian financial market; thus the SAMS complies with Core Principle VIII.

Core Principle IX. The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.

To become a SAMS participant, the prospective system participant shall:

- be a bank or a branch of a foreign bank registered in the Republic of Latvia, a credit institution registered in an EU or a European Economic Area country, a foreign bank, an international monetary, financial or credit institution or any other institution entitled to perform funds transfer operations in the Republic of Latvia pursuant to its legislation;
- open a settlement account with the Bank of Latvia;
- conclude an agreement on the participation in the SAMS;
- be a full-fledged SWIFT participant;
- join the Bank of Latvia Interbank Data Transmission Network and conclude an agreement on using electronic keys for data protection in compliance with the Bank of Latvia's "Regulation for Encrypting and Digitally Signing Information".
- conduct the relevant system tests.

The Bank of Latvia's Regulations and the SAMS participation agreements are freely available on the Bank of Latvia's website to any person interested.

The participation agreement in the SAMS is concluded for an indefinite time; there are three options for a SAMS participant to terminate its participation in the system:

- the parties agree in writing thereof ;
- seven days after the receipt of a notification from the Bank of Latvia in writing;
- after the receipt of a notification from the bank in writing if the bank has settled all obligations against the Bank of Latvia arisen as a result of the agreement.

When assessing the SAMS it was identified that additional participation criteria in the SAMS should be stipulated, requiring the prospective system participant to submit a legal opinion on its compliance with the system's security requirements. Since the shortcoming has been removed by supplementing the SAMS participation criteria with a requirement to submit a legal opinion and in view of the fact that the SAMS participation criteria are objective and explicit and they ensure the participants free and fair access, the SAMS fully complies with Core Principle IX.

Core Principle X. The system's governance arrangements should be effective, accountable and transparent.

The SAMS owner and operator is the Bank of Latvia, and the system is managed by the Payment Systems Department. The Payment Systems Department ensures the SAMS operation and performs the SAMS day-to-day oversight. The Information Systems Department cooperates with the Payment Systems Department, ensuring technical maintenance of the system, communications network and servers.

In the Payment Systems Department, operational and oversight functions are strictly separated: the Payment System Operations Division is responsible for ensuring the system's operation, whereas the Payment System Policy Division is responsible for ensuring the SAMS and the EKS oversight.

The Bank of Latvia makes amendments to legislation in cooperation with the system participants and the Association of Latvian Commercial Banks. The Board or Council of the Bank of Latvia approve the system regulations and their amendments; they are published in *Latvijas Vēstnesis*, the official newspaper of the Republic of Latvia, and are available on the Bank of Latvia website.

The Payment Systems Department ensures the SAMS operation in line with ISO 9002 quality procedures developed and approved by the Bank of Latvia.

Assessing the SAMS, it was identified that the Bank of Latvia ensures transparent, accountable and effective management of the SAMS, thus the SAMS fully complies with Core Principle X.

2. OVERSIGHT OF RETAIL PAYMENT SYSTEMS

The main features of retail payment systems are payments of relatively low value and a large number of users. The aggregate value of retail payments processed by such systems accounts for the second major share of the national payment infrastructure. Pursuant to the "Bank of Latvia's Payment System Policy", the responsibility for a safe and efficient functioning of the retail payment system has to be undertaken by operators and participants of the respective systems, making the operation of the system compliant, where possible, with the Oversight Core Principles. The EKS is one of the major retail payment systems in Latvia, and the Bank of Latvia performs the EKS oversight in compliance with the Oversight Core Principles. The EKS role in Latvia's payment system was assessed in line with the guidelines of the European Central Bank (hereinafter, the ECB)[1], stating that in 2003 the EKS operation qualified it as a systemically prominent system. For systems of such status, full compliance with the Oversight Core Principles related to containing financial risks is not strictly required. Applying other Oversight Core Principles to the EKS operation, full compliance with them was identified, thus confirming a high level of security and efficiency of the system.

2.1 Importance of the EKS in Latvia's payment infrastructure

The methodology developed by the ECB offers criteria for assessing the retail payment system's importance and identifying the Oversight Core Principles to be applied to the particular system. Three inherent factors are used to assess the EKS importance: 1) the availability of substitute systems in the payment infrastructure in Latvia; 2) the system's impact in the context of the financial market and the economy, and 3) the possibility of a domino effect in the system.

Availability of substitute systems

The possibility to substitute the system is characterised by its share in the respective retail payment market. The larger the system's market penetration, the more attention should be paid to the oversight of the respective system. Where the retail payment system is the only settlement possibility for a definite type of payments or where it has a substantial market share, i.e. there is no equivalent settlement alternative, the risk of being unable to execute a particular type of settlement in the event of a system's operational error increases for a large number of customers, mostly private persons and small and medium size enterprises (hereinafter, the SMEs). Hence part of the general public may lose confidence in the overall payment system and the national currency. A system where more than 75% of the respective retail payment market execute their settlements is considered to have a low possibility of substitution and hence it is a systemically important system.

The EKS processes retail credit transfers in lats. Settlement of customer credit transfers of Latvia's banking system may be executed via the Bank of Latvia's interbank payment systems or intrabank and interbank payment systems outside the Bank of Latvia. In the overall customer credit transfer market intrabank payments accounted for the largest share. In 2003, the EKS retail credit transfers accounted for 35.7% and 13.6% of total volume and value of credit transfers, respectively (see Charts 2.1 and 2.2).

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[1] *Oversight Standards for Euro Retail Payment Systems. – Frankfurt am Main: European Central Bank, June 2003, 8 pp.*

Chart 2.1

CUSTOMER CREDIT TRANSFERS WITHIN THE BANKING SYSTEM
(In 2003; volume; %)

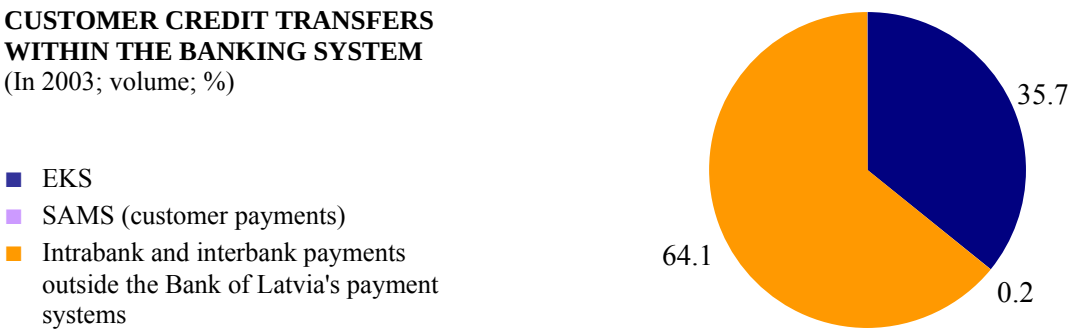
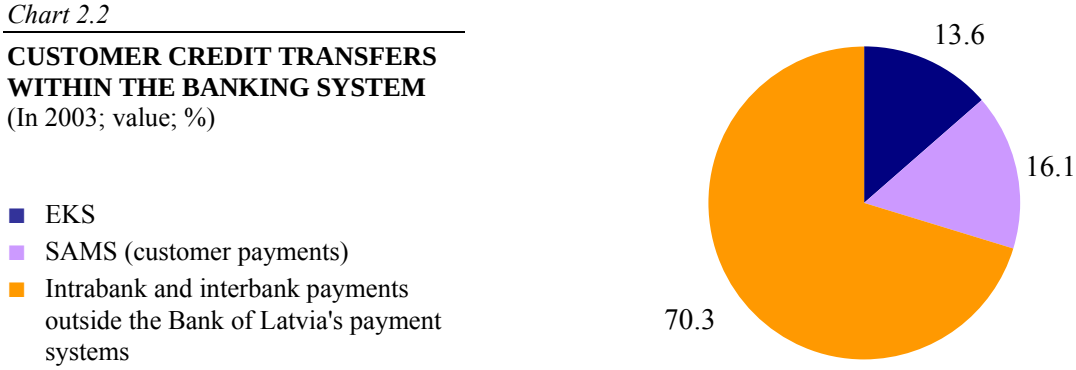


Chart 2.2

CUSTOMER CREDIT TRANSFERS WITHIN THE BANKING SYSTEM
(In 2003; value; %)



Nevertheless, the EKS importance is better demonstrated by its share in retail credit transfers among banks, excluding urgent customer payments which are settled via the SAMS, the Bank of Latvia's real time settlement system. In 2003, on average 56.7% and 65.0% of the volume and value of retail credit transfers among banks were processed with the help of the EKS.

Hence in 2003 the share of interbank retail credit transfers made in the EKS exceeded the 25% limit set by the ECB (a feature characteristic of a systemically prominent system), but did not exceed the 75% market penetration limit (a feature of a systemically important system). Hence according to substitution criteria the EKS qualifies as a systemically prominent payment system.

The impact of the system in the financial market context

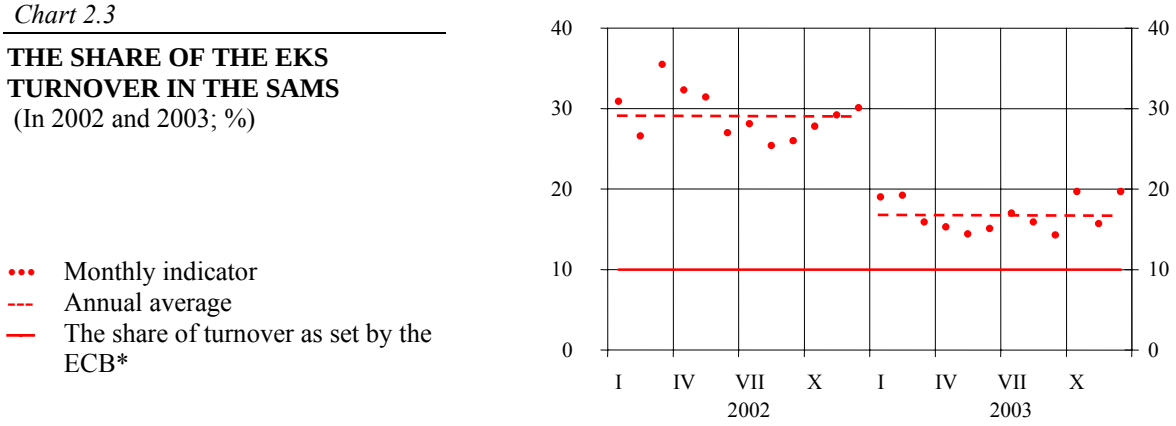
Retail payment systems process retail payments of relatively low value, hence their disruptions normally do not pose immediate threat to the stability of the national payment system. Nevertheless, the overall payment flow of retail payment systems may considerably affect the financial market. To assess the potential impact of the EKS, the relevant retail payment system, its turnover is compared with the turnover of the respective large-value interbank payment system, the SAMS, and the system's daily average turnover is assessed.

The retail payment system normally handling the real sector payments is considered systemically important according to the ECB methodology where the share of its aggregate value against the large-value system of the financial sector exceeds 10%. A higher penetration suggests that private persons and SMEs execute large-value payments outside the payment systems of the financial sector. With the above share increasing, the impact of the respective retail payment system's financial risks on the overall payment system increases.

In 2003, the EKS turnover was 5.6 billion lats or 16.7% of the SAMS turnover. It is considerably lower than in 2002 (6.2 billion lats or 29.0%; see Chart 2.3). The decrease in the EKS share was mostly the result of the dynamic increase in the financial market transactions in lats: in 2003 the value of payments processed in the SAMS grew by 56.0% (to 33.5 billion lats).

Chart 2.3

THE SHARE OF THE EKS TURNOVER IN THE SAMS
(In 2002 and 2003; %)



∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

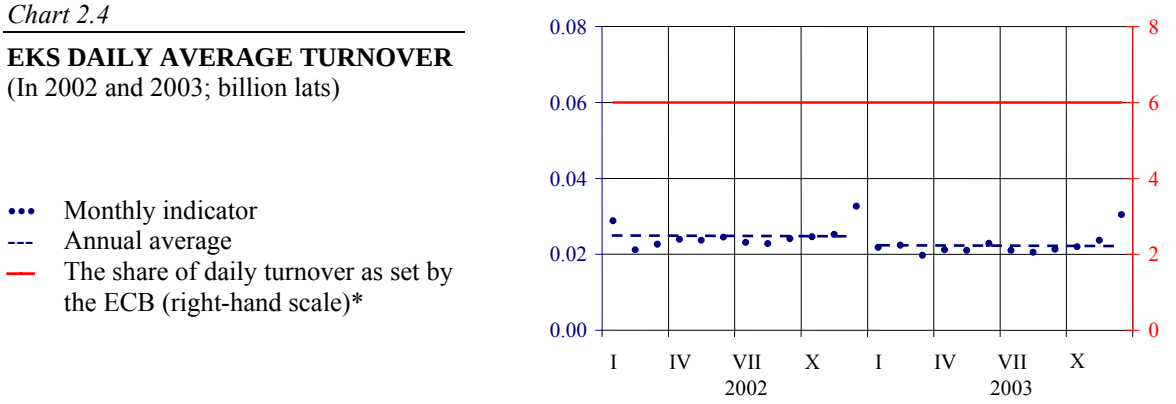
The EKS processes credit transfers in lats only, and in Latvia, like elsewhere, other payment instruments have developed more rapidly in recent years: card payments and direct debits; therefore the EKS turnover remains approximately the same. The increase in internet banking payments ensures a stable share of credit transfers in the payment instrument market in Latvia; the considerable increase though is more attributable to the above card payments and direct debits.

With the financial market in Latvia remaining dynamic and the structure of the payment instrument market having no essential changes, the EKS could reach the 10% share of a retail payment system in the financial sector payment system (as stipulated by the ECB methodology) in the near future.

According to the ECB methodology, apart from the share indicator, the system's daily average turnover is used as the second indicator of a system's financial importance. In 2003, the EKS daily average turnover was 22.3 million lats, i.e. 9.7% less than in 2002. A payment system is considered systemically important where its daily average turnover reaches 10 billion euros. However, the value stipulated by the ECB is more typical of the EU developed countries, and the EKS daily average turnover in 2003 was considerably smaller than that (see Chart 2.4).

Chart 2.4

EKS DAILY AVERAGE TURNOVER
(In 2002 and 2003; billion lats)



∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

Although the EKS absolute indicators in 2003 showed quite small daily turnover of the payment system in comparison with the one set by the ECB, the share of the EKS turnover in the SAMS (16.7%) qualified this retail payment system as systemically important.

Domino effect

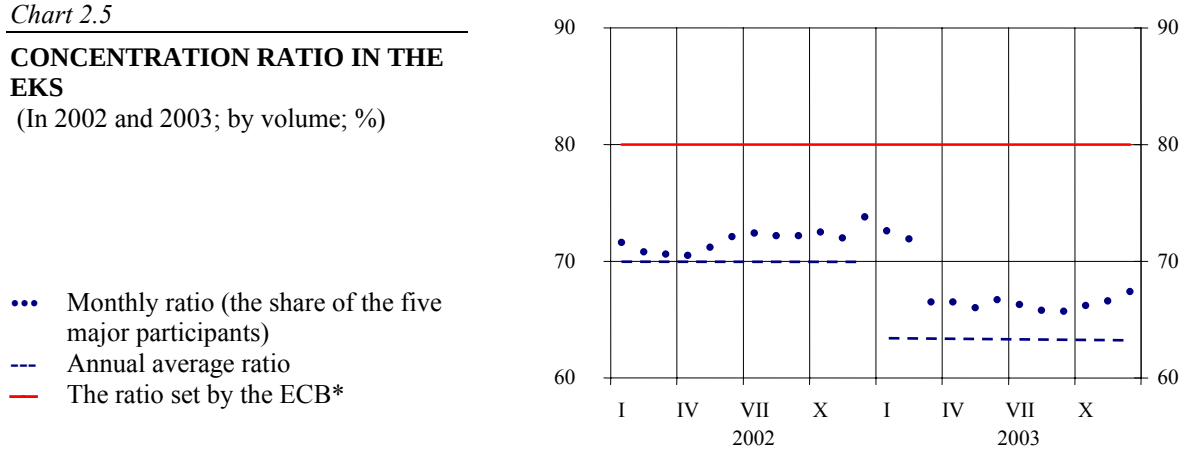
The risk of a domino effect is very significant in large-value net settlement systems, since the failure of any of the system participants to fulfil its settlement obligations may prevent the fulfilment of other participants' obligations which in its turn might cause problems both in the financial and the real sectors. The EKS is a net settlement system processing retail payments. A maximum limit of 50 000 lats has been set per one payment in the system. In compliance with the ECB methodology, the risk of a domino effect is assessed with the help of three indicators: 1) concentration ratio; 2) the netting effect of a system and 3) the size of the system participants' net debit positions.

The first indicator of the domino effect assessment is the concentration ratio, calculated as the share of the five largest participants (according to their debit positions) in the system turnover. With the concentration ratio reaching 80%, a possibility increases in the system that in the event any of the major system participants (according to their debit positions) encountered difficulties executing settlement or failed to fulfil its obligations also in a later period, other system participants as well might face financial problems. According to the ECB, such a level of the concentration ratio qualifies the system as systemically important.

In 2003, the EKS concentration ratio both with respect to the volume (63.3%) and value (69.3%) of payments was lower than the 80% limit set by the ECB (see Charts 2.5 and 2.6). In comparison with 2002, both average annual ratios shrank by 6 percentage points, suggesting that dispersion of liabilities positions among the system participants increased in 2003. Consequently the influence of the major system participants and the potential risk of the domino effect decreased. Although the maximum monthly concentration ratios (in January 2003 the volume and value of payments were 72.6% and 75.5%, respectively) are lower than the stipulated limit of 80%, they indicate periodically high concentration of major system participant obligations in the system.

Chart 2.5

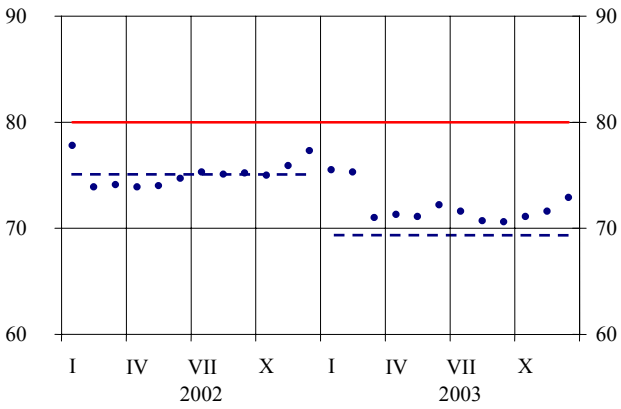
CONCENTRATION RATIO IN THE EKS
(In 2002 and 2003; by volume; %)



∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

Chart 2.6

CONCENTRATION RATIO IN THE EKS
(In 2002 and 2003; by value; %)



∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

The next indicator of the domino effect assessment is the netting effect, i.e. the system participants' net settlement balance as a percentage of gross transaction value. A high netting effect is the basis for an efficient system, since most of transactions are mutually offset (netting) and the system participants do not need additional liquidity collateral on their accounts. However, in the event of settlement errors the high netting effect may become a significant risk as the system participants incur additional obligations which might trigger liquidity risk and credit risk expansion in the system.

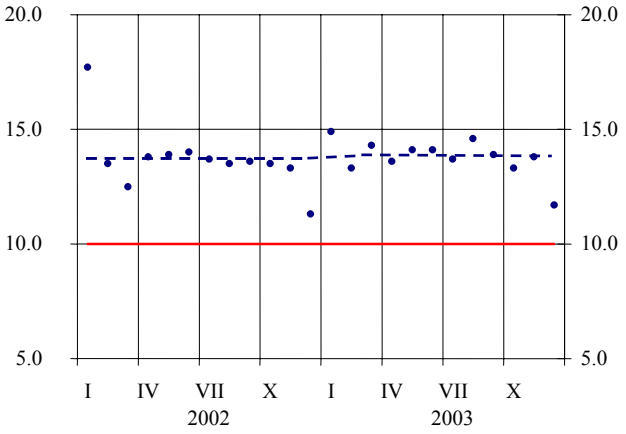
The domino effect is more prominent where the net settlement system has a higher netting effect. Where the net settlement in the system is executed e.g. with respect to half (50%) of gross positions but participants have to execute gross settlement of these positions due to an error in the system operation, the liquidity required is 50% higher than in the event of a successful net settlement. With the netting ratio declining below 10%, the system is considered systemically important according to the ECB methodology. In comparison with the average ratio of 2002 (13.7%), the EKS netting effect remained almost unchanged (13.8%), retaining a difference of 4 percentage points in comparison with the level set by the ECB (see Chart 2.7). Thus no significant netting risk or its increase was identified, and in 2003 the EKS should not be considered a systemically important system with respect to this ratio.

The last indicator of the domino effect assessment is the value of the system participants' net debit positions. According to the ECB methodology, a payment system is considered systemically important where its daily average turnover exceeds 1 billion euros. In 2003, average of the daily maximum debit position per system's participant was 1 192.3 thousand lats or 0.2% of the level set by the ECB (see Chart 2.8). In comparison with the average indicator of 2002, the value of the net debit position per system participant shrank by 29.7%, suggesting that the possibility of causing substantial damage to other system participants in the event of disruptions of the largest liabilities position settlement in the EKS decreased; hence the potential risk of a domino effect in the system decreased.

Chart 2.7

THE SHARE OF NET DEBIT POSITIONS IN THE EKS TURNOVER

(In 2002 and 2003; %)



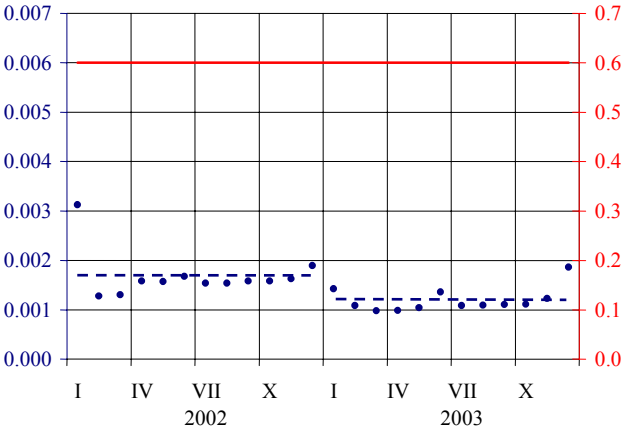
••• Monthly indicator
--- Annual average
— The share of net debit positions as set by the ECB*

∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

Chart 2.8

MAXIMUM DAILY NET DEBIT POSITION PER EKS PARTICIPANT

(In 2002 and 2003; in billions of lats)



••• Monthly indicator
--- Annual average
— Daily net debit position as set by the ECB (right-hand scale)*

∗ According to the *Oversight Standards for Euro Retail Payment Systems*.

Where the retail payment system can be hardly substituted and has significant financial risks, as well as the risk of a domino effect is highly possible, the system may be assessed as systemically important according to the ECB methodology. According to the above criteria the EKS in 2003 was an interbank retail payment system with a low possibility of substitution and with important financial and prominent domino effect relative ratios. However, in view of the small value of the processed payments and in comparison with the turnover set by the ECB methodology for systemically important systems these risks were assessed as insignificant. Consequently the EKS may be qualified as a systemically prominent and not a systemically important payment system.

2.2 Assessment of the EKS pursuant to the status of a systemically prominent payment system

A systemically prominent payment system plays considerable role in the processing and settlement of retail payments, and disruptions in such a system have a substantial economic effect and may undermine the confidence of the public in the payment system at large and the national currency. However, the degree of financial risk posed by this system is lesser than the potential financial risks posed by the systemically important payment system. In order not to undermine the efficiency of the system in the context of the economy and upon aligning the

evaluation of the EKS with the ECB methodology, the EKS is not currently assessed according to the Core Principles (III–VI) containing financial risks of the system. The operational quality of the EKS is confirmed by the system's full compliance with Core Principles I, II and VII–X.

Core Principle I. The system should have a well founded legal basis under all relevant jurisdictions.

Retail payment systems identified as systemically prominent systems according to the ECB methodology should have a well founded legal basis. Participants in the system will be exposed to financial risks, if the system's rules and procedures are not clearly defined and implemental. The legal basis of the EKS operation is similar to that of the SAMS operation (see Core Principle I in section 1.2).

The EKS operational procedures are regulated by the following Bank of Latvia's regulations: the "Regulation for Interbank Settlements", the agreement "On Electronic Settlement in the Electronic Clearing System of the Bank of Latvia" and the "Functional Specification of the EKS" (hereinafter jointly referred to as the EKS Regulations).

– The "Regulation for Interbank Settlements" stipulates the settlement procedure in the EKS: the Bank of Latvia executes payments in lats among the banks, participants in the SAMS, that have opened settlement accounts with the Bank of Latvia. Payment orders are irrevocable from the moment they are sent to the EKS. The net settlement is final as of the moment all book transfers of all credit positions within the respective clearing cycle have been recorded.

– The "Functional Specification of the EKS, the Electronic Clearing System" incorporates the technical specification of the EKS, the descriptions of the message and payment message file formats, as well as the criteria for checking payment messages.

The legislation and the agreements of the EKS create a stable and appropriate legal basis for the operation of the EKS in the Republic of Latvia. The EKS thus fully complies with Core Principle I.

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.

Participants in the retail payment system, considered to be systemically prominent according to the ECB methodology, should have a clear understanding of the financial risks incurred through participation in the system. Such information should be described in the system's regulations and procedures stipulating the rights and obligations of all parties involved.

The EKS Regulations set out the principles for the EKS overall operation and for effecting settlements in both clearing cycles, the system's operation time, requirements for the participation in the system and the system's operation in an emergency. The EKS Regulations stipulate the parties' liabilities for reducing financial risks, ensure full understanding of the risks they may incur in relation to their participation in the system, and are publicly disclosed on the Bank of Latvia's web site.

Any participant in the SAMS may become a participant in the EKS by concluding an additional agreement "On Electronic Settlement in the Electronic Clearing System of the Bank of Latvia", whereby the rights and obligations of the system's participants participating

in the EKS are stipulated. The agreement "On Electronic Settlement in the Electronic Clearing System of the Bank of Latvia" is an integral part of the "Regulation for Interbank Settlements", and by signing this agreement the system's participants confirm that they are familiar with the EKS Regulations and undertake to comply with them.

Participants in the system are informed of the amendments to the EKS Regulations, and all amendments are agreed with the system's participants prior to their approval by the Board of the Bank of Latvia.

The regulations and agreements regulating the EKS operation are explicit, accountable and consistent with the present operation of the system, and provide a clear understanding of the financial risks related to the participation in the EKS. Hence the EKS fully complies with Core Principle II.

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

Just as the participants in the financial sector rely on large-value payment systems for the settlement of the financial market transactions, the real economic agents: private persons and SMEs are also very dependent on the availability of retail payment systems. According to the ECB methodology, systemically prominent retail payment systems should be secure, operationally reliable and have contingency arrangements for timely completion of daily processing.

The EKS is an automated payment system and settlement in the EKS is effected through the system participants' settlement accounts in the SAMS. The EKS uses the same SWIFT message format for customer payments as the SAMS: MT103. The Bank of Latvia's interbank communication network (hereinafter – ICN) is used for transmitting the EKS data. The ICN data are encrypted and signed digitally pursuant to the Bank of Latvia's "Regulation for Using the Interbank Network" and the "Regulation for Encrypting and Digitally Signing Information", thus providing full data protection.

To ensure a high degree of security and operational reliability, the EKS consists of a main system and a reserve system located in two separate buildings. The data exchange between the main system and the reserve system is effected in real time, and if disruptions occur in the main system, the system can resume operation in another building within an hour, without losing any information.

To identify efficiently and eliminate, on a timely basis, the problems incurred in the systems, the Bank of Latvia has defined the "Procedure for Implementing Immediate Bank of Latvia's Payment Information System Corrections". The employees of the Payment Systems Department and the Information Systems Department hold monthly discussions about the most topical solutions to the EKS problems.

The EKS ensures a high degree of security and operational reliability in standard situations, as well as in an emergency, thus the EKS fully complies with Core Principle VII.

VIII The system should provide a means of making payments which is practical for its users and efficient for the economy.

Pursuant to the ECB methodology, all systems deemed to be systemically prominent should be practical for their users and efficient for the economic development. In practice, designers of systems have to choose between minimising costs and achieving other objectives, such as maximising the safety of the system. The payment executing in the system should be

consistent with the business practice in the country, and its effects on the economy as a whole should be taken into account, when developing the system.

The EKS processes retail credit transfers made in lats among banks. The EKS is an automated payment system, and a high netting effect of the system indicates that the clearing system is efficient. To increase the system's efficiency in the context of the economy, a transition from one clearing cycle and a fixed tariff to two clearing cycles and a varied tariff depending on the number of transactions in the system, was implemented at the beginning of 2004.

Upon introducing two clearing cycles, the participants in the EKS are ensured the execution of retail payment settlement on the same day. In the first clearing cycle, payments are accepted from 8.30 to 10.30 and in the second clearing cycle – from 10.30 to 15.00. In an emergency, the recording of book transfer of net positions is postponed until 16.00.

After the completion of every clearing cycle, the Bank of Latvia sends to the system's participants the clearing result files containing reference to the payment messages prepared by the participant and included in the net settlement, as well as those addressed to the respective participant.

The EKS charges no regular fee for participation in the system, and the system's participants are not charged an entry fee. A system's participant is charged per payment order depending on the number of payment orders submitted per month: for the first 10 000 payment orders – LVL 0.015, from 10 001st to 100 000th payment orders – LVL 0.007, and beginning with the 100 001st payment order – LVL 0.002. A transaction fee charged from the participants for the processing of payments in the system fully covers the EKS maintenance costs.

The EKS is an efficient net settlement system providing services in line with the demand by private persons and SMEs, thus the EKS fully complies with Core Principle VIII.

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

Pursuant to the ECB methodology, all systems deemed to be of prominent importance should have objective and publicly disclosed criteria for participation. Access criteria should encourage competition amongst participants in the retail payment system, promoting efficient and low-cost payment services.

Key conditions stipulated for the participants in the EKS are the participation in the SAMS (see Core Principle IX in section 1.2) and entering into the agreement "On Electronic Settlement in the Electronic Clearing System of the Bank of Latvia". These requirements have been stipulated for the participation in the EKS to protect its participants against additional risks resulting from the participation of other parties in the system.

Criteria for participation in the EKS are objective and understandable and permit fair and open access, thus the EKS fully complies with Core Principle IX.

X The system's governance arrangements should be effective, accountable and transparent.

Pursuant to the ECB methodology, the payment system's governance arrangements should be effective, accountable and transparent. The governance arrangements provide the structure through which the system's overall objectives are set, attained, as well as their performance is monitored. The governance arrangements should ensure an unrestriceted performance of the management functions to attain the objectives of the system, its participants and the public as

a whole. The system's governance arrangements should ensure accountability and transparency, so that all affected parties have access to information applicable to them. The EKS governance arrangements are identical to the SAMS governance arrangements (see Core Principle X in section 1.2).

The Bank of Latvia ensures transparent, accountable and efficient management of the EKS, thus the EKS fully complies with Core Principle X.

3. DAY-TO-DAY OVERSIGHT OF THE SAMS AND THE EKS

Day-to-day oversight of the SAMS and the EKS is conducted to obtain current information on the systems' operation, disruptions in their functioning or unexpected changes in the systems' operational indicators. The task of the oversight is to analyse this information and indicate potential risks, which can have an adverse effect on the smooth operation of the systems. Day-to-day oversight comprises an oversight of various processes related to the systems' operation, its functions being strictly separated from the operational functions of the systems. The day-to-day oversight of the SAMS and the EKS includes the following tasks:

1) analysis of the payment systems' statistical data. The day-to-day oversight includes analysis of fluctuations in the system's financial risk and the risk of a domino effect indicators. Thus, for instance, in 2003, the daily indicator of the EKS netting effect fluctuated 9.8 percentage points around the annual average indicator, i.e. the system's efficiency variation was in the range of 8.9% to 18.7%. The analysis of the systems' statistical data helps to evaluate effectively the changes in the volume and value of the payments processed in the system, as well as the trends related to the payment systems and their participants. Thus, for instance, the system's availability ratio fluctuated 0.72% points, while the annual average ratio (99.83%) was the highest since the introduction of the SAMS. Information about the payments processed in the systems on a preceding day is available to the system overseers, allowing them to analyse efficiently the payment systems' operation over any period. Thus, for instance, upon extending the EKS operation time at the beginning of 2004, the payment flows by some banks increased. Analysis of the payment systems indicated that after the extension of the system's operation time and the introduction of the second clearing cycle the banks, which had executed some payments outside the EKS previously, started executing payments through the EKS. Once a month the overseers of the SAMS and the EKS perform data analysis of the volume and value of the payments processed in the payment systems, the average payment amount, the participants in the payment systems, the types of payments and other data, published in the quarterly and annual reports on a regular basis;

2) review of the legal basis regulating the operation of the payment systems.

Drafting of regulations and laws is assessed by the systems' overseers. In 2003, amendments were made to the "Regulation for Interbank Settlements". The systems' overseers assessed the draft amendments to the above Regulation and gave commentaries, which were taken into account when supplementing the system's regulations, including also the corrections of the drawbacks identified during the assessment of the SAMS at the beginning of 2003 and incorporated therein;

3) analysis of the SAMS and the EKS risk assessment. The risk coordinator of the Payment Systems Department conducts an annual assessment of the risks inherent in the SAMS and the EKS. Analysis of the risk assessment in the first half of 2004 indicates that all potential risks have been reviewed, risk reducing measures are appropriate and the level of the remaining risk is acceptable;

4) analysis of the incidents and their potential impact on the smooth operation of the payment systems. Oversight of incidents is one of the most substantial tasks within the oversight of the systems, as it directly impacts the system's operation and its participants. A special working group, consisting of the employees of the Payment Systems Department and the Information Systems Department, has been established for the purpose of identifying incidents in the SAMS and the EKS. Once a month the working group discusses topical issues of the SAMS

and the EKS. At the working group meetings the systems' overseers express their opinions on the solutions to the respective problems. In 2003, a number of minor incidents, mainly related to the operation of the EKS, occurred. They were solved by the working group.

4. OVERSIGHT OF PAYMENT INSTRUMENTS

Payment instruments offered to bank customers directly impact the efficiency of the payment system. The Bank of Latvia collects and analyses information on the payment instruments used in Latvia. If necessary, the Bank of Latvia drafts legislation, regulations or recommendations for the use of payment instruments to reduce the national payment system's exposure to risks, when significance of a payment instrument increases considerably and its use poses a threat to an efficient and secure operation of the payment system.

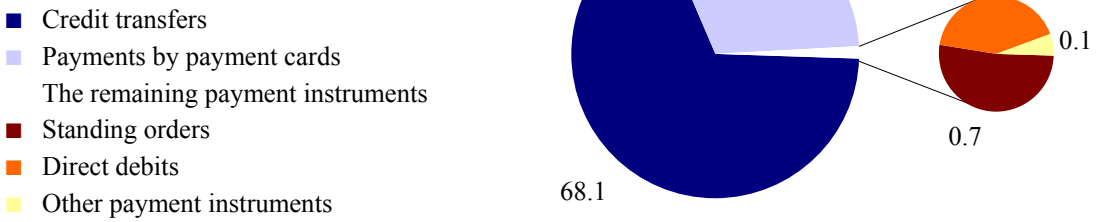
4.1 Importance of payment instruments in Latvia's payment infrastructure

The payment system of Latvia is relatively novel and has already initially developed, with banks introducing technologically advanced and progressive payment instruments. The development of cashless payment instruments has been very dynamic. Along with the development of infrastructure, banks offered their customers increasingly novel and comprehensive means of paying for goods and services, by using cash deposits on their bank accounts. Electronic settlements are widely used in Latvia's payment system.

Customers are ensured all types of cashless payment instruments by the banks of Latvia. Credit and debit instruments are used, with the payment cards being an individual group of payment instruments. Credit instruments (credit transfers, etc.) and payment cards (see Chart 4.1) are most widely used in the banking system of Latvia.

Chart 4.1

PAYMENT INSTRUMENTS
(In 2003; volume of payments; %)

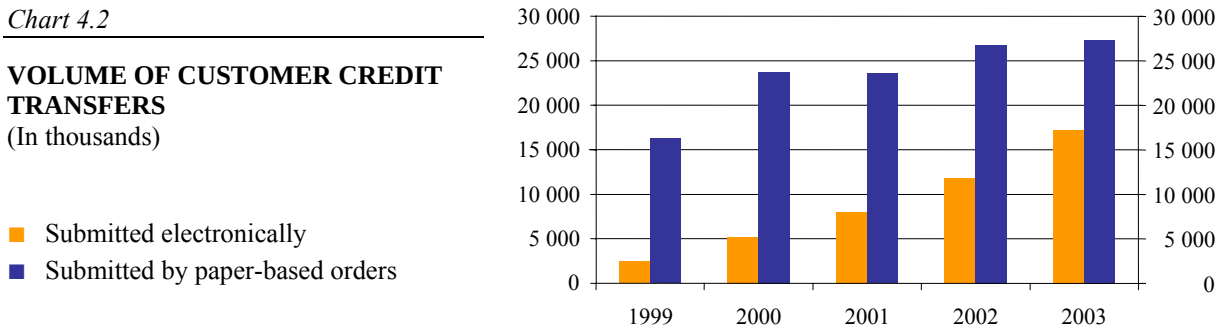


Credit transfers account for 68.1% and 99.8% of total volume and value of the banking system's cashless payments. All credit transfers have been executed electronically in the banking system of Latvia since 2002, i.e. information included in the customer payment orders is transferred via telecommunications. Electronic credit transfers have substantially reduced the transfer execution time and processing costs. Credit transfers in lats can be effected in a few minutes from the receipt of a customer payment order by the originator's bank. Nowadays bank customers are also provided variuos possibilities for submitting payment orders to banks. Expanding the range of services, banks offer their customers alternative arrangements in addition to submitting paper-based payment orders to banks, for instance, home-banking, Internet banking, telephone banking and mobile banking services. These banking products ensure efficient and safe means of communication to the customers, allowing them to save both money and time. Recently the volume of electronic credit transfers has increased substantially (see Chart 4.2). Although large share of the credit

transfer orders are still submitted to banks in the form of paper documents, their penetration in the total volume of credit transfers reports a steep decline.

Chart 4.2

VOLUME OF CUSTOMER CREDIT TRANSFERS
(In thousands)



Debit instruments (cheques and direct debits) are seldom used in Latvia. Cheques are used increasingly less in Europe. It is related to the EU policy on containing the use of cheques due to their inefficiency and the credit risk involved. Direct debits are quite a new banking product, still not very popular in Latvia.

Given the dynamic development of electronic payment instruments, the Bank of Latvia's task is to analyse risks related to the payment instruments and reduce them on a timely basis. Hence the Bank of Latvia, overseeing Latvia's payment system, focuses on the security of payment instruments and has developed the "Recommendations for Transactions Effected by Means of Electronic Payment Instruments" (hereinafter – the Recommendations). At the end of 2003, the Bank of Latvia conducted a survey of compliance with the Recommendations.

4.2. Compliance with the "Recommendations for Transactions Effected by Means of Electronic Payment Instruments"

The main objective of the survey was to identify compliance with the Recommendations upon informing customers about an overall procedure for the use of electronic payment instruments and stipulating the obligations and liabilities for banks and customers in the transactions effected by electronic payment instruments.

The results of the survey indicate that the Recommendations are basically complied with. The response from the banks indicates that the Recommendations are taken into consideration in relation to the minimum information to be incorporated in the regulations for the issuance and use of electronic payment instruments and information to be provided about the transactions with electronic payment instruments.

Drawbacks were also identified in the compliance with individual recommendations. Banks offer their customers mainly four types of electronic payment instruments: telephone banking, Internet banking, home-banking and payment cards. Major shortcomings in the compliance with the Recommendations have been identified in the sphere of payment cards. The use and servicing of payment cards is mostly stipulated by the international payment card companies' (Eurocard/MasterCard, VISA) regulations, which the banks endeavour to fulfil first.

One of the reasons why the above requirements for the use of payment cards have not been fully complied with might be differences in the requirements set by the Recommendations and the international payment card companies.

The summary of the survey results provides analysis of the bank answers about compliance with some particular requirements of the Recommendations.

Liability of a holder of an electronic payment instrument in the case of a loss or theft of the electronic payment instrument

Item 4.2.1 of the Recommendations stipulates that until the time the holder notifies the issuer (a bank) or the entity specified by the latter, the holder has to bear the loss sustained in consequence of the loss or theft of the electronic payment instrument up to a set limit, which may not exceed EUR 150. This requirement of the Recommendations is particularly significant in consequence of the loss or theft of the payment cards, as a person's identification data is not requested for the purchases up to 150 lats, when executing a payment with a payment card a signature is enough, and the recipient of the payment card is not liable for its authenticity.

The results of the survey indicate that this requirement of the Recommendations is not accurately complied with by any bank. The bank regulations and agreements generally stipulate that until the submission of a notification on the loss or theft of the payment instrument, the customer is held liable for all operations and transactions with the electronic payment instrument owned by him/her. However, banks or customers themselves may set the transaction amounts or a daily limit for the transactions with electronic payment instrument, thus containing losses to a certain amount. The regulations of any bank, whereby the use of electronic payment instruments is regulated, stipulate the minimum measures for secure storage of an electronic payment instrument and a customer's liability for superficial or negligent storage of the electronic payment instrument. One of the customer's essential obligations is to immediately notify the bank or an institution indicated by the bank of the loss or theft of the electronic payment instrument. Moreover, banks have also provided their customers with a convenient and efficient notification system at any time of day or night. The banking practice indicates that every case is reviewed individually by analysing the degree of fault of a customer for losses sustained in consequence of the loss or theft of the electronic payment instrument. Having analysed the facts, bank decides on the amount of losses the customer should recover. The most active banks in the payment card business maintain 24-hour payment card transaction monitoring systems examining transactions effected by payment cards in real time to discover, on a timely basis, and prevent the use of payment cards for fraudulent purposes and reduce the contingent losses incurred by a customer or a bank as a result of an unauthorised use of a payment card by its owner. Moreover, these systems of monitoring ensure timely elimination of problems related to the technical faults in the payment card servicing. Such a system of monitoring is maintained also by *BSC,* servicing the payment card settlements by those banks which do not maintain their own POSs networks. To contain an unauthorised use of payment cards, banks have commenced issuing smart cards and updating POSs, thereby providing card authorisation using a PIN.

In Latvia, 15 banks fail to comply precisely with the requirement that the holder of an electronic payment instrument shall not be held liable for further losses sustained after notifying the issuer of the loss or theft of the electronic payment instrument. The answers provided by the banks suggest that this requirement is generally not met concerning credit cards, as these cards are not authorised in retail transactions abroad via direct communication with the issuer's bank each time. Banks have stipulated that, for 24 hours and even longer after notifying the issuer of the loss or theft of the card, the customer is liable for every transaction with the card in the amount of 100–300 US dollars (pursuant to the regulations of the respective bank). 12 banks have failed to set even such a limit. This, in essence, means lack of customer protection as credit cards are an exclusive banking product with which banks

confirm confidence in their customers and guarantee convenient settlements internationally. Debit card holders enjoy a better protection, as every transaction with these cards is generally authorised directly communicating with the issuer's bank. If a bank has received a customer's notification of loss or theft of a card, the respective card is immediately blocked. Banks and the *BSC* ensure their customers notification of a loss or theft of the card via telecommunications on a 24-hour basis.

A substantive requirement of the Recommendations for customer protection (Item 4.2.3) is the following: the customer is not liable for any losses if the payment instrument has been used without presenting it physically or identifying electronically. Such a requirement helps to prevent cases where a third party may pay for Internet purchases by indicating the number and the validity term of another person's payment card (without carrying out any other card owner's authorisation measures). Settlements with a payment card for Internet purchases are common. Fraudulent transactions with payment cards on Internet substantially impair the card users' confidence in the safety of the payment card products. To contain such risks, banks offer other arrangements for a convenient and fairly safe settlement for Internet purchases.

Notifying customers on the amendments to the regulations for the use of electronic payment instruments

The Recommendations stipulate that the issuer of the electronic payment instruments has to notify its customers individually, if amendments are made to the regulations for the use of electronic payment instruments, and a period of at least 30 days has to be set, enabling customers either to accept the regulations or decline further use of the electronic payment instrument.

The results of the survey suggest that banks comply with these requirements, however, not all customers are informed individually about the amendments to the Regulation. Informing the customers usually takes the form of providing information at the bank. The regulations of the banks generally stipulate customers' liability for compliance with the amendments to the regulations. Customers using remote access banking services (Internet banking, mobile banking and other services), are informed on an individual basis electronically (via the Internet, e-mail, telephone etc.). Banks generally provide information on the amendments to the regulations on a timely basis.

Bank's liability for the non-execution or erroneous execution of the customer's transactions effected by electronic payment instruments, if transactions are initiated at devices/terminals or through equipment which is under the issuer's direct or exclusive control

In practice, the liability of banks is not generally stipulated or the regulations provide a disclaimer of the customer's liability for the transactions executed with his/her electronic payment instrument. Banks review each issue separately to make a decision on the compensation for the losses incurred by a customer and on the degree of the customer's fault for the losses sustained.

Moreover, the Association of Commercial Banks of Latvia provides for an efficient dispute resolution out of court, i.e. disputes are brought to an Ombudsman of the Association of Latvian Commercial Banks; disputes are thus resolved quickly, if no agreement has been reached between a bank and a customer.

According to the summarised results of the survey, only three banks have had disputes resolved in court. In most cases banks agree with their customers and resolve disputes without lodging a claim with the court.

Conclusions

Assessing the results of the survey, it can be concluded that the Recommendations are mostly complied with. However, it has to be admitted that the banks' regulations for the use of electronic payment instruments stipulate that a customer is mainly liable for the losses sustained by him/her as a result of the use of electronic payment instruments. Such a situation, primarily regarding payment cards, arises from banks for the most part offering international payment cards in Latvia. The use of these cards is regulated by international standards and regulations binding on the card issuer banks and stipulating different, less strict requirements for banks with respect to their customer protection, as stated in the Recommendations.

The Bank of Latvia's Recommendations have been developed on the basis of the "EC Recommendations 97/489/EC concerning transactions carried out by electronic payment instruments and in particular the relationship between holder and issuer". The EU Study on the implementation of the EC Recommendations in EU countries indicates that the compliance with the requirements of the Recommendations is imprecise in most countries. As the competition among Latvian banks is tight and preserving customer confidence is significant for them, banks increasingly improve and develop security measures related to electronic payment instruments and enhance regulations for the use of electronic payment instruments.

The Recommendations stipulate sound practice that should be introduced in Latvia to strengthen customers' confidence in the banking sector. Thus, the bank regulations for the use of electronic payment instruments should explicitly define the liability of banks in the cases involving the use and servicing of electronic payment instruments. Transparency in the use of electronic payment instruments would thus substantially improve and the number of disputable issues would decrease. Given the situation in the EU, the Bank of Latvia for the time being will not stipulate additional measures to improve compliance with the requirements of the Recommendations, but will continue to analyse the situation in the sphere of electronic payment instruments in Latvia and its development trends in the EU.

4.3 Implementation of the IBAN in Latvia

To improve automated processing of payments, reduce the number of erroneous payments and payment execution, correction and error examination costs, and to align the financial system according to the requirements of the Regulation No 2560/2001 of the European Parliament and of the Council "On Cross-Border Payments in Euro", the Bank of Latvia and banks have agreed on implementing the IBAN (International Bank Account Number) standard in Latvia.

The IBAN is an international bank account number, developed by the European Committee for Banking Standards and the International Organisation for Standardisation, to be used internationally as banking information explicitly identifying a customer's account number with a financial institution. By mid-2004, the IBAN had already been implemented in 32 European countries and their territories.

The Latvian IBAN was introduced on the basis of the "Concept for the Implementation of the IBAN" approved by all banks.

Pursuant to the Concept, the Bank of Latvia, upon an agreement with banks, developed and approved the "Regulation for the Use of the IBAN" (in effect as of January 1, 2004), setting forth the requirements regarding the procedure for assigning, validating and using the IBAN in Latvia. The Regulation is binding on all credit institutions and other institutions registered

with the Republic of Latvia (including the state joint-stock company *Latvijas pasts*), servicing customer accounts and executing customer funds transfers. To align the financial system gradually and prepare customers for the use of the Latvian IBAN, a transition period has been set until January 1, 2005, when banks can concurrently use both the current customer account numbers and the IBAN to identify customer accounts. As of January 1, 2005, the Latvian IBAN will be the sole identifier of customer accounts.

The Regulation (EC) No 2560/2001 of the European Parliament and of the Council "On Cross-Border Payments in Euro" provides for the duty of banks to issue the IBAN to their customers and the duty of customers to indicate it in their invoices for cross-border business transactions in euros within the European Economic Area (the EU countries, Iceland, Liechtenstein and Norway). Compliance with the requirements of the Regulation is essential both for banks and all customers executing cross-border payments in euros within the European Economic Area: if the beneficiary's IBAN has not been indicated in the payment documents, higher commission fees may be charged both by the banks of Latvia and by the banks of the European countries. The commission fee charged for a cross-border transfer in euros to a country within the European Economic Area, thereby indicating the beneficiary's IBAN and the BIC (Bank Identifier Code) of the beneficiary's bank, and the commission fee charged for similar intra-Member State transfers have to be the same. The above conditions relate only to the transfers not exceeding 12 500 euros (50 000 euros from January 1, 2006).

The structure of the Latvian IBAN (21 characters) is as follows: 2 letters (country code), 2 digits (check digits), 4 letters (the bank identifier code BIC) and 13 characters (the account number; for shorter account numbers zeros will be added where characters are missing). For instance, if a customer's account number with a bank is 876543210, the respective IBAN will be LV34BANK0000876543210. The customer may find out the IBAN only in his/her bank and it is unacceptable that other institutions or individuals create an IBAN arbitrarily, as it may differ from the IBAN assigned by a bank.

The key advantage of the IBAN standard is the use of check digits preventing a possible error due to misspelling or other reasons, when the payer indicates the beneficiary's IBAN. Upon submitting a payment order to a bank, the bank can check the compliance of the beneficiary's account number, the IBAN, and inform the customer, if an incorrect IBAN has been specified.

By mid-2004, almost all banks of Latvia (except two) had ensured their customers the use of the IBAN, thereby notifying customers on the assigned IBAN in person or by placing information in the bank or via mass media. Pursuant to the "Concept for the Implementation of the IBAN", the Bank of Latvia has issued a booklet informing bank customers on the necessity of the IBAN standard, the purpose of its use and the possibilities of assigning the Latvian IBAN.