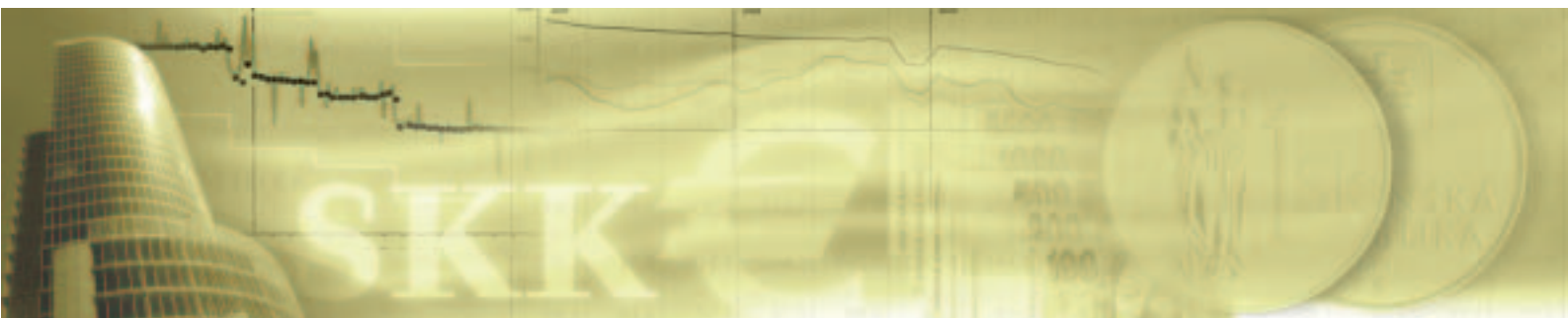


E. PAYMENT SYSTEM



1. THE PAYMENT SYSTEM OF THE SLOVAK REPUBLIC

The primary objective of the National Bank of Slovakia is to maintain price stability. To this end, the National Bank of Slovakia controls, co-ordinates and ensures the payment system and settlement of payment transactions in the scope defined by the Act of the National Council of the Slovak Republic No. 566/1992 Coll., as amended.

On 1 January 2003, Act No. 510/2002 Coll. on the payment system and on the amendment of certain other laws (the Act on the Payment System) became effective. In this act, comprehensive legislation governing the payment system has been enacted and the Slovak legal system has been brought into line with European Union legislation relating to payments. The Act on the Payment System was drafted in accordance with the process of approximation and harmonisation of the Slovak legal system with that of the European Union. The Act on the Payment System transposes Directive 97/5/EC on cross-border credit transfers, Directive 98/26/EC on settlement finality in payment and securities settlement systems, part of Directive 2000/46/EC on the taking up, pursuit of and prudential supervision of the business of electronic money institutions (institutions issuing electronic money), Article 8 of Directive 97/7/EC on consumer protection in respect to distance contracts, and recommendation 97/489/EC concerning transactions by electronic payment instruments and in particular the relationship between the issuer and the holder. The Act on the Payment System, in fact, goes beyond the scope of relevant European Union legislation to stipulate other issues related to the payment system.

The Act on the Payment System governs, in particular, the execution of domestic and cross-border fund transfers, the issuance and use of electronic payment instruments, the creation and operation of payment systems, supervision of payment systems, as well as procedures address-

ing complaints and out-of-court resolution of disputes arising in connection with the payments.

In order to direct and ensure a uniform payment and settlement system and data clearing from the payment and settlement system between banks and selected juristic entities, the National Bank of Slovakia issues generally binding regulations.

2. PAYMENT SYSTEMS IN THE SLOVAK REPUBLIC

Beginning on 1 January 2003, a significant change occurred in the interbank payment system in the Slovak Republic. Operation of the payment system was taken over by the National Bank of Slovakia from the Slovak National Clearing Centre (Bankové zúčtovacie centrum Slovenska a. s.) which had operated the SIPS interbank payment system since 1993. The National Bank of Slovakia thus became the operator and concurrently the settlement agent for SIPS (the Slovak Interbank Payment System). This change was motivated by an effort on the part of the National Bank of Slovakia to enhance the effectiveness and safety of the payment system, using the most advanced information technologies as a basis to build up the RTGS (Real Time Gross Settlement) system under Slovak Republic conditions. Another reason was to pursue a pricing policy based on the principle of full cost recovery, which in the end meant a principal multiple reduction in charges for transfers to participants in the SIPS payment system. This effort was also supported by shareholders' decision of the Slovak National Clearing Centre.

The SIPS interbank payment system is the only payment system in the Slovak Republic designed to process and settle domestic payments. The system processes all payments regardless of their value. The National Bank of Slovakia built up the SIPS interbank payment system by investing its own resources, while preserving the cost effectiveness thereof. It can be stated that from the very

start of its operations, the SIPS payment system has been operating reliably and to the full satisfaction of its participants. Participation in the SIPS payment system is based on equal access for each participant. No participant is discriminated against, and the National Bank of Slovakia has concluded the same contract with each participant. Any pending changes in the payment system are always discussed in advance with participants at joint working meetings.

2.1. SIPS Interbank Payment System

The processing and settlement of payments is done in line with the principles of gross settlement, high priority payments are executed in line with the principles of real time gross settlement. Payments are processed and settled on a continuous basis during the day in accounts maintained in the National Bank of Slovakia. Technically, account balance information is provided to participants at 5-minute intervals.

The processing and settlement of payments is fully automated, data between the National Bank of Slovakia and participants to the SIPS system is transmitted exclusively in electronic form: via a communication system called BIPS (Basic Interface for Payment System). Payments are entered for processing in the form of clearing files following a local standard, which is called a clearing sentence.

The SIPS interbank payment system operates in 24-hour cycles, called clearing days. During such a cycle, the SIPS system continuously receives input files from participants, processing them and updating balances on money reserve accounts maintained in the National Bank of Slovakia. The responsibility for the content and completeness of data rests with the participants. The SIPS system performs formal checks on the structure of input data.

Payments are processed and settled along FIFO (First In First Out) lines in accordance with predetermined priorities. For each payment the

system checks whether there are sufficient funds available on the participant's account with the National Bank of Slovakia to cover the payment. If this proves to be the case, the payment is immediately processed and settled. If not, the payment is lined up in a queue, from which it is released only after reaching the sufficient amount of funds to cover it or if conditions are met for its settlement within the clearing algorithm. Payments, which are not covered at the end of the clearing day with sufficient funds on the participants account with the National Bank of Slovakia, are returned to the participant as unprocessed on the grounds of the lack of liquidity.

Until 31 December 2003 debit balances on participants' accounts with the National Bank of Slovakia were not allowed. Payments were processed and settled only up to the credit balance amount. There is an intention that, starting on 1 January 2004, participants subject to the minimum reserve requirement will be allowed to apply for an intraday credit line. The intraday credit line will only be payable within one operating day of the SIPS system and it must be fully covered by short-term securities registered in the Central Registry maintained by the National Bank of Slovakia. The provision of intraday credits has been enacted in the Decision of the National Bank of Slovakia No. 6/2003 dated 12 December 2003 on conditions and procedure for the provision of intraday credits to participants in the SIPS payment system.

Payments are continuously released from the queue by the clearing algorithm. The clearing algorithm enables the processing and settlement of a group of payments of several participants, which could not be processed separately because of a lack of liquidity, but after their mutual matching none of the participants will exceed the authorised balance on the account with the National Bank of Slovakia. The clearing algorithm is initiated automatically during the day on receipt of any new input file. During the end-of-day processing, all payments that can be executed are settled with finality. The settlement system will not return, after closing the accounting day, any

payment with a value below the participant's end-of-day closing available balance. Payments which, even after the end-of-day closing clearing, cannot be settled due to the participant's lack of liquidity, are returned to the participant that sent them into the system.

Following the end-of-day processing, outputs in the form of clearing files are sent to the SIPS system participants via the BIPS system, along with statements of money reserve accounts.

Basic types of payments recognised by the system are a credit transfer and a direct debit. Payments are then divided into standard and high priority payments. Standard payments can be characterised as „small-value“ payments, and they usually involve standard interbank and customer payments with a low priority in terms of processing. High priority payments can be characterised as „large-value“ payments, and they usually involve interbank money market payments, that is, payments of extraordinary economic importance. In terms of processing, high priority payments have the highest priority, which means that they are settled on a priority basis by the interbank payment system.

Transmission of a high priority payment from the participant to the National Bank of Slovakia takes approximately 3 to 5 minutes. In the event that there are sufficient funds available on the participant's account with the National Bank of Slovakia to cover a high priority payment, such a payment is settled in the next couple of minutes depending on the number of payments ready for processing in the SIPS system at that given moment. After the processing and settlement of each individual high priority payment, a binding confirmation is sent via the BIPS system to sending and receiving institutions, which contains all the data necessary to identify this high priority payment.

The SIPS can be effectively and simply integrated into the payment systems of participants using the so-called API (Application Program Interface).

2.2. Participants of the SIPS Interbank Payment System

SIPS system participants can be divided into direct and indirect ones. Banks, branch offices of foreign banks and other financial institutions are direct participants in the SIPS system. Direct participants have their own accounts kept with the National Bank of Slovakia to settle payments executed via the SIPS system. These accounts of banks and branch offices of foreign banks are also used to monitor and evaluate the set minimum required reserves. Direct participants execute their own payments and payments by their clients via the SIPS system.

Indirect participants in the SIPS system are deemed to be entities operating under the interbank payment system as so-called third parties. They include non-bank entities, for which the National Bank of Slovakia does not maintain their own accounts. Such entities carry out selected activities under the SIPS system delegated to them by direct participants or activities laid down in a separate regulation, usually a law. Non-bank entities are authorised to debit and credit accounts of direct participants in the SIPS system, but subject to the latter's prior written approval. With the use of the SIPS system, the Bratislava Stock Exchange (Burza cenných papierov Bratislava, a. s.) arranges for the settlement of securities transactions and Transacty Slovakia, a. s., arranges settlement of payment card transactions.

Participants' access to the SIPS system is coordinated and managed by the National Bank of Slovakia in accordance with the Act on the Payment System. The National Bank of Slovakia issued rules for access to the SIPS Interbank Payment System. In the process of applying for access to the payment system, the applicant's technical prerequisites for its participation in the system are reviewed in accordance with the set requirements. The purpose of such testing is to verify the applicant's capability to carry out and ensure via the SIPS system all activities required of participants by the Act on the

Payment System and the Rules of the SIPS System. Upon the successful completion of testing, the National Bank of Slovakia issues approval for the applicant's entry and participation in the payment system.

An applicant becomes a participant in the system after meeting conditions for participation in the payment system. Only then does the National Bank of Slovakia conclude a contract on the SIPS system, assigning identification codes for domestic payments thereto. A payment system contract governs the rights and duties of the National Bank of Slovakia and a participant in the SIPS Interbank Payment System. The contract is divided into several areas, such as conditions for maintaining a money reserve account, delivery and processing of orders, settlement of fees and charges, operational organisation, data protection, consultations, complaint procedures and other details relating to SIPS operation. Forming an integral part of the contract is a description of the format and structure of the national standard applied to data transmission under the SIPS system, a time schedule for operation of the SIPS system and a list of fees and charges. Through its pricing policy, the National Bank of Slovakia aims to fully cover service cost provided via the SIPS system. A fee on any payment is only charged once, since the National Bank of Slovakia does not charge fees on output items.

The National Bank of Slovakia issues and regularly updates a list of identification codes in the form of a conversion table. The conversion table containing the identification codes for domestic payments, the list of payment systems and their participants, as well as the rules for access to the Interbank Payment System SIPS, are disclosed on the NBS web-site.

2.3. Technical and organisational support for the payment system's operation

The SIPS system is designed to provide a reliable and trustworthy platform on which to operate the interbank payment system in the Slovak Republic. In its design, the principles of information security and proven encryption algorithms were taken into account. The security of the SIPS system draws upon a high level of data protection in all phases of processing and settlement, as well as during data transmission between the National Bank of Slovakia and SIPS system participants.

In data transmission, the integrity and authenticity of data is verified by a digital signature. The processing and settlement of payments is fully automated, the transmission between participants is effected in electronic form via the BIPS communication system and the UNIVERZAL-NET, data network.

The BIPS system is a special system intended for data transmission and protection within the SIPS system. It consists of the BIPS central server, which is located in the National Bank of Slovakia and BIPS servers in individual participants' locations. In addition, each participant uses several workstations (terminals), which communicate with the BIPS participant's server.

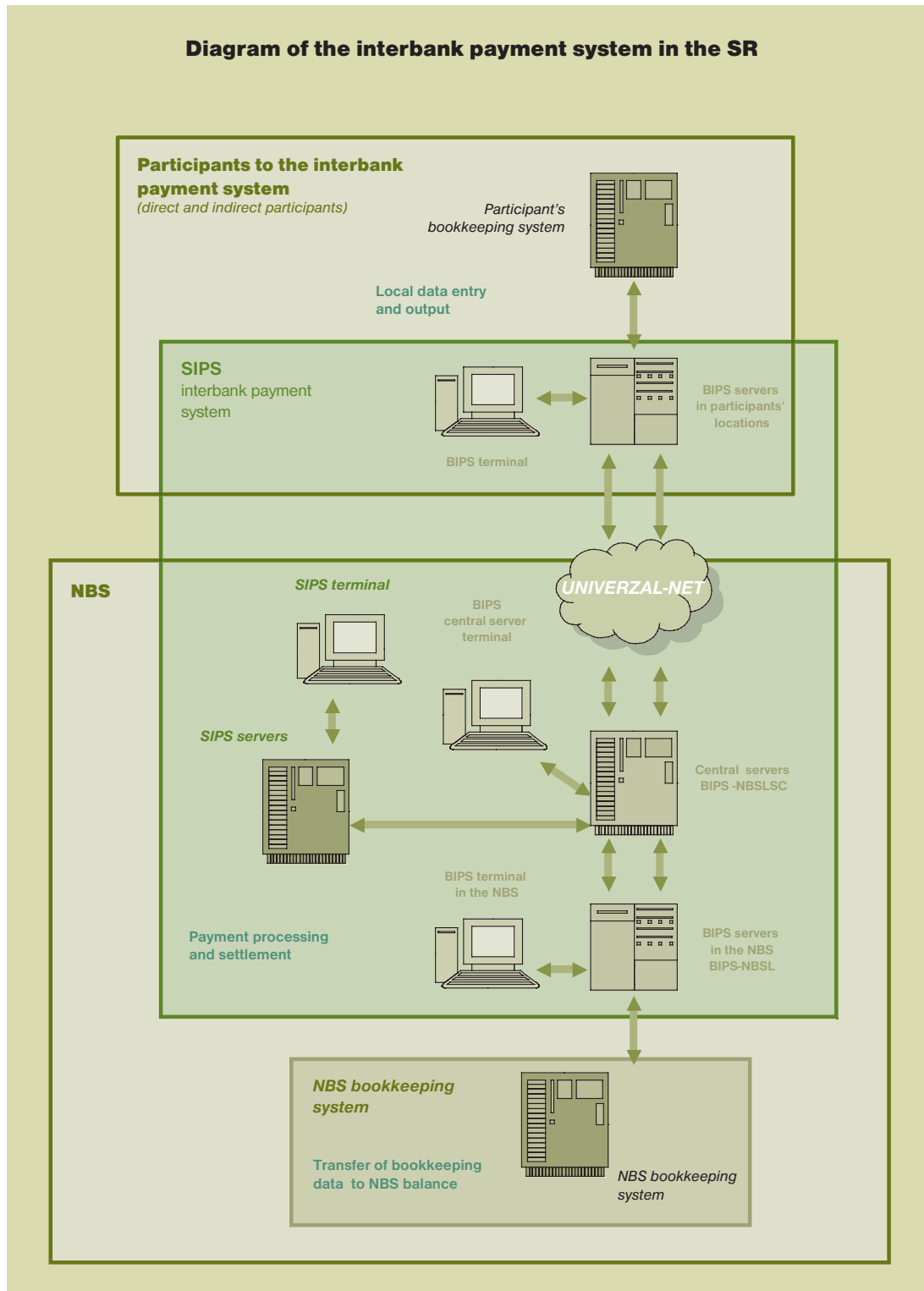
BIPS participant servers and the BIPS clearing centre server are interconnected via the UNIVERZAL-NET, network. This is a private data network built and operated for the purposes of the National Bank of Slovakia. It is solely designed for two-way data transmission between the payment system operator and its participants.

The settlement system is a single-purpose system for the settlement of transfer orders within the Slovak Republic. This system performs functions, such as formal checks on input data, continuous processing and settlement of individual types of clearing items, payment queuing logistics and such like.

Payments are processed and settled using the SIPS server. Processing parameters are set up and the monitoring and server administration is performed via the SIPS terminal.

Output data from the SIPS server proceed to the BIPS central server, from where they are sent to individual BIPS servers at participants' locations.

Chart E1



2.4. Statistical data

In 2003, there were 25 participants in the SIPS system, of which 23 were direct participants and 2 were indirect. On the whole, 99 million transactions were processed in 2003,

which was 11% more than a year ago. The value of transactions totalled Sk 32,248,756 million, up 44% from a year ago. High priority payments accounted for 0.02% to 0.03% of the total number of transactions processed and for more than 25% of the value of all transactions. The value of

Chart E2

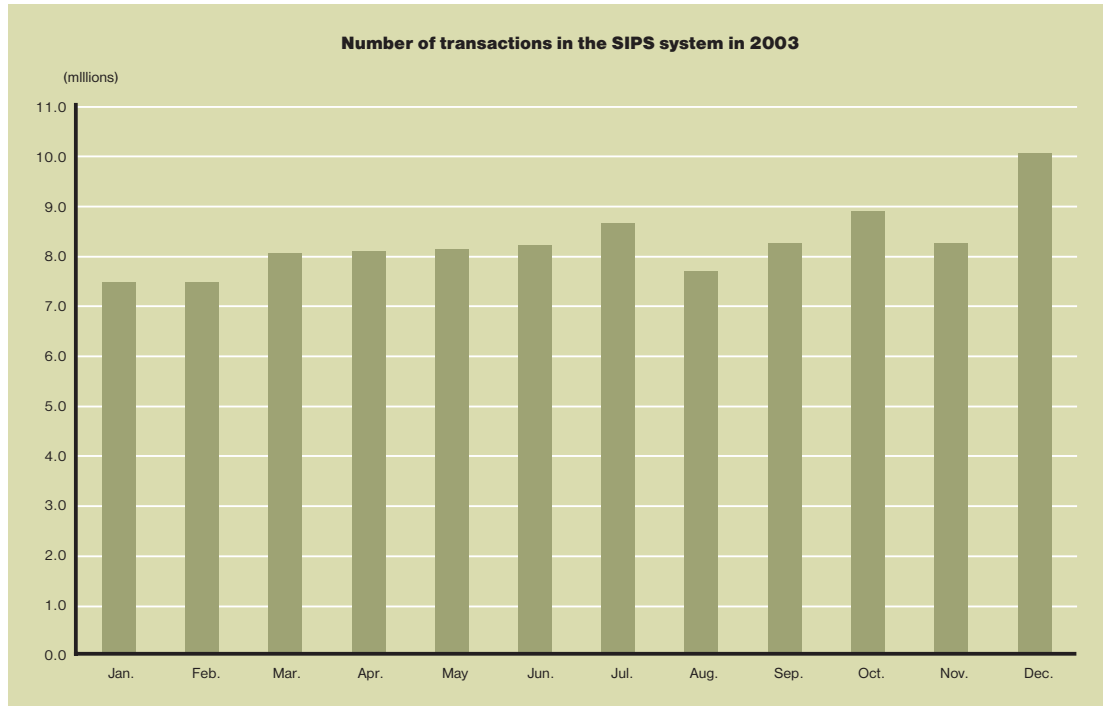


Chart E3

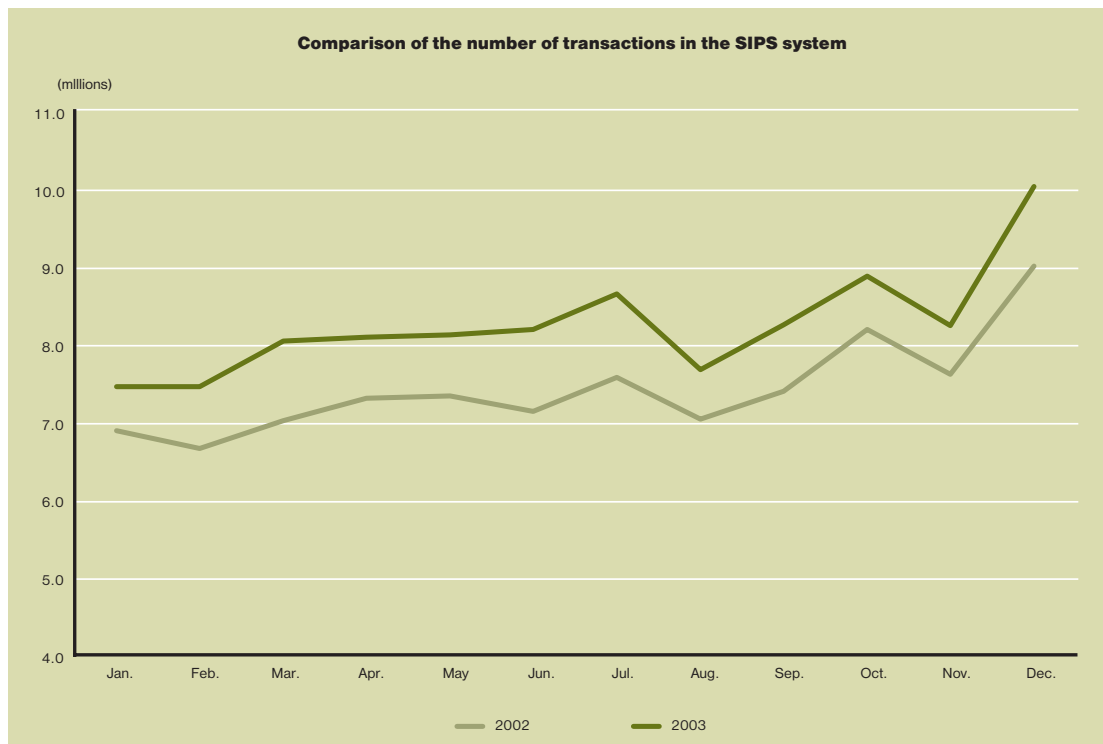


Chart E4

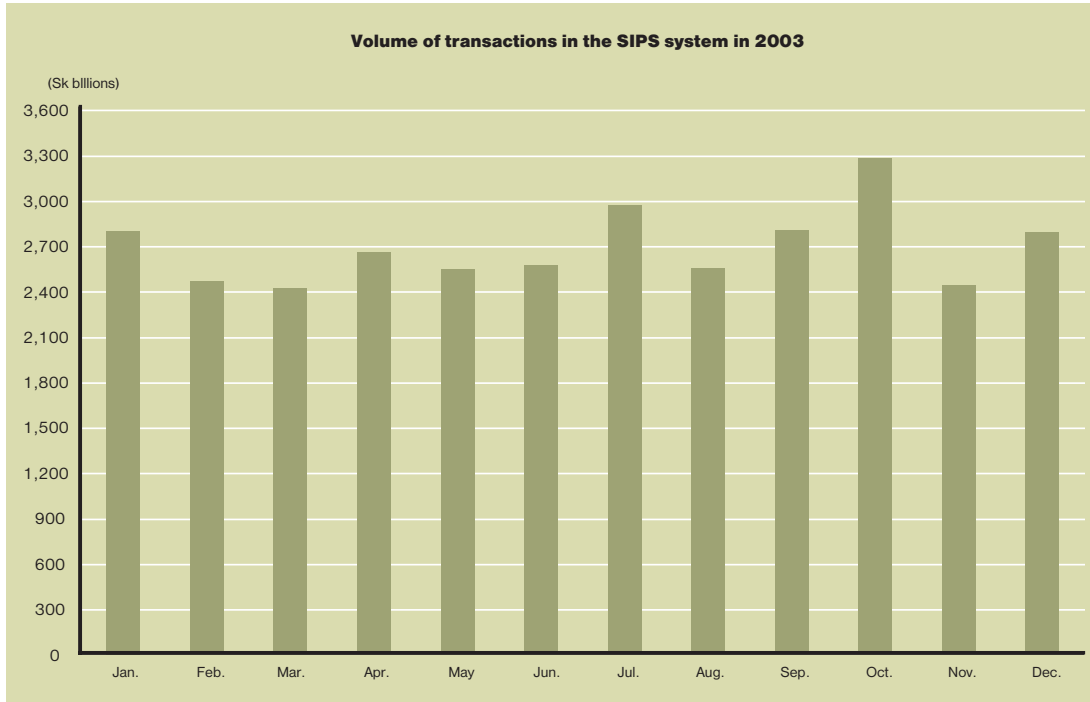
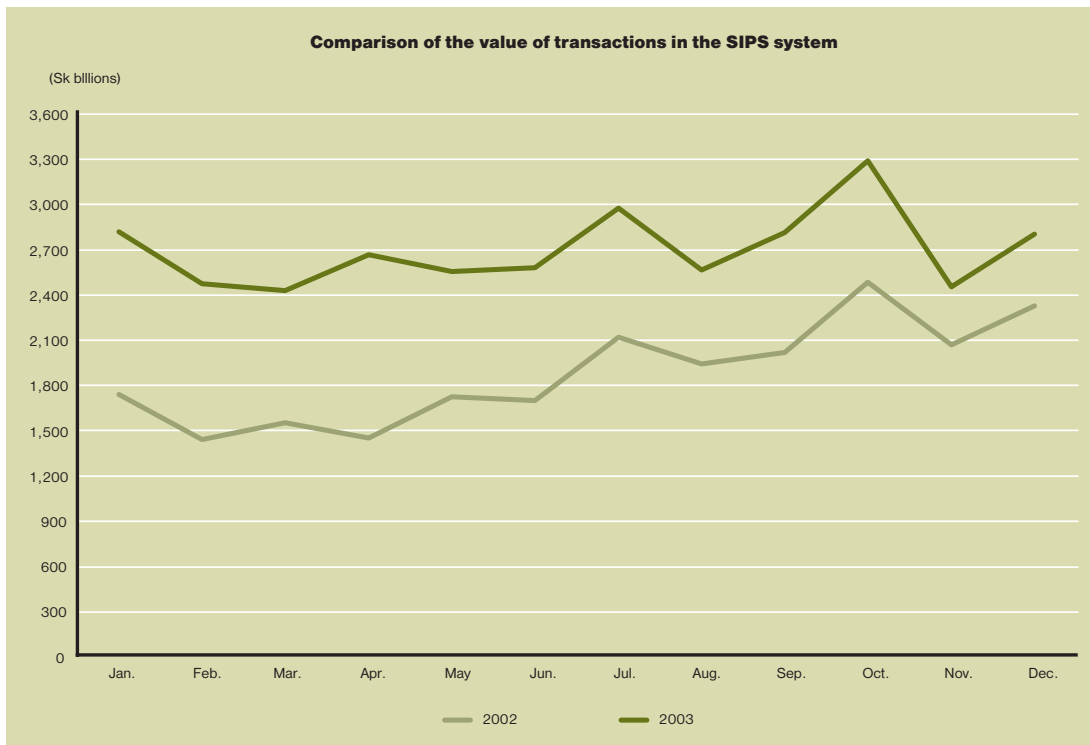


Chart E5



a high priority payment was Sk 460 million on average. Standard payments accounted for over 99% of the total number and for approximately 74% of the value of transactions processed. The value of standard payments averaged Sk 250,000. Information on the number and

volume of transactions processed within the SIPS system is published on the NBS' web-site.

An operating day in the payment system starts at 15.30 and terminates at 13.30 on the following day. During public holidays and non-working

days the payment system is shut down and system maintenance is conducted. In 2003, the system was run for 248 operating days. In total 399,000 payments worth Sk 130,035 million were processed and settled on average within the SIPS system per day. The current technology enables the processing and settlement of as many as two million payments per hour. Approximately 230,000 payments per hour can be transmitted via the BIPS communication system between one participant and the National Bank of Slovakia.

2.5. Prospects for 2004

Since being introduced into operation the SIPS system has successfully provided the processing and settlement of payments within the Slovak Republic. In spite of this, the National Bank of Slovakia is in the processes of developing and implementing further improvements, which can be divided as follows:

- functions enhancing participants' comfort,
- functions supporting real time gross settlement.

From 1 April 2004 the National Bank of Slovakia intends to introduce into operation a new version of the SIPS interbank payment system, which aims mainly to implement some other features of the real time gross settlement system under the conditions of the Slovak Republic. The most important upgrades incorporated in this version of the SIPS system include:

- periodical generation of output files on high priority payments during an accounting day,
- an option available to a participant, who may decide if he wants to have output files with high priority payments generated periodically in the course of an accounting day, or up to date, only at the end-of-day processing,
- the introduction of checks on the correctness of constant symbols by the clearing centre,
- stringent control of text fields in the clearing sentence (authorised characters).

In addition, the National Bank of Slovakia is preparing some other changes, namely:

- fully automated provision of intraday credit fully covered by securities. The provision of intraday credit will be automated throughout the whole process, starting from filing an application through the transfer of securities up to the final provision of the credit. Intraday credit will no longer be provided by setting up a debit limit applicable for the whole week, but through the provision of liquidity on the participant's account,
- administration of high priority payment queues (changing the payment order and payment priority, payment withdrawal from the queue),
- alternative ways of entering and outputting data into/from the SIPS system.

The aforementioned changes will be implemented in the SIPS system in the course of 2004 and 2005.

3. OVERSIGHT OF THE PAYMENT SYSTEM IN THE SLOVAK REPUBLIC

The central bank's most important role in respect to the payment system is to conduct its oversight. In September 2003 the Bank Board of the National Bank of Slovakia approved a document on principal objectives and instruments of the oversight of payment systems under the conditions of the Slovak Republic. This discusses the oversight of payment systems in the Euro-system context, and particularly the oversight of Slovakia's payment system. This document is available to the public via the NBS web-site. It governs the main areas and instruments for performing the oversight of payment systems. It must be underlined that subject to such an oversight are payment systems, which are still under development and their oversight is being widely discussed in different international forums, as well as at meetings of working groups set up as part of the European Central Bank and international financial institutions.

The oversight of payment systems, as the role to be performed by the central bank, principally focuses on ensuring a smooth functioning of payment systems. The oversight aims to protect the financial system against risks: system risk, credit risk, liquidity risk, operational risk, etc., as well as to enhance the effectiveness and safety of payment systems. The oversight of payment systems targets the systems (such as interbank payment systems), not individual participants. This mainly concerns systemically important systems. It also covers the oversight of payment instruments.

In overseeing payment systems, the National Bank of Slovakia pursues three principal objectives:

1. to maintain the stability of the payment system: to identify potential risks, to which the payment system is exposed and to take steps to eliminate them and get them under control,
2. to ensure the safe and smooth functioning of the securities payment and settlement system,
3. to maintain public confidence in payment instruments used.

The instruments to achieve these objectives are:

- a) issuing generally binding regulations to ensure the smooth, effective and safe functioning of the payment system,
- b) harmonisation of the existing payment system infrastructure with international principles and standards applicable to securities payment and settlement systems,
- c) operating the SIPS payment system: determining its rules, the functions it provides to users, criteria for participation in the system, etc.,
- d) organizing of regular working meetings with representatives of the banking sector or other entities whose activities are associated with payment systems,
- e) collecting and evaluating statistical data.

4. PAYMENT INSTRUMENTS

The most frequently used non-cash payment media include fund transfers and electronic payment instruments. Of electronic payment instruments, remote-access payment instruments are the most widely used option, in particular bank payment cards and, last but not least, electronic banking applications, which allow clients to withdraw funds from their bank accounts via electronic communications media (such as Internet banking, home banking or telephone applications).

Up to 31 December 2003, 3.02 million bank payment cards were in circulation, of which the largest number, namely 84.2% (2.55 million) were debit cards, with credit cards accounting for 15.5% (468,000) and charge cards making up 0.3% (9,000). In comparison with 2002, the number of credit cards increased from 86,000 to almost 468,000 and the number of bank payment cards issued grew by 13%, which, measured per capita, means that every other person in the country holds a bank payment card.

Almost 83% of the total number of bank payment cards in circulation are international bank payment cards and 17% are domestic bank payment cards. Banks issue bank payment cards of the card associations VISA (VISA and VISA Electron), MasterCard Europe (MasterCard and Maestro), American Express, Diners Club and ZBK domestic payment cards.

Within the territory of the Slovak Republic, cardholders have at their disposal a network of 1,505 ATMs and 16,974 POS terminals, of which 13,842 are EFT POS (Electronic Fund Transfer Point Of Sale) terminals and 3,132 are sales outlets with imprinters.

Out of the 1,505 ATMs, cardholders can use all ATMs to withdraw cash and check their account balance, 30 ATMs are available for depositing cash, 883 ATMs are assigned to

domestic fund transfers and 1,184 ATMs have a facility for mobile phone credit top-ups.

A discernible trend in bank payment card acceptance is the slightly slower pace of growth in the number of EFT POS terminals in comparison with the growth in the number of ATMs. In a year-on-year comparison, this means an increase in the number of EFT POS terminals by 13% and ATMs by 10%. Cash withdrawals from ATMs (76% in 2003 compared to 79% in 2002, of the total number of card transactions) continue to dominate over payments (24% in 2003 compared to 21% in 2002). The value of cash withdrawals from ATMs accounted for 87%, and the value of payments accounted for 13% of the total value of card transactions.

5. COOPERATION WITH INTERNATIONAL FINANCIAL INSTITUTIONS IN RESPECT TO PRE-ACCESSION WORKS ON THE PAYMENT SYSTEM

Since 2003, or the year of signing and the subsequent ratification of the Treaty of Accession, the standard of co-operation in respect to payment systems between the National Bank of Slovakia and the European Central Bank (ECB) reached a qualitatively higher level. In that year the ECB asked the National Bank of Slovakia to nominate its representatives onto the respective ECB committees and working groups. In 2003 the National Bank of Slovakia had 5 representatives specialising in payment systems in the mentioned bodies. They included the Payment and Settlement Systems Committee of the European System of Central Banks, which is the advisory body to the ECB's Governing Council. Within the scope of its authority, it directs and co-ordinates the activities of 4 working groups, namely the TARGET Management Working Group, the TARGET2 Working Group, the Payment Systems Policy Working Group and the Securities Working Group. Until the accession to the EU, representatives of national central banks

of acceding countries had an observer status. Observers were given an opportunity to participate actively in working meetings, as well as to participate in preparation of ECB materials by sending comments, filled-in questionnaires and follow-up materials.

The most important areas covered at regular meetings included issues relating to future development of the TARGET system, payment instruments, electronic money, payment systems, securities settlement systems and models for providing intraday credits within the European System of Central Banks. As part of the TARGET2 Working Group, representatives of the National Bank of Slovakia were involved in the further development of the TARGET1 strategy, and pre-design preparation of the TARGET2 system.

In 2003, as part of co-operation between acceding countries and the ECB, assessment processes were continued, aiming to determine the readiness of these countries for becoming involved in Eurosystem financial operations, with a view to identifying risks and revealing shortcomings in payment systems and securities settlement systems.

In 2003, as a follow-up to the above mentioned efforts, an account was made of the fulfilment of recommendations ensuing from the assessment of the infrastructure of payment systems and securities settlement systems and the oversight functions concerning the said systems, which had been made under an ECB initiative in 2002. In the respective report it was noted that the majority of recommendations have already been met, or are in the process of being fulfilled according to a time schedule. These recommendations concerned the use of payment instruments, the level of automation and standardisation, suitability of the market infrastructure and the central bank's tasks with regard to the oversight of payment systems and securities settlement systems.

In 2003, a new assessment programme was concurrently underway, which focused exclusively on securities settlement systems. The assessment drew upon the ECB's decision that acceding countries should have an opportunity, but not an obligation to get involved in the TARGET system prior to their entry into the Economic and Monetary Union (EMU). In view of the fact that all Eurosystem credit operations, including the provision of intraday credits for payment purposes, must be fully collateralised, the securities settlement systems must be in line with European Monetary Institute standards set for securities settlement systems.

Subject to the aforementioned assessment were:

- statutory provisions governing the given area,
- settlement procedures on the accounts kept by the central bank,
- possibility of inadequate risk due to the custody of securities,
- institutional support for management and the regulation of securities settlement systems, including the oversight,

- risk management procedures,
- ability of the system to settle with finality during the day,
- operating hours and days (in relation to TARGET)
- operational reliability of technical systems
- availability of adequate backup systems.

Co-operation between the National Bank of Slovakia and the European Commission (CEC) mainly consists of participation by NBS staff in the CEC expert groups. These groups focus on payments and payment systems and primarily aim to lead discussions on the latest topics, such as the new legal framework for payments and payment systems within the EU internal market.

The National Bank of Slovakia also maintains co-operation with other international institutions, such as the Bank for International Settlements (BIS). As part of this co-operation, in 2003 the National Bank of Slovakia was involved in the preparation of a survey paper on electronic money.