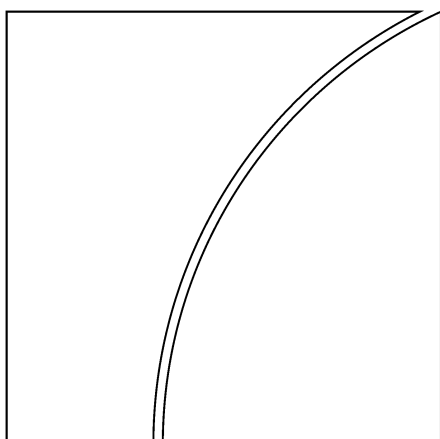


# Committee on Payment and Settlement Systems



## Payment systems in Russia

Prepared by the Bank of Russia and the  
Committee on Payment and Settlement Systems  
of the central banks of the Group of Ten countries

September 2003



BANK FOR INTERNATIONAL SETTLEMENTS

Copies of publications are available from:

Bank for International Settlements  
Press & Communications  
CH-4002 Basel, Switzerland

E-mail: [publications@bis.org](mailto:publications@bis.org)

Fax: +41 61 280 9100 and +41 61 280 8100

This publication is available on the BIS website ([www.bis.org](http://www.bis.org)).

© *Bank for International Settlements 2003. All rights reserved. Brief excerpts may be reproduced or translated provided the source is cited.*

ISBN 92-9131-656-3 (print)

ISBN 92-9197-656-3 (online)

## Foreword

The Committee on Payment and Settlement Systems (CPSS) periodically publishes - under the aegis of the Bank for International Settlements (BIS) - reference works on payment systems in various countries, widely known as Red Books. As part of this series, the present volume, the first edition of the Red Book for Russia, is a further important step towards increasing our understanding of the way payment systems work in different countries.

Properly functioning payment systems enhance the stability of the financial system, reduce transaction costs in the economy, promote the efficient use of financial resources, improve financial market liquidity and facilitate the conduct of monetary policy. In recent years, issues relating to the financial risks and efficiency of all types of payment systems have come to the fore. Central banks have a strong interest in promoting safety and improving efficiency in payment systems as part of their responsibilities towards the currency (facilitating its use as means of exchange) and given their overall concern with financial stability and efficiency. Because of this, central banks are influential in improving public understanding of the payment and settlement arrangements in their countries. They also play an important role in domestic payment system development and, in many cases, central banks themselves operate key payment systems.

We hope this volume will contribute to the general understanding and awareness of payment systems in Russia, both domestically and internationally.

Tommaso Padoa-Schioppa  
Chairman, Committee on  
Payment and Settlement Systems

Sergey M Ignatiev  
Chairman  
Bank of Russia



# Contents

|   |     |
|---|-----|
| Foreword .....  | iii |
| Abbreviations.....  | vii |
| Introduction.....   | 1   |
| 1. General legal aspects .....  | 1   |
| 2. Institutional aspects.....   | 2   |
| 2.1 The role of credit organisations .....  | 2   |
| 2.1.1 Banks.....  | 2   |
| 2.1.2 Settlement non-bank credit organisations (settlement NCOs).....   | 4   |
| 2.2 Role of the Bank of Russia .....  | 4   |
| 2.2.1 Organisation of cashless payments .....   | 5   |
| 2.2.2 Organisation of cash circulation .....  | 5   |
| 2.3 Role of other private and state organisations .....   | 6   |
| 2.3.1 Federal Treasury .....  | 6   |
| 2.3.2 Postal service .....  | 6   |
| 2.3.3 Stock exchanges .....   | 7   |
| 2.3.4 Depositories.....   | 7   |
| 2.3.5 Agency for Restructuring Credit Organisations .....   | 8   |
| 2.3.6 Russian banking associations .....  | 8   |
| 2.3.7 Russian National SWIFT Association.....   | 9   |
| 3. Payment instruments .....  | 10  |
| 3.1 Cash payments .....   | 10  |
| 3.2 Cashless payments.....  | 10  |
| 3.2.1 Payments by payment orders.....   | 10  |
| 3.2.2 Payments by letters of credit.....  | 11  |
| 3.2.3 Payments by collection.....   | 11  |
| 3.2.4 Cheque payments .....   | 11  |
| 3.2.5 Payment cards.....  | 12  |
| 4. Interbank payment systems .....  | 12  |
| 4.1 General overview .....  | 12  |
| 4.2 Payment system of the Bank of Russia .....  | 13  |
| 4.2.1 Electronic payments .....   | 13  |
| 4.2.2 Paper-based payments .....  | 14  |
| 4.3 Payment systems of credit organisations for settlements across correspondent<br>accounts opened with other credit organisations ..... | 15  |
| 4.4 Intrabank payment systems for settlements between branches of the same credit<br>organisation .....                                   | 15  |
| 4.5 Payment systems of settlement NCOs.....   | 16  |
| 4.6 Pricing policy.....   | 16  |

|     |   |    |
|-----|---|----|
| 5.  | International payments .....  | 17 |
| 5.1 | International interbank payments.....   | 17 |
| 5.2 | Traveller's cheques .....   | 18 |
| 5.3 | Payment cards .....   | 18 |
| 6.  | Securities settlement systems.....  | 18 |
| 6.1 | Securities.....   | 18 |
| 6.2 | Settlement system of the Moscow Interbank Currency Exchange and the Organised<br>Market of Securities and Other Financial Assets..... | 19 |
| 6.3 | Settlement system of the RTS Fund Exchange .....  | 20 |
| 6.4 | National Depository Centre .....  | 20 |
| 7.  | Major projects under implementation .....   | 21 |
|     | Statistical tables.....   | 25 |
|     | Comparative tables.....   | 37 |

## Abbreviations

|         |   |
|---------|---|
| ARCO    | Agency for Restructuring Credit Organisations             |
| BIC     | Bank Identification Code                                  |
| BoRB    | Bank of Russia bond                                       |
| DVP     | Delivery versus payment                                   |
| FCSM    | Federal Commission on the Securities Market               |
| GKO     | State short-term, non-coupon bond                         |
| InterEP | Inter-regional electronic payments                        |
| IntraEP | Intraregional electronic payments                         |
| MICEX   | Moscow Interbank Currency Exchange                        |
| NCO     | Non-bank credit organisation                              |
| NDC     | National Depository Centre                                |
| OFZ     | Bond of federal loan                                      |
| OMS     | Organised Market of Securities and Other Financial Assets |
| RTS     | Russian Trade System                                      |
| SP      | Settlement participant                                    |





## Introduction

With the launch of market reforms in Russia at the beginning of the 1990s, the payment mechanism established by the State Bank of the former USSR was no longer adapted to the situation and required reorganisation. The formation of the current Russian payment system thus took place in conditions of transition from a centralised planned economy to a market economy.

The Russian payment system has passed through several transformations: the opening of correspondent accounts by credit organisations with the Bank of Russia and with other credit organisations for the execution of interbank settlements, the establishment of private clearing houses and of settlement centres of the organised securities market (in the form of settlement non-bank credit organisations), the development of electronic payment technologies, and the introduction of retail payments using payment cards.

At present the Russian payment system can be said to consist of two relatively independent segments, formed by the payment system of the Central Bank of the Russian Federation (Bank of Russia) and private payment systems.

The Bank of Russia plays a special role in the country's payment system. It is not only an operator and user of its own payment system, but also defines key rules for the functioning of the private payment systems.

### 1. General legal aspects

The payment system of the Bank of Russia and the private payment systems are governed by the Civil Code of the Russian Federation, by federal laws "On the Central Bank of the Russian Federation (Bank of Russia)" and "On banks and banking activity", by other federal laws, and by regulations of the Bank of Russia.

The Civil Code of the Russian Federation, which contains key norms regulating cash and non-cash settlements in Russia, should be noted especially. It is established in the Civil Code that settlements between legal entities, as well as between individuals, can be effected with cash money or by cashless means.

The Civil Code also defines the terms of agreements on bank deposits and bank accounts, which include bank account secrecy, queuing of funds withdrawals in the event that there are insufficient funds on the account to satisfy all claims (priority of execution, depending on the type of payment), timing of operations through the account, forms of payment and responsibilities of payment systems participants.

The Civil Code stipulates that a credit organisation is obliged to transfer funds from a customer's account and to credit funds to customer's account not later than the day following the day of receipt of the relevant payment document by the bank, unless a shorter term is defined by the bank account agreement.

According to Article 80 of the federal law "On the Central Bank of the Russian Federation (Bank of Russia)", the total term for execution of cashless payments must not exceed two working days for intraregional payments,<sup>1</sup> and five operational days for inter-regional payments.

The federal law "On banks and banking activity" regulates the banking activities of credit organisations in Russia, establishes rules for the registration of credit organisations, including credit organisations with foreign capital, defines the list of operations that only credit organisations licensed by the Bank of Russia can carry out, and the list of other activities which credit organisations may also carry out in accordance with the law.

---

<sup>1</sup> The Russian Federation comprises the following subjects: national republics, territories, regions, cities of federal importance, autonomous region and autonomous areas. Hereinafter these are referred to as "regions". In certain cases a "region" may include several subjects of the Russian Federation (see Section 2.2).

Credit organisations are not allowed to conduct industrial, trade and insurance activities.

Definitions of credit organisations, banks, non-bank credit organisations and their legal status are given in this law.

A credit organisation is a legal entity which, on the basis of a licence from the Bank of Russia, has the right to carry out banking operations as a profit-making entity as stipulated by the above-mentioned federal law. Thus, credit organisations are commercial entities with the statutory capital divided into shares.

The federal law “On the Central Bank of the Russian Federation (Bank of Russia)” establishes the authority of the Bank of Russia in the area of payments.

The above-mentioned legislative acts do not establish rules on the functioning of Russian payment systems and responsibilities of their participants. Rules on conducting operations in different payment systems are defined by regulations of the Bank of Russia, while the responsibilities of the payment system participants are regulated by agreements between the participants and the payment system operators.

## **2. Institutional aspects**

### **2.1 The role of credit organisations**

According to the Civil Code of the Russian Federation, non-cash settlements must be effected through credit organisations.

The activity of credit organisations is considered legal only if they have a licence granted by the Bank of Russia. The operations that the credit organisation can execute (banking operations) are indicated in the licence.

There are two types of credit organisations: banks and non-bank credit organisations (NCOs). The key distinguishing feature of banks is that only they are allowed to accept funds of individuals and legal entities on deposit. NCOs can execute certain banking operations, the list of which is determined by the Bank of Russia. The majority of NCOs in Russia specialise in conducting interbank settlements; these NCOs are defined by the Bank of Russia as settlement NCOs (see Section 2.1.2). Other NCOs do not participate in making payments.

According to the federal law “On banks and banking activity”, all banking operations and deals are effected in roubles, except that, where an appropriate licence from the Bank of Russia exists, they can be carried out in foreign currency.

At the beginning of 2002 there were 1,323 credit organisations in Russia, including 1,280 banks and 43 NCOs, of which 38 were settlement NCOs. The banks had 3,433 branches, of which 1,233 were branches of the Savings Bank of the Russian Federation, and one branch of a foreign bank.<sup>2</sup> Banks also had 6,131 sub-branches. The registered authorised capital of operating banks was 261.0 billion roubles.

#### **2.1.1 Banks**

Banks are authorised to execute banking operations on the basis of a licence, granted by the Bank of Russia, which is compulsory for all banks.

Pursuant to the federal law “On banks and banking activity” the operations which require a licence from the Bank of Russia, in addition to the above-mentioned acceptance of money funds of individuals and legal entities on sight and time deposit (see Section 2.1), are:

---

<sup>2</sup> This foreign bank (Bank Anelik) received permission in November 2002 to incorporate its branch into an affiliated bank.

- placing deposited funds on its own behalf and for its own account;
- opening and maintaining bank accounts of individuals and legal entities;
- carrying out payments by order of individuals and legal entities, including bank correspondents, across their bank accounts;
- collecting funds, bills of exchange, payment and settlement documents and providing cash servicing for individuals and legal entities;
- buying and selling foreign currency in cash or cashless forms;
- accepting and placing deposits in precious metals;
- issuing bank guarantees;
- carrying out transfers of funds upon the order of individuals without opening an account at the bank concerned (excluding postal transfers).

In addition to these operations for which a licence is required, banks (as well as NCOs) have the right to carry out operations, such as trust management of funds and other property under agreements with individuals and legal entities, other operations in precious metals and precious stones (ie besides those mentioned in the list above), renting out special premises and safes for storing documents and valuables to individuals and legal entities, leasing operations, providing consulting and information services, and other activities permitted under the legislation of the Russian Federation. Carrying out those activities does not require a licence from the Bank of Russia.

Banks use various payment instruments (see Section 3) when providing payment processing services to their customers.

Banks make payments on an agreed basis through: (1) the payment system of the Bank of Russia; (2) correspondent accounts opened with each other; (3) intrabank payment systems; and (4) payment systems of settlement NCOs (see Section 4).

#### *2.1.1.1 Savings Bank of the Russian Federation*

The Savings Bank of the Russian Federation, or Sberbank, occupies a special place in the Russian banking system. Sberbank is a credit organisation with the largest branch network in Russia, accounting for 40% of all branches of credit organisations.

Sberbank attracts household savings and enterprises' funds and keeps them on deposit, pays out pensions and allowances, effects payments by order of individuals in connection with all kinds of financial obligations (taxes, payments for trade, utilities, transport, public and other organisations and institutions) and provides settlement services to enterprises and organisations. The share of Sberbank in the private deposit market at the beginning of 2002 was 82.5% for rouble deposits and 51.3% for foreign currency deposits.

According to the federal law "On the Central Bank of the Russian Federation (Bank of Russia)", the Bank of Russia owns the majority stake in Sberbank (at the beginning of 2002: 63.8%).

#### *2.1.1.2 Banks with foreign capital*

In recent years, a policy to facilitate Russia's integration with the international financial and economic community has been pursued and one of the particular manifestations of that policy is the liberalisation of access for foreign capital to the domestic market. The presence of foreign capital in the Russian banking system is seen as important, as it makes business easier for foreign investors.

At present, foreign investors can set up affiliates in Russia in the form of limited liability companies which are treated in the same way as domestic banks.

First on the list of banks with the biggest investments in the Russian banking sector are credit organisations from the United States and Germany.

At the beginning of 2002, there were 126 banks with foreign participation in their authorised capital in Russia. Of these banks, 23 had 100% of their authorised capital held by non-residents, and a further 12 had a non-resident share of 50% or more.

At present eight affiliates of foreign banks are among Russia's top 30 banks (this compares with two such banks in 1998). However, in recent years the aggregate authorised capital of operating credit

organisations has been growing faster than the aggregate non-resident participation. As a result, the share of non-residents in aggregate authorised capital on 1 January 2002 was 5.3%, against 7.5% on 1 January 2001 and 10.7% on 1 January 2000.

### **2.1.2 Settlement non-bank credit organisations (settlement NCOs)**

The Bank of Russia, in accordance with current legislation, has established the principles of activity for settlement non-bank credit organisations (settlement NCOs).

Settlement NCOs, along with clearing of payments (on both a gross and a net basis), effect the following banking operations with rouble and foreign currency funds on the basis of a licence from the Bank of Russia:

- opening and maintaining bank accounts of legal entities;
- carrying out payments by order of individuals and legal entities, including bank correspondents, across their bank accounts;
- collecting funds, bills of exchange, payment and settlement documents and providing cash servicing for legal entities;
- buying and selling foreign currency in cashless form;
- carrying out transfers of funds upon the order of individuals without opening bank accounts at the institution concerned (excluding postal transfers).

As well as these operations for which they need a licence from the Bank of Russia, settlement NCOs (like banks) may also conduct activities permitted under the law that do not require a licence from the Bank of Russia. These activities are listed in Section 2.1.1.

The Bank of Russia has placed restrictions on the operations of settlement NCOs, which allows credit risk to be virtually eliminated for the assets of settlement NCOs and customers' funds on accounts with settlement NCOs.

Under the licence to conduct banking operations granted by the Bank of Russia, all settlement NCOs (38 in total at the beginning of 2002) effect gross settlements upon customers' orders. Of these, 15 settlement NCOs, in accordance with the special addendum to the licence from the Bank of Russia, also effect net clearing of payments. Of the 23 which effect settlements exclusively on a gross basis, eight are settlement centres of the Organised Market of Securities and Other Financial Assets (OMS) (see Section 6.2), which have concluded a separate contract with the Bank of Russia; they provide settlement services (funds transfers) to participants of the OMS relating to purchases and sales of state debt obligations, foreign currency and other financial assets. (Clearing of these operations is carried out by a stock exchange.)

## **2.2 Role of the Bank of Russia**

According to the law "On the Central Bank of the Russian Federation (Bank of Russia)", one of the main aims of the Bank of Russia's activity is to ensure the effective and smooth functioning of the payment system. To that end, the Bank of Russia performs the following functions: it establishes the rules for effecting settlements on the territory of the Russian Federation; it has the exclusive right to issue cash; and it organises cash circulation. The Bank of Russia is also the lender of last resort for credit organisations, providing refinancing facilities for them.

Concerning matters within its competence, the Bank of Russia issues rules that are binding on federal state bodies, state centralised bodies of members of the Russian Federation and local self-governing bodies, and all legal entities and individuals.

The system of the Bank of Russia includes the Head Office, territorial branches, settlement cash centres, computer centres and other organisations, which are necessary to carry out its activities. Territorial branches of the Bank of Russia are located in each region of the Russian Federation. In national republics of the Russian Federation territorial branches are "national banks", and in all other regions they are "main branches". Each national bank and main branch has settlement cash centres (one of which is the head centre) for conducting non-cash payments, distributing cash to and receiving cash from credit organisations and other customers. At the beginning of 2002 there were 78 territorial branches and 1,175 head settlement cash centres and settlement cash centres (hereinafter -

branches) in Russia. Territorial branches of the Bank of Russia do not have legal personality and have no right to make decisions of a regulatory nature.

### **2.2.1 Organisation of cashless payments**

The Bank of Russia, in compliance with the federal law "On the Central Bank of the Russian Federation (Bank of Russia)", is an institution coordinating, regulating and licensing the organisation of payment and settlement systems, including clearing systems, in the Russian Federation. The Bank of Russia establishes rules, forms, timing and standards for effecting non-cash settlements, monitors the activities of private payment systems on the basis of statistical reports and carries out settlements through its branches.

Non-cash settlements on the territory of the Russian Federation are effected in both national currency (roubles) and foreign currency. Foreign currency may only be used as the means of non-cash settlement (for goods, work and services) in cases established by federal laws.

The Bank of Russia renders settlement and payment services to credit organisations and other legal entities entitled to receive such services according to the law.

In compliance with the federal law "On the Central Bank of the Russian Federation (Bank of Russia)", along with credit organisations the Bank of Russia may carry out banking operations related to the servicing of state bodies and local self-governing bodies, their organisations, state extra-budgetary funds, military units, military servicemen, employees of the Bank of Russia and also other persons in cases stipulated by federal laws. In addition, the Bank of Russia has the right to provide services to customers that are not credit organisations in regions which lack credit organisations.

Each credit organisation located on the territory of the Russian Federation, after receiving a licence from the Bank of Russia, must open a correspondent account with its local branch of the Bank of Russia.

Other customers also have bank accounts in local branches of the Bank of Russia, which can be used for making payments.

Each credit organisation and branch of the Bank of Russia has a bank identification code (BIC), which identifies them as settlement participants in the payment system of the Bank of Russia; the BIC must be used when creating payment documents and effecting transactions.

Furthermore, for the purposes of maintaining the money supply at a certain level, credit organisations deposit part of their funds as required reserves with the branches of the Bank of Russia, on separate accounts. In some cases, stipulated by regulatory acts of the Bank of Russia, these reserve deposits may be used by the credit organisation as short-term liquidity, provided that the average balance of reserves is maintained at the required level.

At the beginning of 2002, 1,323 credit organisations, 1,817 branches of credit organisations and over 70,000 non-credit organisations (of which: 1,402 bodies of the Federal Treasury) were customers of the Bank of Russia.

Settlement services are rendered by the Bank of Russia on a charge basis according to tariffs established by the Council of Directors of the Bank of Russia, depending on the kind of payment and the mode and time of transmission of payment documents (see Section 4.6).

### **2.2.2 Organisation of cash circulation**

The official currency unit of the Russian Federation is the rouble. One rouble is made up of 100 kopecks.

Issuing cash (banknotes and coins), organising its circulation and withdrawing it from circulation in the territory of the Russian Federation is done exclusively by the Bank of Russia.

Banknotes and coins of the Bank of Russia are the only legal tender for cash payments in the territory of the Russian Federation.

The Bank of Russia makes decisions to issue new and withdraw old banknotes and coins and approves the denominations and designs of new banknotes and coins. Descriptions of new banknotes and coins are published in the mass media. Prior notice of such decisions is sent to the State Duma and the Government of the Russian Federation.

To organise cash circulation in the territory of the Russian Federation, the Bank of Russia:

- plans and organises the production, transportation and storage of banknotes and coins and the creation of the associated reserve funds;
- establishes rules on safekeeping, transportation and collection of cash for credit organisations;
- establishes the criteria for accepting banknotes and coins of the Bank of Russia, and procedures for destroying banknotes and coins of the Bank of Russia, as well as for exchanging damaged banknotes and coins;
- establishes the rules for conducting cash operations.

The Bank of Russia monitors the cash money turnover that passes through cash offices of banks, as well as changes in its structure, and carries out analysis of the denomination breakdown of banknotes and coins in circulation and its adequacy to the needs of payment turnover. The Bank of Russia takes steps to duly and fully satisfy the cash needs of the economy and households, tracing the service life of different denominations of banknotes and coins, calculating requirements for cash broken down by banknote denomination and region, compiling plans for banknote and coin manufacturing, and organising their production by the Goznak group, as well as their regional distribution.

The Goznak group of the Ministry of Finance of the Russian Federation is an association of state enterprises and organisations that produces state notes - the only complex of enterprises in Russia that produces special types of paper, banknotes, forms for documents and securities, excise and special marks, stamps, coins and state decorations. Goznak includes four printing enterprises, two paper factories, two mints and a research institute. Goznak is the monopoly producer of banknotes and coins.

The Bank of Russia regularly issues commemorative coins. In 2001, 28 commemorative coins were issued: 18 silver, seven gold and three made of copper-nickel alloy.

## **2.3 Role of other private and state organisations**

### **2.3.1 Federal Treasury**

The Federal Treasury of the Ministry of Finance of the Russian Federation (Federal Treasury) was created by Presidential Decree in 1992 in order to conduct the government's budget policy, efficiently manage federal budget revenues and expenditures as part of Russia's budget implementation, enhance efficiency in the allocation of funds for financing government programmes, and strengthen control over the receipt and use of state funds.

The Federal Treasury consists of the head office and territorial offices in all republics, territories, regions, autonomous formations, the cities of Moscow and St Petersburg, other cities and city districts (total at the beginning of 2002: 1,399). These offices have bank accounts with local branches of the Bank of Russia or, in the absence of a Bank of Russia branch, with credit organisations authorised by the government.

To fulfil Presidential Decree no 1556 "On the Federal Treasury" of 8 December 1992, a phased transition is being implemented to arrangements in which expenditures of the federal budget are financed through accounts that budget funds managers (of enterprises, institutions and organisations receiving financing from the federal budget) open with the offices of the Federal Treasury. Accordingly, budget funds managers close their accounts with the branches of the Bank of Russia and credit organisations. Instead their funds are held on the accounts at the offices of the Federal Treasury, from which, upon the orders of the relevant budget funds managers, payments are made by the Federal Treasury.

### **2.3.2 Postal service**

Postal communications in the territory of the Russian Federation take place via a unified network of over 40,000 branches of the federal postal service. The Ministry of Communications and Information of the Russian Federation is in charge of managing the postal communications industry.

Unlike credit organisations, post offices do not accept deposits, keep accounts or execute other banking operations.

According to the federal law "On postal communications" no 176-FL of 17 July 1999, branches of the federal postal service provide legal entities and individuals with services related to postal transfers of funds (postal transfer): receipt, processing, transportation (transfer) and delivery (handover) of funds via postal and electronic communication networks.

Funds for postal transfer are accepted in Russian roubles in cash or in cashless form. Delivery (handover) of postal transfers is made in cash or by remitting to receivers' accounts with credit organisations.

Branches of the federal postal service perform cash delivery and handover of pensions and allowances to pensioners on the basis of agreements with relevant pension funds, including the Pension Fund of the Russian Federation.

Branches of the federal postal service have bank accounts with credit organisations, which are used for the receipt and remittance of funds in non-cash form.

According to data for 2001, 52.3 million postal funds transfers were made through the network of post offices for an amount of 36.0 billion roubles.

### **2.3.3 Stock exchanges**

The securities market in the Russian Federation (see Section 6.1) consists of stock exchanges and the "Fund market" and "GKO-OFZ-BoRB" sections of interbank currency exchanges, which have been granted a licence by the Federal Commission on the Securities Market (FCSM)<sup>3</sup> to carry out activities related to the organisation of trading in the capacity of stock exchanges. Hereinafter, both types of organisation are referred to as "stock exchanges".

According to the federal law "On the securities market" no. 39-FL of 22 April 1996 stock exchanges, as well as organising trading in securities and other financial assets, also perform clearing activities, ie match the account liabilities and claims of trade participants as a result of trades in securities, collect, verify and correct information on trades in securities, define the procedure for the settlement of trade participants' obligations (rules for money payment and securities delivery), determine the net liabilities and net claims of trade participants, and provide settlement of net liabilities and claims on a "delivery-versus-payment" basis.

Settlement NCOs perform the functions of settlement agents for stock exchanges, and trading participants keep accounts with settlement NCOs. As a rule, stock exchanges set up settlement NCOs in the form of affiliated companies for conducting settlements.

### **2.3.4 Depositories**

Depositories emerged in Russia with the development of the shares market.

Depositories operate on the basis of a licence granted by the FCSM in accordance with the federal law "On the securities market"

The main aim of depositories is to ensure the rights of investors and shareholders for securities in the Russian Federation. Depositories carry out the following main functions: accounting and custody (physically and electronically) of securities and keeping of information on the rights of ownership over them; collection of data on the volumes and value of deals on the securities market; and collection, state registration and storage of information received from the issuers of securities.

The largest depositories in Russia in terms of the volume of operations are the National Depository Centre (NDC) (see Section 6.4) and the Depository Clearing Company (see Section 6.3).

---

<sup>3</sup> The FCSM is a federal body with executive power for conducting state policy in the area of the securities market and regulating the activity of professional securities market participants.

### **2.3.5 Agency for Restructuring Credit Organisations**

The Agency for Restructuring Credit Organisations (ARCO) was created in January 1999 in connection with the crisis that hit the Russian financial system in summer 1998. As a result of the crisis significant amounts of funds of legal entities and individuals were frozen.

In view of this, ARCO's programme of activity was adopted by the Government of the Russian Federation and the Bank of Russia, aimed at implementing a set of measures for the financial recovery of the country's banking system, and the restoration of its ability to fully carry out its basic functions: execution of payments and safekeeping of the money funds of legal entities and individuals.

The procedures used by the Agency and their sequence were determined by the federal law "On restructuring of credit organisations", no 144-FL of 8 July 1999. At the same time the law gives the Bank of Russia responsibility for preparing proposals to bring credit organisations which do not comply with the established criteria and requirements under the Agency's management. When acting on these proposals, the Agency implements a set of measures aimed at re-establishing the creditworthiness of the credit organisation concerned.

When carrying out the restructuring measures, the Agency has the right to open in its books correspondent accounts for the credit organisations under its administration and to effect payments upon credit organisations' orders.

As stipulated by this federal law, the Agency has an account with the Bank of Russia.

In cases where the financial recovery of a credit organisation under its administration is not possible, the Agency initiates bankruptcy proceedings for the credit organisation, and takes part in the liquidation procedures.

At the beginning of 2002, there were 10 credit organisations under ARCO's administration.

### **2.3.6 Russian banking associations**

#### **2.3.6.1 Association of Regional Banks (Association Russia)**

The Association of Regional Banks (Association Russia) was created in 1990 and became the first banking association in the history of the country, initially comprising 44 banks. Now, more than 170 credit and other organisations in different regions of Russia are members of Association Russia. These member banks are owned by and provide banking services to enterprises of the fuel-energy complex and of the transport, communications, ferrous and non-ferrous metallurgy and construction industries.

The main areas of the activity of Association Russia are developing and strengthening the banking community by improving banks' capitalisation, creating economic and legal conditions for investing in the real economy and conducting efficient banking business.

Support for regional banks is the main priority for Association Russia, which is called on to clarify and put across the position of regional banks on key economic, finance and banking issues.

Thus, the most important function of the Association is coordinating the interests of regional banks, federal and regional administrative bodies, and the Bank of Russia, with a view to optimal restructuring of the banking system and to improving the payment system of Russia.

#### **2.3.6.2 Association of Russian Banks**

The Association of Russian Banks was created in 1993 and includes credit organisations and other financial institutions.

The most important objectives of the Association of Russian Banks are:

- development of banking business in Russia;
- assisting credit organisations in consolidating their resources for carrying out large-scale economic programmes;
- assisting the expansion of cooperation between Russian credit organisations and foreign banks, their unions and associations, and international financial organisations;



- representation and protection of credit organisations' interests in legislative and executive bodies of power and administration, judicial, law enforcement, tax and other state bodies.

In 1997, the Association of Russian Banks was admitted as a correspondent member to the European Union's Banking Federation.

As part of its activities the Association of Russian Banks pays close attention to the functioning and development of the payment system, without which it is impossible to fundamentally strengthen the banking system. Draft proposals for regulatory acts on Russian payment system activities are considered at an early stage by representatives of the Association of Russian Banks, and their opinion, suggestions and remarks are, wherever possible, taken into account by the Bank of Russia in its work. Thus, the Bank of Russia, by conducting regular consultations with the representatives of the Association of Russian Banks on matters of regulations concerning the private payment systems of Russia and the Bank of Russia payment system, is working closely with a wide range of credit organisations.

The Committee on Payment Systems and Organisation of Settlements operates within the structure of the Association of Russian Banks. Under the auspices of the Committee, regular meetings are held on payment system matters with the participation of representatives of the Bank of Russia and credit organisations.

In 2001, the Association of Russian Banks counted 492 credit organisations among its members. This number includes most of the largest banks in Russia, and 15 banks with 100% participation of foreign capital.

### **2.3.7 Russian National SWIFT Association**

The Russian National SWIFT Association was established in May 1994. It is a non-state, non-commercial organisation uniting all Russian users of the SWIFT network and acts on their behalf and in their interest.

The Association provides Russian users of SWIFT with legal, organisational, information, consultative and other assistance, and protects their rights and interests in state bodies of the Russian Federation. In particular, the Association imports into the territory of the Russian Federation cryptographic equipment for switching to the SWIFT network, and forms working groups for solving concrete tasks. The Association, in the interests of its members, holds meetings, conferences and seminars and organises the training of staff and preparation of documentation for operating in the SWIFT network.

SWIFT is the system of transmission for electronic payment documents used by Russian commercial banks for interbank settlements in private payment systems. As for the volume of traffic, today Russia occupies 27th place among 192 countries using SWIFT.

The price of one standard SWIFT message transmission inside the country is 0.075 euros, ie less than two roubles.

In order to allow Russian credit organisations and their correspondents to conduct operations in roubles using the SWIFT network, while observing Bank of Russia requirements relating to execution of payments and settlements, special rules on formation of SWIFT-RUR 5 messages for operations in roubles have been elaborated. This makes it possible to take into account the specific way credit organisations settle in Russia and provides an opportunity to use unified technologies for automation of the processing of financial messages, both in roubles and in foreign currencies.

When settlements are carried out through the payment system of the Bank of Russia, SWIFT is not used.

### **3. Payment instruments**

#### **3.1 Cash payments**

The major payment means used for retail payments in the Russian Federation is cash. The total amount of cash in circulation on 1 January 2002 was 584.3 billion roubles. The share of cash in the total money stock remains significant, at 36.5%. As a means of payment, cash is used for settlements directly connected with retail sales of goods and services, as well as for salary payments, pensions, allowances and grants.

Since 1 January 1998 the rouble has been redenominated, and old roubles in circulation have been exchanged for new ones at a rate of 1,000 old roubles for 1 rouble in new money. Banknotes of the Bank of Russia's 1997 design were introduced in denominations of 5, 10, 50, 100 and 500 roubles, as well as coins in denominations of 1, 2 and 5 roubles and 1, 5, 10 and 50 kopecks, minted by Goznak in accordance with agreements concluded with the Bank of Russia.

The main principles of the measures conducted were not to incur any losses for the population and to provide a gradual changeover of banknotes and coins. Throughout 1998, there was parallel circulation of old and new design banknotes and coins. As received by the Bank of Russia, old denomination banknotes and coins were withdrawn from circulation.

The enlargement of the Russian money unit has, to a certain extent, had a positive influence on cash turnover: the nominal quantity of money has decreased; and cash payments for goods and services have been simplified.

On 1 January 2001, the Bank of Russia introduced new banknotes of 1,000 roubles into circulation. Issuing new money at a higher face value reflected increases in the salaries and income of the population, as well as being aimed at achieving savings in the expenditures connected with the transportation, storage and recalculation of cash.

In accordance with the legislation, and to discourage the use of cash, the Bank of Russia has set a ceiling on the size of cash payments between legal entities. There are no such restrictions for citizens.

#### **3.2 Cashless payments**

Cashless payments in the territory of the Russian Federation are effected in the forms stipulated by the Civil Code of the Russian Federation, which refers to payments by payment orders, letters of credit, collection and cheques, as well as by other forms stipulated by law, by banking rules established under the law, and by normal business practice in banking. Counterparties, in accordance with the agreement between them, have the right to choose any of the forms of payment.

Cashless payments are carried out through credit organisations.

Payment orders and letters of credit refer to payment instruments used to conduct transfers of funds at the initiative of payers (credit transfers). The most widely used type of cashless payment is a credit transfer on the basis of a payment order.

Payment claims and bills for collection refer to payment instruments used to receive payment by debiting the payer's account at the initiative of the payee.

Cheques and payment cards are also used as payment instruments.

##### **3.2.1 Payments by payment orders**

When carrying out payments by payment orders, a credit organisation is obliged, by order of a payer and using the funds available on his bank account, to remit a certain amount of money to the bank account of a person with the same or another credit organisation indicated by the payer (ie a credit transfer).

Payment orders are the main instrument for non-cash payments used for effecting payments under monetary obligations resulting from agreements concluded by counterparties (for delivery of goods, work performed, services rendered, and for purposes of repaying credits, placing deposits and paying interest), and in compliance with legal requirements (remitting tax payments). The wide use of

payment orders is explained by the relative simplicity of the documentation, which facilitates the automation of processing.

### **3.2.2 Payments by letters of credit**

When effecting payments by letter of credit, a credit organisation, acting by the order of a payer to issue a letter of credit and in compliance with his instructions, is obliged to make payments to a payee upon presentation by the latter of documents corresponding with the conditions of the letter of credit, or to authorise another bank to make such payments.

The share of letters of credit in cashless payments is insignificant. The fact that letters of credit are not widely used is explained by the more complicated rules for performing settlement operations, compared with other forms of payment.

### **3.2.3 Payments by collection**

In the case of payments by collection, a credit organisation is obliged by order and on behalf of a customer to undertake actions aimed at receiving payment from a payer. Payments by collection are carried out using two instruments: (1) a payment claim, under which payment may be effected either upon instructions of the payer's customer ("with acceptance") or without his instructions ("without acceptance"); and (2) a collection order, under which payment is effected without the payer's customers' acceptance.

In operational terms the two instruments are very similar. The choice of instrument is determined:

- firstly, by legislative acts which define the cases when payment claims (without acceptance) and collection orders have to be used;
- secondly, by agreements between a payer and a payee in cases where they have the right to choose the form of payment and the instrument.

#### **3.2.3.1 Payment claims**

A payment claim comprises a demand by a payee to a payer to pay a certain amount of money by debiting the payer's bank account. Payment claims are used when effecting payments for delivery of goods, work performed, services rendered and also in other cases stipulated by agreement between a payer and a payee.

In the case of payments by payment claim "with acceptance", a payer has the right to accept in writing a payment claim fully or partially, or to refuse the payment claim on grounds stipulated in the agreement between a payer and a payee.

Payments by payment claims "without acceptance" by the payer are used in cases:

- established by the law (currently for payments relating to production and services of energy, water, sewage and communications enterprises);
- established by agreement between a payer and a payee, where the payer has granted the servicing bank the right to withdraw funds from his account without his instructions.

#### **3.2.3.2 Collection orders**

Collection orders are used in cases:

- established by the law (currently for tax and some other payments);
- established by the agreement between a payer and a payee, where the payer has granted the servicing bank the right to withdraw funds from his account without his instructions (ie as in the case of payment claims "without acceptance", described above).

### **3.2.4 Cheque payments**

Cheques issued by credit organisations are sometimes used in Russia for carrying out cashless payments, but not for payments through the Bank of Russia's payment system. Rules for cheque circulation and cheque samples are not approved by the Bank of Russia. Cheques are used on the basis of agreements on cheque payments, concluded between credit organisations and customers,

interbank agreements on cheque payments, and rules on conducting cheque operations set down by credit organisations.

### **3.2.5 Payment cards**

In Russia payment cards, including cards issued by credit organisations (bank cards), are payment instruments for effecting cashless retail payments, and cash withdrawals.

Credit organisations issue and/or acquire payment cards, including bank cards, of both Russian and international payment card organisations.

Many credit organisations issue their own cards; holders may carry out operations with these cards only in facilities of that credit organisation. Often, issuers offer the holders of such cards only one service - withdrawal of cash.

At the end of 2001, the total number of bank cards issued in Russia was 10.5 million, against 7 million at the beginning of the year. The two main players, in terms of both the number of issued cards and the volume of operations, are Visa International and MasterCard International. This is due mainly to their developed infrastructure for effecting settlements relating to the use of the cards, both in Russia and abroad.

Chipcards are widely spread in certain regions of Russia; in 2001 their number increased by 43%, totalling more than 3 million cards by the end of the year.

Cardholders can make cash withdrawals in roubles and foreign currency at bank counters and ATMs.

Cash withdrawals predominate in operations with cards. This situation in general is explained by the preference of the population to pay cash, and by the underdeveloped network of trade and service companies that accept bank cards for payments.

Over half the volume of non-cash payments by cards in Russia is accounted for by payments using cards issued abroad.

## **4. Interbank payment systems**

### **4.1 General overview**

In the planned economy of the Soviet Union, settlements between banks were effected through accounts opened with the State Bank of the USSR. The term "interbank settlements" was not applicable in practice since all banks were state-owned.

During 1991-92, with the commercialisation of state banks and the creation of new commercial banks, a widespread network of credit organisations was set up and a system of interbank settlements was organised.

At present, interbank settlements are carried out through the following payment systems (data for 2001):

- payment system of the Bank of Russia (78.1% of the total value and 71.9% of the total volume of payments);
- payment systems of credit organisations using correspondent accounts opened with other credit organisations (9.3% of total value and 3.2% of total volume of payments);
- intrabank payment systems for settlements between branches of the same bank (11.8% of total value and 24.3% of total volume of payments);
- payment systems of settlement NCOs (0.8% of total value and 0.6% of total volume of payments).

The distribution of the volume of payments effected through the different payment systems varies slightly from year to year.

## **4.2 Payment system of the Bank of Russia**

The payment system of the Bank of Russia is the most important in Russia. Payments are carried out on a gross basis in roubles.

The payment system of the Bank of Russia is a two-tier (intra- and inter-regional levels) system, in which customer accounts are opened and maintained at the branches of the Bank of Russia.

Intraregional payments are understood as payments between a payer and a payee located in the same region while inter-regional payments are between a payer and a payee located in different regions.

The majority of payments routed through the Bank of Russia payment system are intraregional payments, which in 2001 accounted for 90.3% of the volume of payments, whereas inter-regional payments accounted for 9.7%. As for the value of funds, intra-regional payments accounted for 84.5%, and interregional payments for 15.5%.

The payment system of the Bank of Russia has regional components, which are located and are operating in each of 78 territorial branches of the Bank of Russia.

- Decentralised processing of payment information is carried out in 19 regional components, ie branches of the Bank of Russia process payment information independently by computer and exchanges between the branches of one region are effected bilaterally at designated times.
- In 53 regional components of the payment system processing of payment information is done centrally, ie in one computer centre, with settlement carried out continuously during the day both individually and in a batch mode.
- In five regional components of the payment system processing of payment information is done centrally, with settlement carried out in a discrete mode at designated times several times during the day.
- In one regional component - Moscow and Moscow region - processing of payment information is conducted in a centralised mode, with settlement carried out both in a continuous form which is similar to a real-time mode and discretely at designated times. This combination allows payment execution times to be reduced, with multiple use of funds by settlement participants, which is also facilitated by the application of optimisation procedures.

Regional components of the payment system operate according to local time in 11 time zones.

To complete settlements, credit organisations located in certain regions, which have concluded agreements with the Bank of Russia, are granted overnight loans backed by collateral in securities held in the National Depository Centre. No new credits are provided until previously granted loans are repaid in full.

The payment system of the Bank of Russia uses national bank identification codes and unified formats for payment documents. Payments are effected both electronically and by using paper technology.

### **4.2.1 Electronic payments**

The execution of electronic payments is governed by the Civil Code of the Russian Federation, other laws, and regulatory acts of the Bank of Russia.

The Bank of Russia's electronic payment system has a two-tiered structure, comprising systems of intraregional and inter-regional electronic payments.

Users of the Bank of Russia's electronic payment system are credit organisations, their branches and other customers of the Bank of Russia having correspondent accounts (sub-accounts) and bank accounts with those branches of the Bank of Russia that are connected to the electronic payment system.

Customers may route electronic payments to the Bank of Russia via telecommunication systems, or using magnetic or paper carriers. In the latter case, they are converted into electronic form by the branches of the Bank of Russia, and the paper carrier is not transmitted further.

The majority of electronic payments are received from users by the branches of the Bank of Russia via telecommunication systems. In 2001 they accounted for 91.3% of the total volume of electronic

payments. The share of paper payment documents presented to branches of the Bank of Russia for electronic payment was 8.5% in 2001. Magnetic carriers for transmission of electronic payments are hardly used (0.2%).

In 2001 the share of electronic payments effected through the Bank of Russia was 89.2% of the total volume of payments and 82.9% of the total value of payments.

#### *4.2.1.1 Intraregional electronic payments*

Procedures for intraregional electronic payments are regulated by regional rules and agreements with customers of the Bank of Russia, taking account of the regulations of the Bank of Russia.

Regional rules establish the schedules for the exchange and processing of electronic payments, formats for electronic messages, and encryption methods for the protection of information.

Settlement of intraregional electronic payments is effected during the day of initiation of the payment, according to the schedule for the exchange and processing of electronic payments.

In 2001, intraregional electronic payments in the Moscow region accounted for 58.0% of the total value and 24.3% of the total volume of payments conducted through the payment system of the Bank of Russia.

#### *4.2.1.2 Inter-regional electronic payments*

Rules for conducting inter-regional electronic payments are standardised for all regions and are established by the Bank of Russia.

In each region one branch of the Bank of Russia is designated a "main settlement participant", and is entrusted with the functions of accounting and control over inter-regional electronic payments. Messages are exchanged between these main settlement participants through the Inter-regional Computer Centre of the Bank of Russia, which does not carry out settlements, but performs communication functions. Settlement of inter-regional electronic payments is effected by the main settlement participants, on an "each with each" (bilateral) basis, through accounts opened with each other.

As a rule, inter-regional electronic payments are effected the same day; between regions located in remote time zones, payments are carried out no later than the following day.

Chart 1 shows how inter-regional electronic payments are routed in the payment system of the Bank of Russia.

### **4.2.2 Paper-based payments**

Paper-based payments refer to payments in which payment documents are delivered between branches of the Bank of Russia by mail, cable or by services of branches of the Bank of Russia.

Paper-based payments are used in cases when branches of the Bank of Russia do not carry out electronic payments in certain regions, as well as when payment documents other than payment orders are used, if such payment documents are presented to the Bank of Russia on a paper carrier, or for some other reasons.

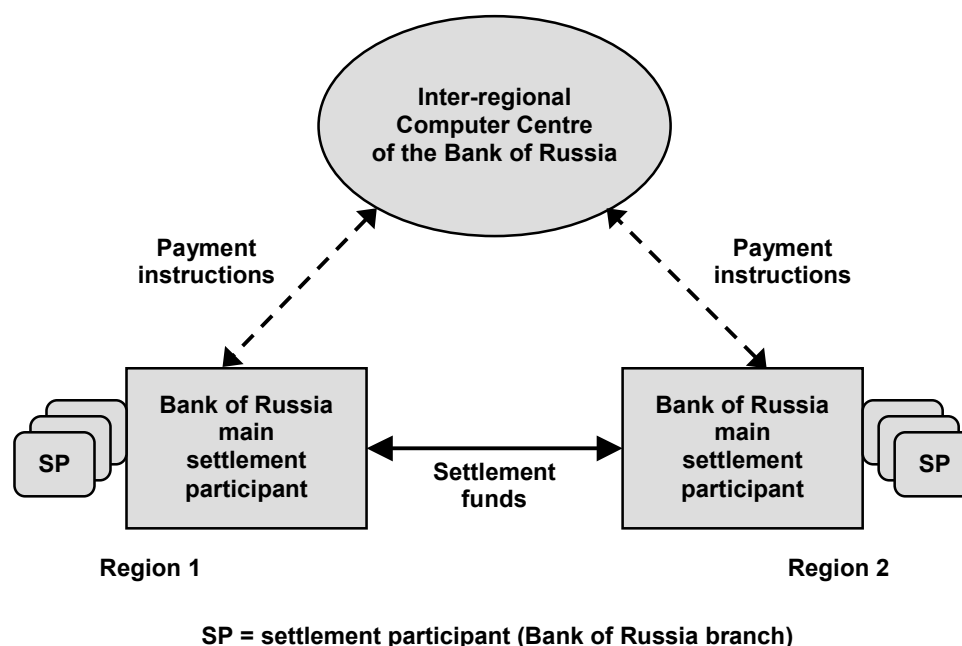
Payment documents that are sent by post between branches of the Bank of Russia are mainly delivered by specialised state services (organisations).

In the case of cable transmission, payment documents are transmitted between branches of the Bank of Russia via cable communication channels, using teletype machines at the Bank of Russia branches or submitted in paper form to structural divisions of the Ministry of Communications and Informatisation of the Russian Federation for further transmission to branches of the Bank of Russia via cable communication channels.

Paper-based payments carried out in 2001 through the Bank of Russia payment system accounted for 10.8% in terms of the volume of payments, and 17.1% in terms of the value of payments. However, the volume and value of paper-based payments carried out is decreasing from year to year.

Chart 1

**Inter-regional payments in the payment system of the Bank of Russia**



**4.3 Payment systems of credit organisations for settlements across correspondent accounts opened with other credit organisations**

In accordance with the federal law “On banks and banking activity”, credit organisations are entitled to make payments through correspondent accounts opened with each other.

The opening of correspondent accounts and execution of settlement operations across such accounts is regulated by legislation, rules established in regulatory documents of the Bank of Russia, and bilateral agreements between credit organisations.

The rules allow a credit organisation to carry out so-called “transit payments”, ie payments between credit organisations with which it has correspondent relations.

The execution of payments by credit organisations through correspondent accounts opened with other credit organisations is aimed at accelerating settlements and saving liquidity. Rules established by the Bank of Russia promote risk reduction in settlement operations across correspondent accounts of credit organisations opened with other credit organisations.

**4.4 Intrabank payment systems for settlements between branches of the same credit organisation**

Many credit organisations effect settlements between the head office and the branches and directly between branches via intrabank payment systems. The procedure for conducting settlement operations via such systems is determined by a credit organisation independently in its internal rules, subject to compliance with requirements established by the Bank of Russia.

The availability of an intrabank payment system obviates the need for a credit organisation to have correspondent sub-accounts at corresponding Bank of Russia branches, which helps to reduce liquidity requirements.

#### **4.5 Payment systems of settlement NCOs**

Settlement NCOs open settlement participant accounts for credit organisations and other legal entities and effect settlements between them on both a gross and a net basis. Final settlements are effected on the day of clearing.

Transfers of funds between settlement NCOs and in favour of credit organisations that are not their settlement participants are effected through the Bank of Russia's payment system, as well as across the accounts opened by settlement NCOs with each other.

Those settlement NCOs that act as settlement centres of the Organised Market of Securities and Other Financial Assets (OMS)(see Section 6.2) carry out payments by order of stock exchanges based on the exchanges' calculation of market participants' net cash positions.

Net settlements are carried out subject to prior depositing of funds by participants on their accounts with the settlement NCOs to cover a debit position. Netting is not carried out if the net debit position of a settlement participant exceeds the amount of funds on his account with the settlement NCO and the amount of credit which can be provided by the settlement NCO to the participant for completion of settlements. If such initial deposit is lacking, the net debit position of a settlement participant after netting must be equal to zero or to the amount of credit granted.

Other settlement NCOs, ie those apart from settlement centres of the OMS, provide short-term credits for completion of settlements using both their own resources and funds set up by their settlement participants.

If credits granted out of the reserves (funds) are not repaid on time, repayment is effected in accordance with the principle of joint and several responsibility of the settlement participants, ie proportionately by all participants, in accordance with the agreement on the establishment and utilisation of funds (reserves). Hence the settlement NCO is not exposed to credit risk.

Rules for conducting settlements on a net basis are agreed upon by settlement NCOs with the Bank of Russia.

With a view to reducing the credit risk of settlement participants, settlement NCOs are permitted by the Bank of Russia to invest funds in roubles held on settlement participants' accounts and in funds (reserves) only in highly liquid assets - namely, risk-free state securities, correspondent accounts with the Bank of Russia, accounts with other settlement NCOs, and funds in foreign currency on accounts with foreign banks headquartered in countries with developed (industrial) economies.

#### **4.6 Pricing policy**

Credit organisations and the Bank of Russia charge for the payment services they provide to customers.

Each credit organisation independently defines its tariffs for the provision of payment services. Some credit organisations establish a fixed charge for the processing of a payment document, not dependent on the amount of the payment, while others, conversely, charge a certain percentage of the payment amount.

Aiming at demonopolisation of the payment system in Russia and creating the conditions for development of alternative services in the private sector, the Bank of Russia has introduced since 1 January 1998 a charge for payment services.

Tariffs are approved by the Council of Directors of the Bank of Russia and are used to influence the development of the Russian payment system.

In order to encourage customers of the Bank of Russia to adopt modern means of communication and electronic payments low charges are set for them. Higher charges are established for paper-based payments. Moreover, charging the highest prices for services at the end of the business day facilitates the smooth processing of volumes over the business day, speeds up the turnover of funds and encourages intraday liquidity management by credit organisations.

The pricing policy of the Bank of Russia is based on fixed charges for the processing of a payment document, not dependent on the amount of the payment. Charges for the payment services of the Bank of Russia are differentiated according to the mode of effecting payment (electronic payments, cable or postal transfers), the mode of transmission of payment documents by customers to the Bank



of Russia (via telecommunication system, on magnetic carriers, or on paper carriers), and, for payments transmitted electronically, the time payment documents are entered into the system.

Some payment operations are effected by the Bank of Russia on a free of charge basis, in accordance with the legislation of the Russian Federation. These include operations with the funds of budgets of different levels and state extra-budgetary funds, as well as the transfer of tax payments.

The Bank of Russia also services payments of customers for amounts not exceeding the limit set by the Bank (as of 1 April 2002, 700 roubles) free of charge.

The following table shows the range of pricing for payment services of the Bank of Russia.

| Table 1                        |   |                               |
|--------------------------------|---|-------------------------------|
| Mode of payment                | Mode and time payment documents are entered into the system | Range of pricing (in roubles) |
| <b>At intraregional level</b>  |   |                               |
| Electronic payments            | Via telecommunication system:                               |                               |
|                                | – before 16:00  | 2.40-4.00                     |
|                                | – after 16:00   | 4.80-7.60                     |
|                                | On magnetic or paper carriers                               | 6.00-7.60                     |
| Cable and postal transfers     | (Not relevant)  | 6.40-6.80                     |
| <b>At inter-regional level</b> |   |                               |
| Electronic payments            | Via telecommunication system:                               |                               |
|                                | – before 16:00  | 3.00-4.40                     |
|                                | – after 16:00   | 5.80-8.80                     |
|                                | On magnetic or paper carriers                               | 6.40-7.60                     |
| Cable and postal transfers     | (Not relevant)  | 6.80-8.00                     |

In addition, the Bank of Russia charges 2.40 roubles for making a paper copy of an electronic payment document.

The Bank of Russia is improving its pricing policy so as to align the price of payment services more closely with the cost of executing settlement operations and thus recover the cost of providing services to customers to the fullest extent possible.

## 5. International payments

### 5.1 International interbank payments

International payments are carried out by credit organisations in compliance with the sets of customs and rules, codified by the International Chamber of Commerce, cheque and bill of exchange conventions, interbank agreements, intergovernmental payment agreements and trade accords.

Credit organisations licensed by the Bank of Russia to conduct banking operations with funds in roubles and foreign currency carry out international payments through correspondent accounts opened with foreign banks in foreign currency or through correspondent accounts opened by foreign banks with Russian credit organisations in foreign currency and roubles. The opening of accounts and execution of payments are effected on the basis of bilateral agreements between Russian credit organisations and foreign banks.

Credit organisations licensed by the Bank of Russia to conduct banking operations in roubles and foreign currency as well as having the right to open accounts for foreign banks, also have the right to open rouble accounts for effecting payments for non-residents (individuals, legal entities and official representations).

Credit organisations without such a licence carry out international payments through credit organisations which have obtained the necessary licence.

In accordance with the rules established by the Bank of Russia under the authority on foreign exchange regulation and control, delegated to it by the legislation of the Russian Federation, credit organisations may open for non-resident individuals and legal entities two types of rouble accounts: convertible and non-convertible. Convertible accounts should be credited with proceeds in roubles received from the sale of goods and provision of services to Russian residents, as well as from financial and non-commercial operations of non-residents in Russia. Funds on convertible accounts may be used for buying foreign currency on Russia's foreign currency market. (There are restrictions on using funds on non-convertible accounts for buying foreign currency.)

## **5.2 Traveller's cheques**

A number of banks licensed by the Bank of Russia to conduct operations in foreign currency, according to the existing regulatory acts, import into the Russian Federation traveller's cheques of foreign issuers, such as Travelex and American Express. The banks conclude agency agreements with issuers for selling traveller's cheques in Russia.

Currency exchange points of credit organisations sell traveller's cheques to individuals against cash payment in roubles, the currency of denomination of the cheque or any other foreign currency sold and bought by the currency exchange point.

Under Bank of Russia regulations, legal entities are authorised to buy traveller's cheques only for business trip expenses and only on a cashless basis from an account opened in foreign currency.

## **5.3 Payment cards**

Bank cards, which enable the holder to carry out international payments, may be issued only by credit organisations licensed by the Bank of Russia to conduct banking operations in foreign currency.

A total of 534 credit organisations were issuing and/or acquiring payment cards, including bank cards, in Russia at the end of 2001. Of these 70% were issuing and/or acquiring cards issued under licence from Visa International and 62% cards under licence from MasterCard International. The value of operations carried out abroad in 2001 using cards issued by credit organisations in Russia totalled 21 billion roubles.

Payment cards issued abroad (American Express, Diners Club, Visa International, MasterCard International) are also accepted in Russia. The value of operations in Russia using cards issued abroad totalled 40 billion roubles in 2001.

# **6. Securities settlement systems**

## **6.1 Securities**

The privatisation of state property at the beginning of 1990s followed by the transformation of state enterprises into joint stock companies, as well as the issue of securities by the government, gave the initial impulse for the formation of the securities market in the Russian Federation.

The securities market now comprises federal government securities, sub-federal securities (bonds of the subjects of the Russian Federation), municipal securities (bonds of municipal structures) and corporate securities (shares and bonds of enterprises and organisations).

The federal government securities issued at present are: (1) state short-term, non-coupon bonds (GKO), which are discount bonds issued with a maturity of one year; and (2) different types of bonds of federal loan (OFZ), which are coupon bonds issued with maturities from one year to 30 years.

## **6.2 Settlement system of the Moscow Interbank Currency Exchange and the Organised Market of Securities and Other Financial Assets**

The Moscow Interbank Currency Exchange (MICEX) was established in March 1992 by the Bank of Russia, the leading commercial banks and the government of Moscow, aiming at the organisation of interbank trading in foreign currencies and other financial instruments. With the assistance of MICEX, regional currency exchanges subsequently started to develop in other major financial-industrial regions; at present these are grouped together in the Association of Russian Currency Exchanges.

In 1993, in the preparatory period for the issue of GKOs, MICEX was granted the right to act in the capacity of a trading system for primary placement of GKOs (and later, OFZs) and their repayment as well as coupon payments under OFZs, and also for secondary market trading. MICEX performs these functions on the basis of an agreement with the Bank of Russia.

In 1993-95 the Bank of Russia jointly with the Ministry of Finance elaborated the legislative and regulatory basis of the Organised Market of Securities and Other Financial Assets (OMS) to conduct operations in government and municipal securities and to organise stock-exchange trading in other financial assets, such as corporate shares and bonds, and futures on certain shares.

The OMS's infrastructure is a national one, uniting eight regional trading sites, which are operated by the currency exchanges located in the following cities: Moscow, St Petersburg, Novosibirsk, Rostov-on-Don, Yekaterinburg, Vladivostok, Nizhniy Novgorod and Samara. MICEX is playing an active role in developing this infrastructure. The trading regime, settlement mechanism and software are unified for all trading sites.

The functions of head depository are carried out by the National Depository Centre (NDC) (see Section 6.4).

Settlement of the money leg of deals is effected in roubles through specialised settlement NCOs, called OMS settlement centres. For each stock exchange there is an OMS settlement centre.

By the beginning of trading, participants must have deposited funds on their accounts with OMS settlement centres, and securities in the NDC. OMS settlement centres and the NDC inform MICEX of the amounts of deposited funds and the number and types of securities respectively. MICEX maintains positions and settles trade participants' net money and securities obligations. This ensures that obligations of participants (debit position) do not exceed the amount of funds and number of securities deposited. Data on net positions of trade participants and respective orders are sent by MICEX to OMS settlement centres and the NDC. Transfers of securities in the NDC and of funds in OMS settlement centres are carried out on a net basis, and become final on the day the information on the results of trading is sent to settlement centres by MICEX. Thus MICEX synchronises completion of securities and funds settlements, ensuring compliance with the DVP principle, which is achieved on a net basis twice a day at the end of each part of the trading session. The Bank of Russia organises and controls settlements between OMS settlement centres. As the GKO/OFZ market is an electronic one, settlements on the securities and money legs of deals are also carried out electronically. Settlements take place on T+0.

Operations in GKOs and OFZs are effected exclusively on the OMS, where the following types of deals in these securities exist:

- primary and secondary market purchases and sales;
- collateral operations;
- repo operations.

Other financial assets are also traded on the OMS (but not exclusively on the OMS):

- other government securities of the subjects of the Russian Federation and non-state securities issued on behalf of municipal structures or corporate issuers ("Fund market" section);

- futures (standard contracts);
- foreign currency.

### **6.3 Settlement system of the RTS Fund Exchange**

The RTS Fund Exchange is one of the largest trading sites in Russia. Corporate and sub-federal securities (shares and bonds) are eligible at the exchange, as well as federal foreign currency bonds (eurobonds) and term instruments (futures on shares and fund indexes).

The RTS Fund Exchange is not included in the OMS system. There is a partial overlap of the assets circulating on the OMS and the RTS, mainly corporate shares and bonds. Deals in all financial assets with the exception of GKO/OFZ may be concluded on the RTS.

The RTS Fund Exchange as an electronic trading system was set up in 1995, aiming at unification of uncoordinated regional markets into a single securities market. Prior to 1997 the RTS did not have the status of exchange, but was a system for issuing quotations. Conclusion of deals was over the counter and took place outside the RTS. Since 1997 the RTS has received the right to perform stock exchange functions. In January 2000 the RTS was licensed as a fund exchange and changed its name to that of non-commercial partnership RTS Fund Exchange.

With the receipt of a fund exchange licence the nature of services provided by the RTS has changed. The receipt of exchange status required the development of mechanisms for conclusion and execution of deals, and, accordingly, the transformation of the existing trading system into a stock-exchange one. Deals on the RTS may be concluded in two ways - by phone or electronically.

The RTS Fund Exchange brings together over 250 investment companies and banks as professional securities market participants. A total of 396 different shares and bonds of Russian companies are traded on the Exchange.

The Exchange participants trade in securities in a real-time mode; over-the-counter trades settlement is usually effected on T+3, and in the system of stock-exchange trades on T+0.

Securities settlements are effected on the RTS based on the principle of free delivery, and DVP with preliminary depositing of assets, which means transfer of assets to trade accounts prior to trades, and with post-depositing of assets, which means conclusion of a deal without collateral and transfer of assets to trade accounts after the conclusion of a deal.

The Depository Clearing Company and Settlement Depository Company act as settlement depositories for settlements under the deals concluded on the RTS. The settlement NCO "RTS Settlement House" acts as a settlement agent for effecting settlements in roubles. Settlements in US dollars are carried out through ABN AMRO Bank.

### **6.4 National Depository Centre**

With a view to reducing operational risks and simplifying the system of transfer of ownership of securities, a modernised depository system for securities, the non-commercial partnership National Depository Centre (NDC) was set up in 1997 with the participation of the Bank of Russia and the MICEX.

The NDC interacts with stock exchanges and settlement NCOs and fulfils the functions of a centralised securities depository, ie it keeps a record of owners' rights to securities and effects transfers of securities between accounts as a result of sales and purchases between professional securities market participants.

In addition, the NDC acts as a depository for servicing deals in corporate and sub-federal securities concluded directly between participants (over-the-counter deals), including deals whose execution entails transfer of securities through registers of owners of nominal securities. Obligations under over-the-counter deals, as a rule, are settled as "free delivery" or "free entry" of securities, ie not on a DVP basis.

## **7. Major projects under implementation**

The Bank of Russia will continue to develop the legal and methodological basis in the sphere of payment systems. The improvement of the existing payment system in Russia, including measures to expand non-cash payments and the introduction of modern technologies and methods of information transmission, so as to ensure all payment system participants receive an efficient and reliable service, is a major factor in enhancing the stability of the financial sector and the country's economy, as well as in decreasing the cash turnover.

The upgrading of Russia's payment system will include the introduction of a real-time gross settlement system. Such a system, earmarked for conducting large, urgent, payments generated by interbank markets, securities markets and other users, will significantly enhance the role of the national payment system in securing efficient functioning of financial markets and enable it to integrate into international payment systems in the future.

Special attention will be given to measures aimed at improving the regulation of private payment systems operating in the country that provide intrabank settlements, settlements on the basis of interbank correspondent relations, and clearing (netting) settlements.

Initiatives of credit organisations to create clearing systems that will enable the provision of additional payment services using payment cards, thus promoting their dissemination in the Russian Federation, will also be supported.

The Bank of Russia will continue its cooperation with credit organisations and their associations in the area of payment system reform.

Considering the significant volume of Russia's foreign trade with the Commonwealth of Independent States (CIS), significant attention will be paid to improving payment and settlement relations with these countries.

The Bank of Russia will continue its efforts to improve the pricing policy in the provision of payment system services to users.

## **Statistical tables**



Table 1  
**Basic statistical data**

|                             | 1997    | 1998    | 1999    | 2000    | 2001    |
|-----------------------------|---------|---------|---------|---------|---------|
| Population (millions)       | 147.1   | 146.7   | 146.3   | 145.6   | 144.0   |
| GDP (billions of roubles)   | 2,521.9 | 2,684.5 | 4,545.5 | 7,302.2 | 9,040.7 |
| GDP per capita (roubles)    | 17,144  | 18,349  | 31,069  | 50,152  | 62,783  |
| Exchange rate (rouble/USD): |         |         |         |         |         |
| <i>Year-end</i>             | 6.0     | 20.7    | 27.0    | 28.2    | 30.1    |
| <i>Annual average</i>       | 5.8     | 9.8     | 24.7    | 28.1    | 29.2    |

Table 2  
**Settlement media used by non-banks**  
End of year, in billions of roubles

|                          | 1997  | 1998  | 1999  | 2000    | 2001    |
|--------------------------|-------|-------|-------|---------|---------|
| Notes and coin           | 130.4 | 187.8 | 266.6 | 419.3   | 584.3   |
| Transferable deposits    | 282.7 | 314.0 | 531.6 | 965.2   | 1,362.0 |
| Narrow money supply (M1) | 413.1 | 501.8 | 798.2 | 1,384.5 | 1,946.3 |

Table 3  
**Settlement media used by banks**  
End of year, in billions of roubles

|  | 1997 | 1998 | 1999 | 2000  | 2001  |
|--|------|------|------|-------|-------|
| Transferable balances held at central bank | 33.0 | 33.3 | 71.9 | 135.8 | 152.1 |
| <i>Of which:</i>                           |      |      |      |       |       |
| <i>Required reserves</i>                   | 1.6  | 0.7  | 3.0  | 5.7   | 7.6   |
| <i>Free reserves</i>                       | 31.4 | 32.6 | 68.9 | 130.1 | 144.5 |
| Transferable balances held at other banks  | 12.6 | 12.8 | 28.8 | 48.4  | 83.3  |
| <i>Memorandum item:</i>                    |      |      |      |       |       |
| Banks' borrowing from the central bank     | 6.8  | 9.1  | 15.6 | 12.6  | 10.7  |



Table 4  
**Banknotes and coins**  
 End of year, in billions of roubles

|  | 1997       | 1998       | 1999       | 2000       | 2001       |
|--|------------|------------|------------|------------|------------|
| Total banknotes issued                 | 136.9      | 193.7      | 285.3      | 442.7      | 618.9      |
| <i>Of which:</i>                       |            |            |            |            |            |
| 1993-1995 issue                        |            |            |            |            |            |
| 500,000 roubles                        | 20.9       | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 100,000 roubles                        | 71.2       | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 50,000 roubles                         | 34.0       | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 10,000 roubles                         | 6.8        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 5,000 roubles                          | 2.7        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 1,000 roubles                          | 0.8        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 500 roubles                            | 0.3        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 200 roubles                            | 0.1        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 100 roubles                            | 0.1        | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> |
| 1997 issue                             |            |            |            |            |            |
| 1000 roubles                           | <i>nap</i> | <i>nap</i> | <i>nap</i> | <i>nap</i> | 91.9       |
| 500 roubles                            | <i>nap</i> | 51.4       | 125.5      | 253.0      | 351.6      |
| 100 roubles                            | <i>nap</i> | 94.4       | 112.5      | 140.3      | 132.4      |
| 50 roubles                             | <i>nap</i> | 39.8       | 40.5       | 43.0       | 36.8       |
| 10 roubles                             | <i>nap</i> | 7.9        | 6.6        | 6.3        | 6.2        |
| 5 roubles                              | <i>nap</i> | 0.2        | 0.2        | 0.1        | <i>neg</i> |
| Total coins issued                     | 0.1        | 2.7        | 3.3        | 4.3        | 5.5        |
| Total banknotes and coins issued       | 137.0      | 196.4      | 288.6      | 447.0      | 624.4      |
| Banknotes and coins held by banks      | 6.5        | 8.6        | 22.1       | 27.7       | 40.1       |
| Banknotes and coins held outside banks | 130.4      | 187.8      | 266.5      | 419.3      | 584.3      |

Table 5  
**Institutional framework**  
 End of 2001

| Categories                | Number of institutions | Number of branches  | Number of accounts (thousands) | Number of internet-linked accounts | Value of accounts (in billions of roubles) |
|---------------------------|------------------------|---------------------|--------------------------------|------------------------------------|--|
| Central bank              | 1                      | 1,175               | 176.33                         | <i>nap</i>                         | 374.06                                     |
| Credit organisations      | 1,319                  | 10,883 <sup>1</sup> | 253,944.51                     | <i>nav</i>                         | 987.90                                     |
| Total                     | 1,320                  | 12,058              | 254,120.84                     | <i>nav</i>                         | 1,361.96                                   |
| <i>Memorandum item:</i>   |                        |                     |                                |                                    |  |
| Branches of foreign banks | 1                      | 1                   | 0.23                           | <i>nav</i>                         | 0.02                                       |

<sup>1</sup> Also includes sub-branches.

Table 6  
**Payment card functions and accepting devices**  
End of year

|   | 1997 <sup>1</sup> | 1998 <sup>1</sup> | 1999 <sup>1</sup> | 2000 <sup>1</sup> | 2001     |
|---|-------------------|-------------------|-------------------|-------------------|----------|
| <b>Cash function</b>  |                   |                   |                   |                   |          |
| Cards with a cash function (thousands) <sup>2</sup>                                   | 3,084.3           | 5,361.7           | 6,417.7           | 7,153.5           | 10,593.4 |
| Number of networks for cash dispensing  | nav               | nav               | nav               | 23                | 29       |
| Number of ATMs with a cash dispensing function  | 1,388             | 2,724             | 3,593             | 3,879             | 5,887    |
| Total volume of transactions (millions)   | 14.0              | 23.1              | 35.3              | 108.5             | 155.5    |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>At ATMs</i>  | 9.5               | 16.2              | 32.1              | 80.8              | 117.4    |
| <i>At bank counters</i>   | 4.5               | 6.9               | 3.2               | 27.7              | 38.1     |
| Total value of transactions (billions of roubles)                                     | 14.9              | 30.9              | 53.8              | 234.5             | 381.4    |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>At ATMs</i>  | 6.2               | 16.9              | 27.0              | 118.1             | 200.1    |
| <i>At bank counters</i>   | 8.7               | 14.0              | 26.8              | 116.4             | 181.3    |
| <b>Cards with debit, credit and deferred debit functions</b>                          |                   |                   |                   |                   |          |
| Total cards (thousands) <sup>2</sup>  | 3,084.3           | 5,361.7           | 6,417.7           | 7,153.5           | 10,593.4 |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>Cards with a debit or deferred debit function</i> <sup>3</sup>                     | nav               | nav               | nav               | 7,126.9           | 10,582.4 |
| <i>Cards with a credit function</i>   | nav               | nav               | nav               | 26.6              | 11.0     |
| Number of networks used for payments for goods and services                           | nav               | nav               | nav               | 14                | 27       |
| Number of EFTPOS terminals  | 6,873             | 10,705            | 14,547            | 21,092            | 28,766   |
| Total volume of transactions for payments for goods and services (millions)           | 4.2               | 6.2               | 7.7               | 21.4              | 28.8     |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>Through EFTPOS terminals</i>   | 4.0               | 6.1               | 7.6               | 21.3              | 28.4     |
| <i>Through imprinters</i>   | 0.2               | 0.1               | 0.1               | 0.1               | 0.4      |
| Total value of transactions for payments for goods and services (billions of roubles) | 1.0               | 2.2               | 2.6               | 13.3              | 18.4     |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>Through EFTPOS terminals</i>   | 0.8               | 2.0               | 2.4               | 11.6              | 17.0     |
| <i>Through imprinters</i>   | 0.2               | 0.2               | 0.2               | 1.7               | 1.4      |
| <b>Electronic money function</b>  |                   |                   |                   |                   |          |
| Cards with an e-money function  | nav               | nav               | nav               | nav               | nav      |
| <b>Memorandum items</b>   |                   |                   |                   |                   |          |
| Total number of cards in circulation (thousands) <sup>2</sup>                         | 3,084.3           | 5,361.7           | 6,417.7           | 7,153.5           | 10,593.4 |
| <i>Of which:</i>  |                   |                   |                   |                   |          |
| <i>Cards with a cheque guarantee function</i>   | nav               | nav               | nav               | nav               | nav      |

<sup>1</sup> Estimated data. <sup>2</sup> All cards have a cash function (including cards with a debit, credit or deferred debit function).

Table 7  
**Payment instructions handled by selected payment systems:  
 volume of transactions**

In millions

|   | 1997 <sup>1</sup> | 1998 <sup>1</sup> | 1999 <sup>1</sup> | 2000 <sup>1</sup> | 2001  |
|---|-------------------|-------------------|-------------------|-------------------|-------|
| Payment system of the Bank of Russia <sup>2</sup>   | nav               | 170.8             | 199.1             | 244.1             | 279.2 |
| <i>Of which:</i>  |                   |                   |                   |                   |       |
| <i>Intraregional electronic payments</i>  | nav               | 109.4             | 137.2             | 181.9             | 224.2 |
| <i>Inter-regional electronic payments</i>   | nav               | 4.1               | 9.8               | 17.2              | 26.8  |
| <i>Paper-based payments</i>   | nav               | 57.3              | 52.1              | 45.0              | 28.2  |
| <i>Of which:</i>  |                   |                   |                   |                   |       |
| <i>Credit transfers</i>   | nav               | nav               | nav               | 41.5              | 24.6  |
| <i>Direct debits</i>  | nav               | nav               | nav               | 3.5               | 3.6   |
| Intrabank payment systems between<br>branches of the same credit organisation                                     | nav               | nav               | nav               | 71.8              | 95.5  |
| <i>Of which:</i>  |                   |                   |                   |                   |       |
| <i>Cheques</i>  | nav               | nav               | nav               | neg               | 0.1   |
| <i>Paper-based credit transfers</i>   | nav               | nav               | nav               | 17.5              | 16.9  |
| <i>Paperless credit transfers</i>   | nav               | nav               | nav               | 52.7              | 76.5  |
| <i>Direct debits</i>  | nav               | nav               | nav               | 1.6               | 2.0   |
| Payment systems of credit organisations<br>using correspondent accounts opened with<br>other credit organisations | nav               | nav               | nav               | 10.3              | 12.7  |
| <i>Of which:</i>  |                   |                   |                   |                   |       |
| <i>Cheques</i>  | nav               | nav               | nav               | neg               | neg   |
| <i>Paper-based credit transfers</i>   | nav               | nav               | nav               | 1.6               | 2.0   |
| <i>Paperless credit transfers</i>   | nav               | nav               | nav               | 8.4               | 10.3  |
| <i>Direct debits</i>  | nav               | nav               | nav               | 0.3               | 0.4   |
| Payment systems of settlement non-bank<br>credit organisations  | nav               | nav               | nav               | 1.7               | 2.3   |

<sup>1</sup> Estimated data. <sup>2</sup> Data does not include intra-Bank of Russia payments.

See Sections 2.1.2 and 4.5 for more information.

Table 8

**Payment instructions handled by selected payment systems:  
value of transactions**

In billions of roubles

|   | 1997 <sup>1</sup>    | 1998 <sup>1</sup> | 1999 <sup>1</sup> | 2000 <sup>1</sup> | 2001     |
|---|----------------------|-------------------|-------------------|-------------------|----------|
| Payment system of the Bank of Russia <sup>2</sup>   | nav                  | 10,695.7          | 21,148.4          | 42,958.0          | 60,603.1 |
| <i>Of which:</i>  |                      |                   |                   |                   |          |
| <i>Intraregional electronic payments</i>  | nav                  | 7,557.7           | 13,302.9          | 28,166.4          | 42,414.2 |
| <i>Inter-regional electronic payments</i>   | nav                  | 454.2             | 2,143.0           | 5,759.8           | 9,400.5  |
| <i>Paper-based payments</i>   | nav                  | 2,683.8           | 5,702.5           | 9,031.8           | 8,788.4  |
| <i>Of which:</i>  |                      |                   |                   |                   |          |
| <i>Credit transfers</i>   | nav                  | nav               | nav               | 8,954.9           | 8,745.7  |
| <i>Direct debits</i>  | nav                  | nav               | nav               | 76.9              | 42.7     |
| Intrabank payment systems between branches of the same credit organisation                                  | 5,893.8 <sup>3</sup> | 5,778.0           | 10,475.4          | 14,344.8          | 9,591.0  |
| <i>Of which:</i>  |                      |                   |                   |                   |          |
| <i>Cheques</i>  | nav                  | nav               | nav               | 1.5               | 4.6      |
| <i>Paper-based credit transfers</i>   | nav                  | nav               | nav               | 4,135.2           | 1,402.9  |
| <i>Paperless credit transfers</i>   | nav                  | nav               | nav               | 10,030.0          | 8,019.6  |
| <i>Direct debits</i>  | nav                  | nav               | nav               | 178.1             | 163.9    |
| Payment systems of credit organisations using correspondent accounts opened with other credit organisations | 3,516.2 <sup>3</sup> | 1,654.0           | 2,563.4           | 5,387.8           | 7,509.7  |
| <i>Of which:</i>  |                      |                   |                   |                   |          |
| <i>Cheques</i>  | nav                  | nav               | nav               | 1.8               | 3.1      |
| <i>Paper-based credit transfers</i>   | nav                  | nav               | nav               | 1,962.5           | 2,492.1  |
| <i>Paperless credit transfers</i>   | nav                  | nav               | nav               | 3,218.3           | 4,968.5  |
| <i>Direct debits</i>  | nav                  | nav               | nav               | 205.2             | 46.0     |
| Payment systems of settlement non-bank credit organisations   | nav                  | 444.4             | 739.6             | 750.9             | 628.2    |

<sup>1</sup> Estimated data. <sup>2</sup> Data does not include intra-Bank of Russia payments. <sup>3</sup> Data is given for the last nine months of 1997.

See Sections 2.1.2 and 4.5 for more information.

Table 9

**Indicators of use of various cashless payment instruments:  
volume of transactions**

In millions

|  | 1997 <sup>1</sup> | 1998 <sup>1</sup> | 1999 <sup>1</sup> | 2000 <sup>1</sup> | 2001  |
|--|-------------------|-------------------|-------------------|-------------------|-------|
| Cheques  | nav               | nav               | nav               | 0.8               | 1.3   |
| Payments by debit, credit and deferred debit cards | 4.2               | 6.2               | 7.7               | 21.4              | 28.8  |
| <i>Of which:</i>                                   |                   |                   |                   |                   |       |
| <i>Through EFTPOS terminals</i>                    | 4.0               | 6.1               | 7.6               | 21.3              | 28.4  |
| <i>Through imprinters</i>                          | 0.2               | 0.1               | 0.1               | 0.1               | 0.4   |
| Credit transfers                                   | nav               | nav               | nav               | 459.0             | 594.1 |
| <i>Of which:</i>                                   |                   |                   |                   |                   |       |
| <i>Paper-based</i>                                 | nav               | nav               | nav               | 175.6             | 199.4 |
| <i>Paperless</i>                                   | nav               | nav               | nav               | 283.4             | 394.7 |
| Direct debits                                      | nav               | nav               | nav               | 8.0               | 9.2   |
| Electronic money                                   | nav               | nav               | nav               | nav               | nav   |
| Total  | nav               | nav               | nav               | 489.2             | 633.4 |

<sup>1</sup> Estimated data.

Table 10

**Indicators of use of various cashless payment instruments:  
value of transactions**

In billions of roubles

|  | 1997 <sup>1</sup> | 1998 <sup>1</sup> | 1999 <sup>1</sup> | 2000 <sup>1</sup> | 2001      |
|--|-------------------|-------------------|-------------------|-------------------|-----------|
| Cheques  | nav               | nav               | nav               | 94.2              | 140.4     |
| Payments by debit, credit and deferred debit cards | 1.0               | 2.2               | 2.6               | 13.3              | 18.4      |
| <i>Of which:</i>                                   |                   |                   |                   |                   |           |
| <i>Through EFTPOS terminals</i>                    | 0.8               | 2.0               | 2.4               | 11.6              | 17.0      |
| <i>Through imprinters</i>                          | 0.2               | 0.2               | 0.2               | 1.7               | 1.4       |
| Credit transfers                                   | nav               | nav               | nav               | 85,003.8          | 106,118.9 |
| <i>Of which:</i>                                   |                   |                   |                   |                   |           |
| <i>Paper-based</i>                                 | nav               | nav               | nav               | 24,727.9          | 25,703.3  |
| <i>Paperless</i>                                   | nav               | nav               | nav               | 60,275.9          | 80,415.6  |
| Direct debits                                      | nav               | nav               | nav               | 487.9             | 371.4     |
| Electronic money                                   | nav               | nav               | nav               | nav               | nav       |
| Total  | nav               | nav               | nav               | 85,599.2          | 106,649.1 |

<sup>1</sup> Estimated data.

Table 11a

**Instructions handled by trading platforms, clearing houses  
and securities settlement systems:  
volume of transactions**

In thousands

|   | 1997  | 1998  | 1999  | 2000  | 2001  |
|---|-------|-------|-------|-------|-------|
| MICEX settlement system   | 526.9 | 396.8 | 136.1 | 251.5 | 291.3 |
| <i>Of which:</i>  |       |       |       |       |       |
| <i>Federal government securities</i>  | 491.1 | 332.0 | 49.9  | 72.1  | 46.5  |
| <i>Government securities of subjects of the Russian Federation and municipal securities</i> | 0.9   | 1.4   | 0.0   | 0.1   | 2.3   |
| <i>Bonds of the Bank of Russia</i>  | nap   | 2.9   | 0.8   | nap   | 0.1   |
| <i>Corporate bonds</i>  | 10.4  | 9.6   | 1.2   | 0.7   | 6.1   |
| <i>Shares</i>   | 24.5  | 50.9  | 84.2  | 178.6 | 236.3 |
| RTS settlement system   | 183.0 | 135.5 | 48.2  | 114.8 | 80.4  |
| <i>Of which:</i>  |       |       |       |       |       |
| <i>Government securities of subjects of the Russian Federation and municipal securities</i> | nap   | nap   | nap   | nap   | neg   |
| <i>Corporate bonds</i>  | nap   | nap   | nap   | nap   | 0.2   |
| <i>Shares</i>   | 183.0 | 135.5 | 48.2  | 114.8 | 80.2  |

Table 11b

**Instructions handled by trading platforms, clearing houses  
and securities settlement systems:  
value of transactions**

In billions of roubles

|   | 1997    | 1998    | 1999  | 2000  | 2001    |
|---|---------|---------|-------|-------|---------|
| MICEX settlement system   | 1,828.6 | 1,142.6 | 245.7 | 831.5 | 1,033.3 |
| <i>Of which:</i>  |         |         |       |       |         |
| <i>Federal government securities</i>  | 1,816.7 | 1,113.1 | 160.6 | 320.3 | 272.5   |
| <i>Government securities of subjects of the Russian Federation and municipal securities</i> | 3.9     | 0.8     | 0.1   | 0.3   | 10.7    |
| <i>Bonds of the Bank of Russia</i>  | nap     | 11.5    | 6.8   | nap   | 2.1     |
| <i>Corporate bonds</i>  | 1.9     | 1.6     | 2.6   | 37.0  | 41.2    |
| <i>Shares</i>   | 6.1     | 15.6    | 75.6  | 473.9 | 706.8   |
| RTS settlement system   | 95.6    | 58.4    | 60.9  | 167.1 | 177.2   |
| <i>Of which:</i>  |         |         |       |       |         |
| <i>Government securities of subjects of the Russian Federation and municipal securities</i> | nap     | nap     | nap   | nap   | neg     |
| <i>Corporate bonds</i>  | nap     | nap     | nap   | nap   | 0.2     |
| <i>Shares</i>   | 95.6    | 58.4    | 60.9  | 167.1 | 177.0   |

Table 11c

**Number of participants in trading platforms, clearing  
houses and securities settlement systems**

|                                 | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| MICEX settlement system         | 275         | 316         | 372         | 459         | 470         |
| <i>Of which:</i>                |             |             |             |             |             |
| <i>Credit organisations</i>     | 199         | 217         | 243         | 290         | 298         |
| <i>Non-credit organisations</i> | 76          | 99          | 129         | 169         | 172         |
| RTS settlement system           | 503         | 578         | 142         | 169         | 158         |
| <i>Of which:</i>                |             |             |             |             |             |
| <i>Credit organisations</i>     | 141         | 161         | 43          | 55          | 53          |
| <i>Non-credit organisations</i> | 362         | 417         | 99          | 114         | 105         |

Table 12

**Participation in SWIFT by domestic institutions**

|                            | 1997  | 1998  | 1999  | 2000  | 2001  |
|----------------------------|-------|-------|-------|-------|-------|
| Members                    | 227   | 210   | 229   | 246   | 273   |
| <i>Of which: live</i>      | 212   | 204   | 222   | 240   | 262   |
| Sub-members                | 13    | 17    | 20    | 19    | 16    |
| <i>Of which: live</i>      | 11    | 17    | 18    | 19    | 16    |
| Participants               | 10    | 20    | 7     | 6     | 4     |
| <i>Of which: live</i>      | 6     | 18    | 7     | 6     | 4     |
| Total users                | 250   | 247   | 256   | 271   | 293   |
| <i>Of which: live</i>      | 229   | 239   | 247   | 265   | 282   |
| <i>Memorandum item:</i>    |       |       |       |       |       |
| Total SWIFT users globally | 6,372 | 6,771 | 6,991 | 7,293 | 7,457 |
| <i>Of which:</i>           |       |       |       |       |       |
| <i>Members</i>             | 3,070 | 3,052 | 2,230 | 2,307 | 2,265 |
| <i>Sub-members</i>         | 2,621 | 2,781 | 2,825 | 3,037 | 3,143 |
| <i>Participants</i>        | 681   | 938   | 1,936 | 1,949 | 2,049 |

Source: SWIFT.

Table 13

**SWIFT message flows to/from domestic users**

|                         | 1997        | 1998        | 1999          | 2000          | 2001          |
|-------------------------|-------------|-------------|---------------|---------------|---------------|
| Total messages sent     | 5,463,857   | 5,517,072   | 4,479,650     | 6,642,263     | 8,309,709     |
| <i>Of which:</i>        |             |             |               |               |               |
| <i>Category I</i>       | 2,230,871   | 2,492,753   | 2,329,684     | 3,404,082     | 3,930,960     |
| <i>Category II</i>      | 974,135     | 699,543     | 447,919       | 626,817       | 795,849       |
| Total messages received | 6,184,338   | 5,689,595   | 4,622,295     | 6,368,795     | 8,004,525     |
| <i>Of which:</i>        |             |             |               |               |               |
| <i>Category I</i>       | 1,850,513   | 2,106,778   | 2,115,324     | 2,886,949     | 3,268,306     |
| <i>Category II</i>      | 248,761     | 250,405     | 232,058       | 301,973       | 371,963       |
| Domestic traffic        | 1,880,109   | 2,128,145   | 1,571,867     | 2,167,083     | 3,480,937     |
| <i>Memorandum item:</i> |             |             |               |               |               |
| Global SWIFT traffic    | 812,117,556 | 941,235,088 | 1,076,490,597 | 1,298,668,103 | 1,533,906,047 |

Source: SWIFT.





## **Comparative tables**



Table 1  
**Banknotes and coin in circulation**  
 End of year

|                | Total<br>(USD millions) <sup>1</sup> |         |         |         |         | Value per inhabitant<br>(USD) <sup>1</sup> |       |       |       |       |
|----------------|--------------------------------------|---------|---------|---------|---------|--|-------|-------|-------|-------|
|                | 1997                                 | 1998    | 1999    | 2000    | 2001    | 1997                                       | 1998  | 1999  | 2000  | 2001  |
| Russia         | 21,733                               | 9,072   | 9,870   | 14,869  | 19,412  | 148  | 62    | 67    | 102   | 135   |
| Belgium        | 11,953                               | 12,694  | 12,055  | 11,045  | 6,257   | 1,174                                      | 1,244 | 1,179 | 1,078 | 609   |
| Canada         | 20,704                               | 20,698  | 25,518  | 23,539  | 23,697  | 688  | 682   | 834   | 762   | 759   |
| France         | 44,584                               | 48,303  | 44,907  | 41,500  | 25,822  | 745  | 804   | 745   | 685   | 424   |
| Germany        | 137,688                              | 144,327 | 131,706 | 117,149 | 59,928  | 1,678                                      | 1,759 | 1,604 | 1,425 | 728   |
| Hong Kong SAR  | 10,404                               | 10,479  | 12,807  | 11,770  | 13,035  | 1,603                                      | 1,601 | 1,938 | 1,766 | 1,938 |
| Italy          | 61,080                               | 69,410  | 66,124  | 64,632  | 50,806  | 1,062                                      | 1,205 | 1,147 | 1,120 | 877   |
| Japan          | 405,887                              | 471,446 | 581,944 | 539,144 | 507,160 | 3,217                                      | 3,728 | 4,594 | 4,248 | 3,984 |
| Netherlands    | 19,205                               | 19,974  | 17,400  | 15,753  | 8,055   | 1,231                                      | 1,272 | 1,101 | 989   | 502   |
| Singapore      | 6,389                                | 6,110   | 6,792   | 6,520   | 6,412   | 1,684                                      | 1,558 | 1,719 | 1,623 | 1,552 |
| Sweden         | 9,370                                | 9,579   | 10,231  | 9,409   | 9,162   | 1,059                                      | 1,082 | 1,155 | 1,061 | 1,030 |
| Switzerland    | 19,796                               | 21,858  | 19,830  | 19,562  | 21,418  | 2,783                                      | 3,065 | 2,767 | 2,715 | 2,950 |
| United Kingdom | 40,116                               | 42,339  | 45,612  | 45,057  | 47,102  | 680  | 715   | 767   | 754   | 786   |
| United States  | 428,100                              | 463,300 | 521,500 | 535,200 | 584,900 | 1,597                                      | 1,713 | 1,911 | 1,944 | 2,052 |

Note: For an explanation of the footnotes refer to the end of the table.

Table 1 (cont)  
**Banknotes and coin in circulation**  
 End of year

|                | As a percentage of GDP |      |      |      |      | As a percentage of narrow money |      |      |      |      |
|----------------|------------------------|------|------|------|------|---------------------------------|------|------|------|------|
|                | 1997                   | 1998 | 1999 | 2000 | 2001 | 1997                            | 1998 | 1999 | 2000 | 2001 |
| Russia         | 5.2                    | 7.0  | 5.9  | 6.0  | 6.5  | 31.6                            | 37.4 | 33.4 | 30.3 | 30.0 |
| Belgium        | 5.0                    | 4.8  | 5.1  | 4.8  | 2.8  | 26.5                            | 23.8 | 20.4 | 19.3 | 11.8 |
| Canada         | 3.4                    | 3.5  | 3.8  | 3.3  | 3.5  | 14.2                            | 14.5 | 15.6 | 13.7 | 13.0 |
| France         | 3.3                    | 3.2  | 3.3  | 3.1  | 2.0  | 13.1                            | 12.9 | 12.7 | 11.9 | 7.4  |
| Germany        | 6.7                    | 6.4  | 6.6  | 6.2  | 3.3  | 27.1                            | 24.1 | 23.5 | 21.9 | 11.3 |
| Hong Kong SAR  | 6.1                    | 6.4  | 8.1  | 7.2  | 7.9  | 42.8                            | 45.5 | 48.5 | 45.0 | 44.2 |
| Italy          | 5.4                    | 5.5  | 5.9  | 6.0  | 4.7  | 16.1                            | 16.1 | 14.4 | 14.3 | 11.3 |
| Japan          | 10.1                   | 10.5 | 11.7 | 12.1 | 13.1 | 25.8                            | 25.3 | 24.8 | 25.0 | 23.7 |
| Netherlands    | 5.3                    | 4.8  | 4.6  | 4.2  | 2.1  | 15.7                            | 14.1 | 12.8 | 11.4 | 5.7  |
| Singapore      | 7.6                    | 7.4  | 8.0  | 7.1  | 7.7  | 38.9                            | 37.2 | 36.4 | 33.9 | 32.9 |
| Sweden         | 4.1                    | 4.1  | 4.3  | 4.3  | 4.5  | nav                             | nav  | nav  | nav  | nav  |
| Switzerland    | 7.8                    | 7.9  | 8.2  | 7.9  | 8.7  | 15.6                            | 15.5 | 15.3 | 15.8 | 16.7 |
| United Kingdom | 3.0                    | 3.0  | 3.1  | 3.2  | 3.3  | 5.0                             | 5.0  | 5.0  | 5.0  | 5.0  |
| United States  | 5.1                    | 5.3  | 5.6  | 5.4  | 5.8  | 39.0                            | 41.4 | 45.4 | 48.1 | 48.6 |

<sup>1</sup> Converted at end-of-year exchange rates.

Table 2  
**Transferable deposits held by non-banks**  
 End of year

|                | Value per inhabitant<br>(USD) <sup>1</sup> |        |        |        |        | As a percentage of GDP |      |      |      |      | As a percentage of narrow money |      |      |      |      |
|----------------|--|--------|--------|--------|--------|------------------------|------|------|------|------|---------------------------------|------|------|------|------|
|                | 1997                                       | 1998   | 1999   | 2000   | 2001   | 1997                   | 1998 | 1999 | 2000 | 2001 | 1997                            | 1998 | 1999 | 2000 | 2001 |
| Russia         | 320  | 103    | 135    | 235    | 314    | 11.2                   | 11.7 | 11.7 | 13.2 | 15.1 | 68.4                            | 62.6 | 66.6 | 69.7 | 70.0 |
| Belgium        | 3,261                                      | 3,984  | 4,609  | 4,504  | 4,558  | 14.0                   | 15.5 | 19.9 | 20.0 | 20.9 | 73.5                            | 76.2 | 79.6 | 80.8 | 88.2 |
| Canada         | 4,169                                      | 4,010  | 4,512  | 4,818  | 5,091  | 20.3                   | 20.4 | 20.3 | 20.9 | 23.2 | 85.8                            | 85.5 | 84.4 | 86.3 | 87.0 |
| France         | 4,913                                      | 5,436  | 5,127  | 5,080  | 5,323  | 21.5                   | 21.4 | 22.7 | 23.3 | 25.1 | 86.8                            | 87.1 | 87.3 | 88.1 | 92.6 |
| Germany        | 4,515                                      | 5,542  | 5,220  | 5,080  | 5,712  | 18.0                   | 20.1 | 21.6 | 22.2 | 25.8 | 72.9                            | 75.9 | 76.5 | 78.1 | 88.7 |
| Hong Kong SAR  | 2,140                                      | 1,915  | 2,061  | 2,160  | 2,448  | 8.1                    | 7.7  | 8.6  | 8.9  | 10.0 | 57.2                            | 54.5 | 51.5 | 55.0 | 55.8 |
| Italy          | 5,379                                      | 6,179  | 6,798  | 6,704  | 6,858  | 27.4                   | 28.4 | 35.2 | 35.7 | 37.1 | 81.7                            | 82.4 | 85.6 | 85.7 | 88.7 |
| Japan          | 9,246                                      | 10,988 | 13,931 | 12,748 | 12,854 | 29.0                   | 31.0 | 35.4 | 36.2 | 42.4 | 74.2                            | 74.7 | 75.2 | 75.0 | 76.3 |
| Netherlands    | 6,609                                      | 7,740  | 7,499  | 7,710  | 8,294  | 28.3                   | 29.4 | 31.5 | 32.8 | 35.2 | 84.3                            | 85.9 | 87.2 | 88.6 | 94.3 |
| Singapore      | 2,644                                      | 2,625  | 3,007  | 3,158  | 3,167  | 12.0                   | 12.4 | 13.9 | 13.8 | 15.8 | 61.1                            | 62.8 | 63.6 | 66.1 | 67.1 |
| Sweden         | 10,487                                     | 10,503 | 10,678 | 9,972  | 9,867  | 40.2                   | 39.7 | 40.2 | 40.0 | 42.8 | nav                             | nav  | nav  | nav  | nav  |
| Switzerland    | 8,561                                      | 9,682  | 8,714  | 8,234  | 8,462  | 23.9                   | 25.0 | 25.7 | 23.9 | 24.8 | 47.9                            | 48.9 | 48.2 | 47.9 | 47.8 |
| United Kingdom | 12,997                                     | 13,718 | 14,471 | 14,225 | 14,960 | 57.0                   | 57.2 | 59.0 | 60.0 | 62.7 | 95.0                            | 95.0 | 95.0 | 95.0 | 95.0 |
| United States  | 2,464                                      | 2,398  | 2,266  | 2,066  | 2,143  | 7.9                    | 7.4  | 6.7  | 5.8  | 6.1  | 60.2                            | 57.9 | 53.9 | 51.2 | 50.7 |

<sup>1</sup> Converted at end-of-year exchange rates.

Table 3  
**Settlement media used by banks**  
 End of year

|                            | Banks' reserves at central bank |      |      |      |      |                                 |      |      |      |      |
|----------------------------|---------------------------------|------|------|------|------|---------------------------------|------|------|------|------|
|                            | USD billions <sup>1</sup>       |      |      |      |      | As a percentage of narrow money |      |      |      |      |
|                            | 1997                            | 1998 | 1999 | 2000 | 2001 | 1997                            | 1998 | 1999 | 2000 | 2001 |
| Russia                     | 5.5                             | 1.6  | 2.7  | 4.8  | 5.1  | 8.0                             | 6.6  | 9.0  | 9.8  | 7.8  |
| Belgium                    | neg                             | 1.0  | 7.4  | 6.7  | 6.7  | 0.1                             | 1.8  | 12.5 | 11.8 | 12.6 |
| Canada                     | 0.3                             | 0.4  | 0.9  | 0.3  | 0.3  | 0.2                             | 0.3  | 0.6  | 0.2  | 0.2  |
| France <sup>2</sup>        | 3.8                             | 19.4 | 24.1 | 26.0 | 26.3 | 1.1                             | 5.2  | 6.8  | 7.4  | 7.5  |
| Germany                    | 23.4                            | 27.7 | 33.5 | 33.0 | 34.3 | 4.6                             | 4.6  | 6.0  | 6.2  | 6.5  |
| Hong Kong SAR <sup>3</sup> | neg                             | 0.3  | 1.0  | 0.1  | 0.1  | 0.2                             | 1.4  | 3.9  | 0.3  | 0.3  |
| Italy                      | 47.6                            | 11.9 | 12.2 | 11.4 | 11.5 | 12.6                            | 2.8  | 2.7  | 2.5  | 2.6  |
| Japan                      | 27.7                            | 33.2 | 94.9 | 36.9 | 82.6 | 1.8                             | 1.8  | 4.0  | 1.7  | 3.9  |
| Netherlands                | 3.0                             | 9.1  | 7.3  | 8.7  | 9.0  | 2.5                             | 6.4  | 5.4  | 6.3  | 6.3  |
| Singapore                  | 4.6                             | 3.3  | 4.5  | 3.3  | 3.8  | 28.0                            | 19.9 | 24.2 | 17.1 | 19.3 |
| Sweden                     | 0.3                             | 0.2  | 0.5  | neg  | neg  | nav                             | nav  | nav  | nav  | nav  |
| Switzerland                | 4.2                             | 5.6  | 6.6  | 4.7  | 4.7  | 3.3                             | 4.0  | 5.1  | 3.8  | 3.7  |
| United Kingdom             | 4.5                             | 2.6  | 3.6  | 2.5  | 2.7  | 0.6                             | 0.3  | 0.4  | 0.3  | 0.3  |
| United States              | 18.3                            | 15.6 | 12.4 | 13.5 | 17.8 | 1.7                             | 1.4  | 1.1  | 1.2  | 1.5  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 3 (cont)  
**Settlement media used by banks**  
 End of year

|                            | Transferable deposits at other banks |       |       |       |       |                                 |      |      |      |      |
|----------------------------|--------------------------------------|-------|-------|-------|-------|---------------------------------|------|------|------|------|
|                            | USD billions <sup>1</sup>            |       |       |       |       | As a percentage of narrow money |      |      |      |      |
|                            | 1997                                 | 1998  | 1999  | 2000  | 2001  | 1997                            | 1998 | 1999 | 2000 | 2001 |
| Russia                     | 2.1                                  | 0.6   | 1.1   | 1.7   | 2.8   | 3.1                             | 2.6  | 3.6  | 3.5  | 4.3  |
| Belgium                    | 4.9                                  | 5.4   | 6.5   | 6.6   | 11.7  | 10.9                            | 10.1 | 11.0 | 11.5 | 22.0 |
| Canada                     | 3.7                                  | 4.2   | 5.2   | 4.5   | 3.3   | 2.5                             | 2.9  | 3.2  | 2.6  | 1.8  |
| France <sup>2</sup>        | 149.1                                | 183.9 | 190.7 | 169.2 | 165.9 | 44.0                            | 49.1 | 53.9 | 48.4 | 47.4 |
| Germany                    | 238.9                                | 281.9 | 114.9 | 105.5 | 108.5 | 47.0                            | 47.1 | 20.5 | 19.7 | 20.5 |
| Hong Kong SAR <sup>3</sup> | nap                                  | nap   | nap   | nap   | nap   | nap                             | nap  | nap  | nap  | nap  |
| Italy                      | 55.0                                 | 64.2  | 59.3  | 88.1  | 75.0  | 14.5                            | 14.9 | 12.9 | 19.5 | 16.7 |
| Japan                      | 29.9                                 | 30.7  | 103.1 | 37.8  | 52.8  | 1.9                             | 1.6  | 4.4  | 1.8  | 2.5  |
| Netherlands                | 1.2                                  | 25.0  | 16.4  | 49.7  | 26.9  | 1.0                             | 17.7 | 12.1 | 35.9 | 19.1 |
| Singapore                  | nav                                  | nav   | nav   | nav   | nav   | nav                             | nav  | nav  | nav  | nav  |
| Sweden                     | 11.9                                 | 13.9  | 11.1  | 7.9   | 11.7  | nav                             | nav  | nav  | nav  | nav  |
| Switzerland                | 23.6                                 | 37.2  | 26.2  | 30.8  | 27.4  | 18.6                            | 26.3 | 20.3 | 24.8 | 21.3 |
| United Kingdom             | 371.1                                | 357.9 | 358.9 | 361.4 | 404.3 | 46.1                            | 41.9 | 39.6 | 40.4 | 42.8 |
| United States              | 29.5                                 | 32.8  | 27.5  | 32.1  | 34.9  | 2.7                             | 2.9  | 2.4  | 2.9  | 2.9  |

<sup>1</sup> Converted at end-of-year exchange rates.

France: <sup>2</sup> Change in reserves policy from 16 October 1998.

Hong Kong SAR: <sup>3</sup> Banks do not maintain reserves with the HKMA as there are no reserve requirements in Hong Kong SAR. The data represent the closing balance of the aggregate balance of settlement accounts.



Table 4  
Institutional framework

|                            | Number of institutions offering payment services <sup>1</sup> |      | Number of central bank branches <sup>1</sup> |      | Number of bank branches <sup>1</sup> |       | Number of post office branches <sup>1</sup> |       | Others <sup>1</sup> |       | Total number of branches offering payment services <sup>1</sup> |       | Number of accounts on which payments can be made <sup>2</sup> |      |
|----------------------------|---|------|--|------|--------------------------------------|-------|---|-------|---------------------|-------|---|-------|---|------|
|                            | 2000  | 2001 | 2000   | 2001 | 2000                                 | 2001  | 2000  | 2001  | 2000                | 2001  | 2000  | 2001  | 2000  | 2001 |
| Russia                     | 9.0   | 9.1  | 8.1  | 8.1  | 68.7                                 | 75.2  | nap   | nap   | nap                 | nap   | 76.8  | 83.3  | 1.7   | 1.8  |
| Belgium                    | 11.8  | 11.2 | 0.8  | 0.7  | 645.1                                | 599.9 | 135.1                                       | 131.1 | nap                 | nap   | 780.2   | 731.1 | 1.2   | 1.0  |
| Canada <sup>3, 4</sup>     | 62.0  | 54.1 | 0.0  | 0.0  | 270.3                                | 285.9 | nap   | nap   | 173.3               | 172.4 | 443.6   | 458.3 | nav   | nav  |
| France                     | 27.8  | 26.9 | 3.5  | 3.5  | 423.5                                | 427.7 | 272.9                                       | 185.5 | 65.3                | 64.5  | 765.2   | 681.1 | 1.1   | 1.1  |
| Germany <sup>5</sup>       | 33.3  | 30.6 | 1.6  | 1.6  | 681.1                                | 640.5 | nap   | nap   | nap                 | nap   | 682.9   | 642.0 | 1.1   | 1.1  |
| Hong Kong SAR <sup>6</sup> | 23.1  | 19.8 | 0.2  | 0.1  | 241.3                                | 218.6 | nap   | nap   | nap                 | nap   | 241.4   | 218.7 | nav   | nav  |
| Italy                      | 13.6  | 13.3 | 1.7  | 1.7  | 486.4                                | 503.4 | 241.3                                       | 237.0 | nap                 | nap   | 729.4   | 742.2 | 0.6   | 0.6  |
| Japan                      | 22.3  | 19.6 | 0.3  | 0.3  | 315.4                                | 304.3 | 190.4                                       | 189.9 | nap                 | nap   | 506.0   | 494.5 | nav   | nav  |
| Netherlands <sup>7</sup>   | 7.1   | 6.9  | 0.3  | 0.2  | 238.0                                | 218.6 | 137.4                                       | 140.4 | nap                 | nap   | 375.7   | 359.3 | 1.4   | 1.4  |
| Singapore <sup>8</sup>     | 54.0  | 48.9 | 0.7  | 0.7  | 174.7                                | 150.6 | nap   | nap   | nap                 | nap   | 175.0   | 150.8 | nav   | nav  |
| Sweden                     | 14.3  | 15.1 | 0.1  | 0.1  | 225.6                                | 229.3 | 154.7                                       | 151.7 | nap                 | nap   | 380.3   | 381.1 | nav   | nav  |
| Switzerland                | 46.6  | 45.2 | 0.8  | 0.8  | 395.5                                | 387.5 | 469.9                                       | 437.6 | nap                 | nap   | 866.2   | 825.9 | nav   | nav  |
| United Kingdom             | 8.4   | 8.0  | neg  | neg  | 252.0                                | 244.9 | 307.8                                       | 291.9 | nap                 | nap   | 559.8   | 536.9 | 2.7   | 2.6  |
| United States              | 74.5  | 71.2 | 0.1  | 0.1  | 282.4                                | 272.9 | nap   | nap   | nap                 | nap   | 282.4   | 273.0 | nav   | nav  |

<sup>1</sup> Per million inhabitants. <sup>2</sup> Per inhabitant.

Canada: <sup>3</sup> "Number of central bank branches": there are five branches but only one offers payment services. <sup>4</sup> "Others" includes trust and loan companies; local credit unions and caisses populaires; and governmental savings institutions.

Germany: <sup>5</sup> Postbank AG is a fully fledged credit institution, and those post office branches which are entrusted with the semi-cashless payment systems on behalf of Postbank AG are included under "Number of bank branches" (and not "Number of post office branches").

Hong Kong SAR: <sup>6</sup> "Number of central bank branches" excludes the HKMA's two overseas representative offices (London and New York).

Netherlands: <sup>7</sup> "Number of bank branches" excludes the counters of the postal institution.

Singapore: <sup>8</sup> As at end-March. The institutions offering payment services include banks and finance companies.

Table 5  
Cards with a cash function and ATMs

|                        | Number of ATMs per million inhabitants (end of year) |      |      |       |       | Number of transactions per inhabitant |      |      |      |      | Average value per transaction (USD) <sup>1</sup> |       |       |       |       |
|------------------------|--|------|------|-------|-------|---------------------------------------|------|------|------|------|--|-------|-------|-------|-------|
|                        | 1997   | 1998 | 1999 | 2000  | 2001  | 1997                                  | 1998 | 1999 | 2000 | 2001 | 1997   | 1998  | 1999  | 2000  | 2001  |
| Russia <sup>a</sup>    | 9  | 19   | 25   | 27    | 41    | 0.1                                   | 0.1  | 0.2  | 0.6  | 0.8  | 112.5  | 106.4 | 34.1  | 52.0  | 58.4  |
| Belgium                | 492  | 564  | 606  | 657   | 669   | 15.7                                  | 15.6 | 17.4 | 19.8 | 21.5 | 117.9  | 118.2 | 111.3 | 97.5  | 92.8  |
| Canada <sup>3</sup>    | 652  | 775  | 873  | 1,034 | 1,142 | 43.1                                  | 47.3 | 47.2 | 48.3 | 47.8 | 50.4   | 62.0  | 65.3  | 66.6  | 69.5  |
| France                 | 452  | 490  | 538  | 580   | 606   | 14.0                                  | 15.5 | 17.0 | 17.9 | 19.1 | 66.2   | 62.8  | 64.8  | 56.0  | 54.7  |
| Germany                | 505  | 556  | 563  | 580   | 603   | nav                                   | 17.1 | 18.4 | 20.4 | 19.4 | nav  | 169.5 | 155.9 | 134.2 | 140.2 |
| Hong Kong SAR          | nav  | nav  | nav  | nav   | nav   | nav                                   | nav  | nav  | nav  | nav  | nav  | nav   | nav   | nav   | nav   |
| Italy                  | 444  | 487  | 524  | 549   | 593   | 7.2                                   | 8.5  | 8.7  | 9.1  | 9.7  | 184.9  | 178.7 | 170.6 | 150.3 | 144.9 |
| Japan <sup>4</sup>     | 924  | 934  | 944  | 922   | 918   | 3.0                                   | 3.1  | 3.1  | 3.2  | 3.1  | 481.4  | 433.8 | 501.3 | 532.2 | 474.4 |
| Netherlands            | 410  | 418  | 422  | 435   | 445   | 25.9                                  | 27.1 | 28.5 | 29.5 | 28.0 | 95.9   | 96.0  | 93.7  | 79.7  | 88.2  |
| Singapore <sup>5</sup> | 499  | 483  | 470  | 446   | 435   | 4.0                                   | 4.0  | 2.6  | 2.1  | 2.1  | 149.4  | 135.0 | 140.0 | 138.2 | 124.7 |
| Sweden                 | 268  | 281  | 291  | 295   | 289   | 35.3                                  | 37.6 | 35.0 | 36.2 | 37.7 | 104.5  | 108.4 | 100.2 | 92.1  | 81.4  |
| Switzerland            | 603  | 642  | 655  | 675   | 694   | 11.4                                  | 11.3 | 12.2 | 17.8 | 19.6 | 186.6  | 180.3 | 173.2 | 117.0 | 111.9 |
| United Kingdom         | 393  | 415  | 460  | 552   | 612   | 29.6                                  | 31.2 | 33.1 | 33.9 | 36.6 | 84.5   | 87.8  | 88.8  | 84.5  | 84.0  |
| United States          | 616  | 691  | 832  | 991   | 1,137 | 41.0                                  | 41.4 | 39.9 | 46.8 | 47.7 | 67.7   | 68.0  | 68.0  | 69.6  | 68.0  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 5 (cont)  
Cards with a cash function and ATMs

|                        | Increase in the number of ATMs<br>(%) |      |      |      |      | Increase in the number of transactions<br>(%) |      |       |       |      | Increase in the value of transactions<br>(%) <sup>2</sup> |      |       |       |       |
|------------------------|---------------------------------------|------|------|------|------|---|------|-------|-------|------|---|------|-------|-------|-------|
|                        | 1997                                  | 1998 | 1999 | 2000 | 2001 | 1997  | 1998 | 1999  | 2000  | 2001 | 1997  | 1998 | 1999  | 2000  | 2001  |
| Russia <sup>a</sup>    | 205.1                                 | 96.3 | 31.9 | 8.0  | 51.8 | 61.0  | 70.5 | 98.1  | 151.7 | 45.3 | 110.0   | 61.3 | -36.6 | 284.5 | 63.0  |
| Belgium                | 24.3                                  | 15.0 | 7.7  | 8.6  | 2.1  | 3.8   | -0.2 | 11.4  | 14.1  | 9.2  | -8.6  | 0.1  | 4.9   | -0.1  | 4.0   |
| Canada <sup>3</sup>    | 5.6                                   | 19.9 | 13.7 | 19.4 | 11.6 | 6.1   | 10.9 | 0.5   | 3.3   | 0.1  | 1.3   | 29.9 | 7.5   | 3.8   | 3.0   |
| France                 | 10.4                                  | 8.6  | 10.3 | 8.4  | 5.0  | 9.0   | 11.4 | 10.3  | 5.5   | 7.7  | -5.6  | 5.7  | 13.9  | -8.9  | 5.2   |
| Germany                | 10.1                                  | 10.2 | 1.3  | 3.1  | 4.1  | nav   | nav  | 7.7   | 11.0  | -4.7 | nav   | nav  | -1.0  | -4.4  | -0.5  |
| Hong Kong SAR          | nav                                   | nav  | nav  | nav  | nav  | nav   | nav  | nav   | nav   | nav  | nav   | nav  | nav   | nav   | nav   |
| Italy                  | 5.0                                   | 9.8  | 7.7  | 5.0  | 8.3  | 12.0  | 18.2 | 2.5   | 5.6   | 6.6  | 2.9   | 14.2 | -2.1  | -7.0  | 2.8   |
| Japan <sup>4</sup>     | 3.0                                   | 1.3  | 1.2  | -2.2 | -0.1 | 4.2   | 3.3  | neg   | 3.6   | -2.2 | -7.1  | -6.9 | 15.6  | 10.0  | -12.9 |
| Netherlands            | 4.0                                   | 2.7  | 1.6  | 3.7  | 3.2  | 1.0   | 5.2  | 5.9   | 4.4   | -4.3 | -13.1   | 5.3  | 3.3   | -11.1 | 5.8   |
| Singapore <sup>5</sup> | 9.2                                   | -0.1 | -2.0 | -3.3 | 0.2  | 10.1  | 2.0  | -34.8 | -15.4 | 2.7  | 6.6   | -7.9 | -32.4 | -16.5 | -7.3  |
| Sweden                 | -0.4                                  | 4.9  | 3.8  | 1.4  | -1.9 | 5.1   | 6.7  | -6.9  | 3.5   | 4.4  | -8.5  | 10.7 | -13.9 | -4.9  | -7.7  |
| Switzerland            | 17.4                                  | 6.7  | 2.5  | 3.7  | 3.6  | 8.2   | -0.6 | 8.5   | 46.9  | 11.2 | -10.4   | -4.0 | 4.2   | -0.8  | 6.5   |
| United Kingdom         | 4.8                                   | 6.0  | 11.4 | 20.5 | 11.1 | 9.1   | 6.0  | 6.4   | 3.0   | 8.2  | 18.0  | 10.2 | 7.6   | -2.0  | 7.6   |
| United States          | 18.6                                  | 13.3 | 21.4 | 20.3 | 18.7 | 2.8   | 1.8  | -2.7  | 18.3  | 5.4  | 2.3   | 2.3  | -2.7  | 21.1  | 3.0   |

<sup>1</sup> Converted at yearly average exchange rates. <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Russia: <sup>a</sup> Estimated data for 1997-2000.

Canada: <sup>3</sup> Data on the value of transactions refer to cash withdrawals only.

Japan: <sup>4</sup> Data on the volume and value of transactions refer to cash withdrawals only.

Singapore: <sup>5</sup> The transactions refer to shared ATM transactions.

Table 6

## Cards with a debit function and POS accepting terminals

|                       | Number of POS terminals<br>per million inhabitants<br>(end of year) |        |        |        |        | Number of transactions<br>per inhabitant |      |      |      |      | Average value per transaction<br>(USD) <sup>1</sup> |      |       |       |       |
|-----------------------|---|--------|--------|--------|--------|--|------|------|------|------|---|------|-------|-------|-------|
|                       | 1997  | 1998   | 1999   | 2000   | 2001   | 1997                                     | 1998 | 1999 | 2000 | 2001 | 1997  | 1998 | 1999  | 2000  | 2001  |
| Russia <sup>a,b</sup> | 47  | 73     | 99     | 145    | 200    | neg                                      | neg  | 0.1  | 0.1  | 0.2  | 34.5  | 33.5 | 12.8  | 19.4  | 20.5  |
| Belgium               | 8,421   | 9,121  | 9,746  | 11,364 | 14,047 | 23.6                                     | 29.1 | 34.6 | 39.8 | 45.0 | 59.5  | 57.5 | 53.8  | 47.0  | 45.1  |
| Canada                | 10,988  | 12,982 | 13,270 | 14,190 | 14,843 | 34.6                                     | 44.7 | 54.3 | 63.5 | 71.7 | 30.6  | 29.4 | 29.4  | 28.5  | 26.9  |
| France                | 11,371  | 12,047 | 13,261 | 13,848 | 14,846 | 38.5                                     | 43.0 | 48.3 | 54.3 | 60.3 | 52.2  | 52.2 | 49.2  | 42.8  | 41.5  |
| Germany <sup>3</sup>  | 3,069   | 4,423  | 5,761  | 7,196  | 5,291  | 2.8                                      | 8.2  | 10.5 | 12.7 | 14.7 | 74.3  | 84.7 | 79.7  | 67.7  | 65.7  |
| Hong Kong SAR         | nav   | nav    | nav    | nav    | nav    | nav                                      | nav  | nav  | nav  | nav  | nav   | nav  | nav   | nav   | nav   |
| Italy                 | 4,886   | 6,001  | 7,549  | 9,884  | 12,918 | 2.2                                      | 3.0  | 4.3  | 5.5  | 7.3  | 100.8   | 90.8 | 81.5  | 66.6  | 61.3  |
| Japan <sup>4</sup>    | 155   | 127    | nav    | nav    | nav    | neg                                      | neg  | neg  | neg  | neg  | 57.9  | 61.1 | 243.5 | 427.1 | 405.3 |
| Netherlands           | 7,696   | 8,533  | 9,208  | 9,774  | 10,333 | 31.1                                     | 37.9 | 44.3 | 50.3 | 59.5 | 48.8  | 48.2 | 48.6  | 42.9  | 41.4  |
| Singapore             | 3,954   | 4,088  | 4,506  | 4,851  | 5,067  | 13.4                                     | 14.8 | 16.6 | 19.1 | 21.2 | 45.2  | 36.5 | 36.7  | 35.7  | 34.9  |
| Sweden                | 7,778   | 8,406  | 9,160  | 9,822  | 9,916  | 13.7                                     | 18.1 | 22.4 | 28.9 | 36.6 | 83.3  | 76.2 | 72.7  | 60.9  | 54.9  |
| Switzerland           | 5,834   | 7,158  | 8,599  | 9,375  | 10,174 | 13.6                                     | 14.9 | 19.1 | 23.9 | 27.8 | 73.3  | 63.8 | 76.0  | 89.5  | 100.2 |
| United Kingdom        | 8,981   | 10,298 | 11,765 | 12,300 | 12,879 | 25.9                                     | 29.8 | 35.3 | 39.9 | 46.0 | 50.0  | 52.2 | 51.6  | 50.3  | 51.7  |
| United States         | 4,850   | 6,284  | 8,610  | 10,168 | 12,771 | 14.6                                     | 21.2 | 27.5 | 34.7 | 43.7 | 41.5  | 41.6 | 43.0  | 43.9  | 45.9  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 6 (cont)  
Cards with a debit function and POS accepting terminals

|                       | Increase in the number of POS terminals (%) |       |      |      |       | Increase in the number of transactions (%) |       |       |       |      | Increase in the value of transactions (%) <sup>2</sup> |       |       |       |      |
|-----------------------|---|-------|------|------|-------|--|-------|-------|-------|------|--|-------|-------|-------|------|
|                       | 1997  | 1998  | 1999 | 2000 | 2001  | 1997                                       | 1998  | 1999  | 2000  | 2001 | 1997   | 1998  | 1999  | 2000  | 2001 |
| Russia <sup>a,b</sup> | 136.8                                       | 55.8  | 35.9 | 45.0 | 36.4  | 53.8                                       | 52.5  | 24.6  | 180.3 | 33.3 | 89.7   | 48.0  | -52.4 | 324.9 | 41.0 |
| Belgium               | 5.4   | 8.6   | 7.1  | 16.9 | 24.0  | 13.5                                       | 23.6  | 19.0  | 15.5  | 13.3 | -1.0   | 19.5  | 11.4  | 0.8   | 8.7  |
| Canada                | 30.6  | 19.1  | 3.1  | 7.9  | 5.7   | 53.6                                       | 30.3  | 22.6  | 18.0  | 14.1 | 44.5   | 25.2  | 22.8  | 14.2  | 7.9  |
| France                | 2.6   | 6.3   | 10.5 | 4.9  | 7.8   | 9.4  | 12.1  | 12.8  | 13.0  | 11.5 | -7.2   | 12.1  | 6.4   | -1.7  | 8.1  |
| Germany <sup>3</sup>  | 60.3  | 44.1  | 30.3 | 25.0 | -26.3 | 5.6  | 198.9 | 27.7  | 20.5  | 16.7 | -22.6  | 240.8 | 20.0  | 2.3   | 13.3 |
| Hong Kong SAR         | nav   | nav   | nav  | nav  | nav   | nav  | nav   | nav   | nav   | nav  | nav  | nav   | nav   | nav   | nav  |
| Italy                 | 30.9  | 23.0  | 25.9 | 31.1 | 31.1  | 72.2                                       | 38.7  | 44.2  | 28.2  | 33.0 | 42.3   | 24.9  | 29.5  | 4.7   | 22.5 |
| Japan <sup>4</sup>    | -15.1                                       | -17.7 | nav  | nav  | nav   | -16.7                                      | neg   | -20.0 | 700   | 93.8 | 57.5   | 5.5   | 219.1 | 1,303 | 83.9 |
| Netherlands           | 25.1  | 11.6  | 8.6  | 6.9  | 6.5   | 30.9                                       | 22.6  | 17.7  | 14.5  | 19.1 | 13.3   | 21.0  | 18.8  | 0.9   | 15.1 |
| Singapore             | 14.7  | 6.9   | 11.0 | 9.5  | 7.4   | 20.0                                       | 13.8  | 13.5  | 17.0  | 14.0 | 16.3   | -8.2  | 14.4  | 13.7  | 11.4 |
| Sweden                | 12.1  | 8.1   | 9.1  | 7.4  | 1.3   | 37.5                                       | 32.2  | 23.8  | 29.3  | 27.3 | 18.6   | 20.9  | 18.0  | 8.4   | 14.7 |
| Switzerland           | 25.7  | 23.0  | 20.7 | 9.6  | 9.4   | 27.0                                       | 9.5   | 28.9  | 25.9  | 17.3 | -3.6   | -4.7  | 53.4  | 48.3  | 31.3 |
| United Kingdom        | -3.6  | 15.1  | 14.8 | 5.0  | 5.0   | 18.4                                       | 15.6  | 18.8  | 13.6  | 15.6 | 27.6   | 20.9  | 17.4  | 10.7  | 18.8 |
| United States         | 48.5  | 30.8  | 38.2 | 19.1 | 30.0  | 58.4                                       | 46.5  | 31.0  | 27.2  | 30.4 | 63.0   | 46.8  | 35.3  | 29.9  | 36.4 |

<sup>1</sup> Converted at yearly average exchange rates. <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Russia: <sup>a</sup> Estimated data for 1997-2000. <sup>b</sup> Payments for goods and services made using all types of cards (including cards with debit, credit and deferred debit functions) through EFTPOS terminals.

Germany: <sup>3</sup> Figures for 1997 exclude POZ and ELV procedures.

Japan: <sup>4</sup> Figures for 1999 and thereafter are not consistent with those up to 1998. Figures up to 1998 are for the local POS services, which are no longer available. Figures for 1999 and thereafter are for the nationwide debit card service launched in January 1999.

Table 7

## Cards with a credit function and accepting terminals

|                          | Number of accepting terminals<br>per million inhabitants<br>(end of year) |        |        |        |        | Number of transactions<br>per inhabitant |      |                  |                  |                  | Average value per transaction<br>(USD) <sup>1</sup> |                   |                   |                   |                   |
|--------------------------|---|--------|--------|--------|--------|--|------|------------------|------------------|------------------|---|-------------------|-------------------|-------------------|-------------------|
|                          | 1997  | 1998   | 1999   | 2000   | 2001   | 1997                                     | 1998 | 1999             | 2000             | 2001             | 1997  | 1998              | 1999              | 2000              | 2001              |
| Russia <sup>a</sup>      | 47  | 73     | 99     | 145    | 200    | neg                                      | neg  | 0.1 <sup>b</sup> | 0.1 <sup>b</sup> | 0.2 <sup>b</sup> | 34.5 <sup>b</sup>                                   | 33.5 <sup>b</sup> | 12.8 <sup>b</sup> | 19.4 <sup>b</sup> | 20.5 <sup>b</sup> |
| Belgium                  | nav   | nav    | nav    | nav    | nav    | 3.9                                      | 4.3  | 4.8              | 5.2              | 5.9              | 110.7   | 111.1             | 107.6             | 94.7              | 97.3              |
| Canada <sup>3</sup>      | 26,900  | 27,555 | 27,233 | 31,205 | 32,021 | 31.8                                     | 33.3 | 37.5             | 41.2             | 42.3             | 64.9  | 66.2              | 63.3              | 65.1              | 58.6              |
| France                   | 11,371  | 12,047 | 13,261 | 13,848 | 14,846 | nav                                      | nav  | nav              | nav              | nav              | nav   | nav               | nav               | nav               | nav               |
| Germany <sup>4</sup>     | 13,406  | 13,911 | 14,852 | 16,449 | 16,252 | 3.7                                      | 3.9  | 4.1              | 4.3              | 4.5              | 119.4   | 101.0             | 100.0             | 87.6              | 90.0              |
| Hong Kong SAR            | nav   | nav    | nav    | nav    | nav    | nav                                      | nav  | nav              | nav              | nav              | nav   | nav               | nav               | nav               | nav               |
| Italy                    | nav   | nav    | nav    | nav    | nav    | 2.5                                      | 3.0  | 4.0              | 4.7              | 5.4              | 104.8   | 102.0             | 97.6              | 84.6              | 82.6              |
| Japan <sup>5</sup>       | 4,393   | 5,162  | 5,488  | 6,069  | 6,426  | 10.1                                     | 11.8 | 12.0             | 15.8             | 17.6             | 117.5   | 96.9              | 116.6             | 100.7             | 85.3              |
| Netherlands <sup>6</sup> | nav   | nav    | nav    | nav    | nav    | 2.5                                      | 2.7  | 2.8              | 2.9              | 3.0              | 99.8  | 103.6             | 105.7             | 101.5             | 99.5              |
| Singapore <sup>7</sup>   | nav   | nav    | nav    | nav    | nav    | nav                                      | nav  | nav              | nav              | nav              | nav   | nav               | nav               | nav               | nav               |
| Sweden                   | 7,778   | 8,406  | 9,160  | 9,822  | 9,916  | 5.4                                      | 5.9  | 6.4              | 7.6              | 8.3              | 100.7   | 86.4              | 92.5              | 92.7              | 76.5              |
| Switzerland              | nav   | nav    | nav    | nav    | nav    | 8.5                                      | 9.8  | 12.1             | 10.4             | 11.1             | 139.4   | 136.3             | 121.7             | 115.1             | 114.3             |
| United Kingdom           | 8,981   | 10,298 | 11,765 | 12,300 | 12,879 | 21.2                                     | 23.0 | 25.0             | 27.1             | 29.1             | 88.5  | 91.7              | 95.7              | 93.6              | 91.2              |
| United States            | 41,784  | 41,773 | 41,400 | 45,756 | 46,312 | 48.1                                     | 49.6 | 53.5             | 58.8             | 60.0             | 81.0  | 84.2              | 86.6              | 88.7              | 88.6              |

Note: For an explanation of the footnotes refer to the end of the table.

Table 7 (cont)  
Cards with a credit function and accepting terminals

|                          | Increase in the number of accepting terminals (%) |      |      |      |      | Increase in the number of transactions (%) |                   |                   |                    |                   | Increase in the value of transactions (%) <sup>2</sup> |                   |                    |                    |                   |
|--------------------------|---|------|------|------|------|--|-------------------|-------------------|--------------------|-------------------|--|-------------------|--------------------|--------------------|-------------------|
|                          | 1997  | 1998 | 1999 | 2000 | 2001 | 1997                                       | 1998              | 1999              | 2000               | 2001              | 1997   | 1998              | 1999               | 2000               | 2001              |
| Russia <sup>a</sup>      | 136.8   | 55.8 | 35.9 | 45.0 | 36.4 | 53.8 <sup>b</sup>                          | 52.5 <sup>b</sup> | 24.6 <sup>b</sup> | 180.3 <sup>b</sup> | 33.3 <sup>b</sup> | 89.7 <sup>b</sup>                                      | 48.0 <sup>b</sup> | -52.4 <sup>b</sup> | 324.9 <sup>b</sup> | 41.0 <sup>b</sup> |
| Belgium                  | nav   | nav  | nav  | nav  | nav  | 10.5                                       | 11.9              | 9.7               | 10.6               | 13.0              | -2.7   | 12.3              | 6.3                | -2.7               | 16.1              |
| Canada <sup>3</sup>      | 2.7   | 3.3  | -0.3 | 15.6 | 3.7  | 5.9  | 5.4               | 13.8              | 10.7               | 3.9               | 11.5   | 7.5               | 8.8                | 14.0               | -6.6              |
| France                   | 2.6   | 6.3  | 10.5 | 4.9  | 7.8  | nav  | nav               | nav               | nav                | nav               | nav  | nav               | nav                | nav                | nav               |
| Germany <sup>4</sup>     | 10.0  | 3.7  | 6.8  | 10.9 | -1.0 | 4.6  | 4.6               | 6.1               | 4.4                | 5.4               | -7.2   | -11.5             | 5.0                | -8.5               | 8.2               |
| Hong Kong SAR            | nav   | nav  | nav  | nav  | nav  | nav  | nav               | nav               | nav                | nav               | nav  | nav               | nav                | nav                | nav               |
| Italy                    | nav   | nav  | nav  | nav  | nav  | 21.6                                       | 24.1              | 30.9              | 18.8               | 15.4              | 7.0  | 20.8              | 25.2               | 3.0                | 12.7              |
| Japan <sup>5</sup>       | 18.5  | 17.8 | 6.5  | 10.8 | 6.2  | 12.7                                       | 17.4              | 1.4               | 32.3               | 11.8              | -2.7   | -3.2              | 21.9               | 14.3               | -5.3              |
| Netherlands <sup>6</sup> | nav   | nav  | nav  | nav  | nav  | 7.0  | 8.2               | 4.6               | 6.2                | 1.5               | -12.6  | 12.3              | 6.8                | 2.0                | -0.5              |
| Singapore <sup>7</sup>   | nav   | nav  | nav  | nav  | nav  | nav  | nav               | nav               | nav                | nav               | 6.6  | -13.1             | 14.7               | 15.9               | 1.1               |
| Sweden                   | 12.1  | 8.1  | 9.1  | 7.4  | 1.3  | 9.1  | 8.3               | 9.6               | 17.5               | 10.4              | 9.8  | 5.6               | 13.6               | 17.9               | -0.9              |
| Switzerland              | nav   | nav  | nav  | nav  | nav  | 12.6                                       | 15.0              | 23.6              | -13.1              | 7.1               | -3.9   | 12.4              | 10.4               | -17.8              | 6.3               |
| United Kingdom           | -3.6  | 15.1 | 14.8 | 5.0  | 5.0  | 11.3                                       | 8.7               | 9.5               | 8.6                | 7.8               | 21.0   | 12.7              | 14.2               | 6.3                | 5.0               |
| United States            | 14.3  | 0.9  | neg  | 11.5 | 4.8  | 5.4  | 4.0               | 8.8               | 10.9               | 5.6               | 9.3  | 8.2               | 11.8               | 13.6               | 5.5               |

<sup>1</sup> Converted at yearly average exchange rates <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Russia: <sup>a</sup> Estimated data for 1997-2000. <sup>b</sup> Payments for goods and services made using all types of cards (including cards with debit, credit and deferred debit functions) through EFTPOS terminals.

Canada: <sup>3</sup> Includes both credit and charge cards.

Germany: <sup>4</sup> The sum of the number of accepting terminals reported by the individual credit card institutions may result in double-counting.

Japan: <sup>5</sup> Includes cards with a delayed debit function.

Netherlands: <sup>6</sup> Includes cards with a delayed debit function.

Singapore: <sup>7</sup> For both credit and charge cards.

Table 8  
Cards with an e-money function and accepting terminals

|                | Number of electronic money cards<br>(end of year, in thousands) |        |        |        |        | Average value per reloading<br>(USD) <sup>1</sup> |      |      |      |      |
|----------------|---|--------|--------|--------|--------|---|------|------|------|------|
|                | 1997  | 1998   | 1999   | 2000   | 2001   | 1997  | 1998 | 1999 | 2000 | 2001 |
| Russia         | nav   | nav    | nav    | nav    | nav    | nav   | nav  | nav  | nav  | nav  |
| Belgium        | 1,035   | 5,606  | 7,898  | 8,396  | 8,543  | 36.4  | 32.2 | 27.9 | 24.3 | 27.3 |
| Canada         | 42  | 36     | 58     | 87     | 74     | nav   | nav  | nav  | nav  | nav  |
| France         | nap   | nap    | nap    | nap    | 319    | nav   | nav  | neg  | neg  | 29.8 |
| Germany        | 35,000  | 60,700 | 60,700 | 60,700 | 67,333 | 77.4  | 60.3 | 42.7 | 29.1 | 25.3 |
| Hong Kong SAR  | nav   | nav    | nav    | nav    | nav    | nav   | nav  | nav  | nav  | nav  |
| Italy          | 62  | 56     | 32     | 45     | 30     | neg   | neg  | neg  | neg  | neg  |
| Japan          | nav   | nav    | nav    | nav    | nav    | nav   | nav  | nav  | nav  | nav  |
| Netherlands    | 9,500   | 17,900 | 20,100 | 20,900 | 21,000 | nav   | nav  | nav  | nav  | nav  |
| Singapore      | 683   | 2,193  | 3,464  | 4,697  | 5,639  | nav   | nav  | nav  | nav  | nav  |
| Sweden         | nav   | 205    | 540    | 593    | 557    | nav   | 50.3 | 36.3 | 36.3 | 64.5 |
| Switzerland    | nap   | 2,953  | 3,137  | 3,355  | 3,524  | nap   | nap  | nap  | nap  | nav  |
| United Kingdom | 110   | 140    | 160    | nav    | nav    | neg   | neg  | neg  | neg  | neg  |
| United States  | nav   | nav    | nav    | nav    | nav    | nav   | nav  | nav  | nav  | nav  |

Note: For an explanation of the footnotes refer to the end of the table.



Table 8 (cont)

## Cards with an e-money function and accepting terminals

|                | Number of purchase terminals |         |         |         |         | Average value per transaction<br>(USD) <sup>1</sup> |      |      |      |      |
|----------------|------------------------------|---------|---------|---------|---------|---|------|------|------|------|
|                | 1997                         | 1998    | 1999    | 2000    | 2001    | 1997  | 1998 | 1999 | 2000 | 2001 |
| Russia         | nav                          | nav     | nav     | nav     | nav     | nav   | nav  | nav  | nav  | nav  |
| Belgium        | 21,000                       | 45,649  | 63,993  | 67,837  | 88,847  | 4.7   | 4.5  | 4.0  | 3.5  | 4.0  |
| Canada         | 1,600                        | 1,050   | 970     | 1,245   | 490     | nav   | neg  | neg  | neg  | neg  |
| France         | nav                          | nav     | neg     | neg     | 13,644  | nav   | nav  | neg  | neg  | 3.2  |
| Germany        | 35,000                       | 60,700  | 60,700  | 60,700  | 67,333  | 12.0  | 7.3  | 3.8  | 2.5  | 2.1  |
| Hong Kong SAR  | nav                          | nav     | nav     | nav     | nav     | nav   | nav  | nav  | nav  | nav  |
| Italy          | 4,406                        | 3,910   | 3,605   | 6,485   | 6,644   | neg   | neg  | neg  | neg  | neg  |
| Japan          | nav                          | nav     | nav     | nav     | nav     | nav   | nav  | nav  | nav  | nav  |
| Netherlands    | 105,401                      | 107,589 | 125,807 | 133,548 | 148,207 | nav   | 4.2  | 3.3  | 2.7  | 2.5  |
| Singapore      | 6,491                        | 10,594  | 14,196  | 16,270  | 17,944  | 9.2   | 0.8  | 0.7  | 1.0  | 1.2  |
| Sweden         | nav                          | 33,938  | 43,921  | 43,000  | 47,000  | nav   | 6.3  | 5.8  | 7.5  | 6.4  |
| Switzerland    | nap                          | 18,498  | 22,948  | 27,215  | 31,290  | nap   | neg  | neg  | 3.3  | 3.0  |
| United Kingdom | 3,537                        | 1,642   | 1,921   | nav     | nav     | neg   | neg  | neg  | neg  | neg  |
| United States  | nav                          | nav     | nav     | nav     | nav     | nav   | nav  | nav  | nav  | nav  |

<sup>1</sup> Converted at yearly average exchange rates.

Table 9  
**Number of cards<sup>1</sup>**  
 Per thousand inhabitants

|                          | Cards with a cash function |                   | Cards with a debit function |                   | Cards with a credit function |         | Cards with a debit function issued by retailers |       | Cards with an e-money function |         | Cards with a cheque guarantee function |       |
|--------------------------|----------------------------|-------------------|-----------------------------|-------------------|------------------------------|---------|---|-------|--------------------------------|---------|--|-------|
|                          | 2000                       | 2001              | 2000                        | 2001              | 2000                         | 2001    | 2000  | 2001  | 2000                           | 2001    | 2000                                   | 2001  |
| Russia                   | 49.1 <sup>a</sup>          | 73.6 <sup>a</sup> | 48.9 <sup>b</sup>           | 73.5 <sup>b</sup> | 0.2                          | 0.1     | nav   | nav   | nav                            | nav     | nap                                    | nap   |
| Belgium                  | 1,359.6                    | 1,360.5           | 1,216.8                     | 1,216.5           | 289.9                        | 296.2   | 147.1   | 152.2 | 819.4                          | 831.0   | 374.7                                  | 272.0 |
| Canada <sup>2</sup>      | 2,104.9                    | nav               | 1,165.8                     | nav               | 1,360.1                      | 1,505.9 | nap   | nap   | 2.8                            | 2.4     | nap                                    | nap   |
| France <sup>3</sup>      | 675.8                      | 711.2             | 609.2                       | 652.3             | nav                          | nav     | nav   | nav   | nav                            | 5.2     | nap                                    | nap   |
| Germany                  | 1,293.7                    | 1,480.2           | 1,206.7                     | 1,405.3           | 213.8                        | 227.9   | 129.0   | 153.0 | 738.6                          | 817.7   | 623.5                                  | 689.3 |
| Hong Kong SAR            | nav                        | nav               | nav                         | nav               | nav                          | nav     | nav   | nav   | nav                            | nav     | nav                                    | nav   |
| Italy                    | 366.8                      | 394.4             | 350.0                       | 370.1             | 293.9                        | 345.2   | nap   | nap   | 0.8                            | 0.5     | neg                                    | neg   |
| Japan <sup>4</sup>       | 2,523.9                    | 2,554.1           | nav                         | nav               | 1,758.9                      | 1,820.1 | nap   | nap   | nav                            | nav     | nap                                    | nap   |
| Netherlands <sup>5</sup> | 1,633.0                    | 1,608.2           | 1,318.9                     | 1,315.2           | 314.0                        | 311.7   | nav   | nav   | 1,312.6                        | 1,309.0 | nav                                    | nav   |
| Singapore <sup>6</sup>   | 742.2                      | 745.1             | 742.2                       | 745.1             | 612.5                        | 681.2   | nap   | nap   | 1,169.0                        | 1,365.0 | nap                                    | nap   |
| Sweden <sup>7</sup>      | 551.5                      | 536.0             | 515.2                       | 541.5             | 429.6                        | 418.7   | nav   | nav   | 66.8                           | 62.6    | nav                                    | nav   |
| Switzerland              | 1,149.2                    | 1,190.6           | 725.6                       | 745.2             | 434.6                        | 451.9   | nav   | nav   | 465.7                          | 485.4   | 739.6                                  | 762.1 |
| United Kingdom           | 1,986.1                    | 2,124.5           | 832.2                       | 906.0             | 851.0                        | 936.4   | nap   | nap   | nav                            | nav     | 947.3                                  | 974.4 |
| United States            | 2,758.1                    | 2,891.7           | 851.9                       | 889.4             | 4,539.3                      | 4,329.5 | 41.0  | 40.0  | nav                            | nav     | nav                                    | nav   |

<sup>1</sup> A card which has several functions is counted in each relevant column (for example, a eurocheque card which can be used to withdraw cash, to make payments and to guarantee cheques is counted under each of these three items). For this reason, the figures should not be added together.

Russia: <sup>a</sup> All debit, credit and deferred debit function cards have a cash function. <sup>b</sup> Deferred debit cards are included.

Canada: <sup>2</sup> Data on cards with a credit function as at 31 October.

France: <sup>3</sup> Figures for cards with a credit function are not provided. Data were incorrectly reported for the previous years and concerned upmarket cards (privileged cards).

Japan: <sup>4</sup> Data on cards with a cash function are at end-March of the following year. Data on cards with a credit function include cards with a delayed debit function, and are at end-March of the current year.

Netherlands: <sup>5</sup> Data on cards with a credit function include cards with a delayed debit function.

Singapore: <sup>6</sup> Data on cards with a cash and/or debit function are based on a survey of eight banks.

Sweden: <sup>7</sup> Data on cards with a credit function include cards with a delayed debit function.

Table 10  
Use of cards

Average number of:

|                          | Cash withdrawals per card with a cash function |                   | Payments per card with a debit function |      | Payments per card with a credit function |      | Payments per card with an e-money function |      |
|--------------------------|--|-------------------|---|------|--|------|--|------|
|                          | 2000   | 2001              | 2000                                    | 2001 | 2000                                     | 2001 | 2000                                       | 2001 |
| Russia                   | 15.2 <sup>a,b</sup>                            | 14.7 <sup>b</sup> | nav                                     | nav  | nav                                      | nav  | nav  | nav  |
| Belgium                  | 14.5   | 15.8              | 32.7                                    | 37.0 | 18.1                                     | 20.0 | 6.1  | 7.1  |
| Canada                   | 22.9   | nav               | 54.4                                    | nav  | 30.3                                     | 28.1 | nav  | nav  |
| France <sup>1</sup>      | 26.4   | 26.9              | 89.2                                    | 92.4 | nav                                      | nav  | nav  | 8.8  |
| Germany                  | 15.8   | 13.1              | 10.5                                    | 10.5 | 20.0                                     | 19.7 | 0.4  | 0.4  |
| Hong Kong SAR            | nav  | nav               | nav                                     | nav  | nav                                      | nav  | nav  | nav  |
| Italy                    | 24.9   | 24.6              | 15.7                                    | 19.7 | 16.0                                     | 15.7 | neg  | neg  |
| Japan <sup>2</sup>       | 1.3  | 1.2               | nav                                     | nav  | 9.0                                      | 9.7  | nav  | nav  |
| Netherlands <sup>3</sup> | 18.1   | 17.4              | 38.2                                    | 45.2 | 11.4                                     | 9.5  | 1.2  | 1.5  |
| Singapore <sup>4</sup>   | nav  | nav               | 25.8                                    | 28.5 | nav                                      | nav  | 21.3                                       | 18.1 |
| Sweden <sup>5</sup>      | 65.6   | 70.2              | 56.0                                    | 67.7 | 17.6                                     | 19.9 | 4.9  | 2.7  |
| Switzerland              | 15.5   | 16.5              | 32.9                                    | 37.3 | 24.0                                     | 24.5 | 5.4  | 5.6  |
| United Kingdom           | 17.1   | 17.2              | 48.0                                    | 50.8 | 31.8                                     | 31.1 | nav  | nav  |
| United States            | 17.0   | 16.5              | 40.7                                    | 49.1 | 12.9                                     | 13.8 | nav  | nav  |

Russia: <sup>a</sup> Estimated data. <sup>b</sup> All cash withdrawals at bank counters and ATMs are included.

France: <sup>1</sup> Data on payments per card with a credit function are included in those with a debit function.

Japan: <sup>2</sup> Data on cards with a credit function include cards with a delayed debit function.

Netherlands: <sup>3</sup> Data on cards with a credit function include cards with a delayed debit function.

Singapore: <sup>4</sup> Payments per card with a debit function refer to shared ATM transactions.

Sweden: <sup>5</sup> Data on cards with a credit function include cards with a delayed debit function.

Table 11  
**Use of cashless payment instruments**  
 Total number of transactions, in millions

|                            | Cheques  |          |          |          |          | Payments by credit/debit cards |                  |                  |                   |                   |
|----------------------------|----------|----------|----------|----------|----------|--------------------------------|------------------|------------------|-------------------|-------------------|
|                            | 1997     | 1998     | 1999     | 2000     | 2001     | 1997                           | 1998             | 1999             | 2000              | 2001              |
| Russia <sup>a</sup>        | nav      | nav      | nav      | 0.8      | 1.3      | 4.2 <sup>b</sup>               | 6.2 <sup>b</sup> | 7.7 <sup>b</sup> | 21.4 <sup>b</sup> | 28.8 <sup>b</sup> |
| Belgium                    | 95.8     | 86.9     | 80.2     | 70.7     | 60.1     | 279.9                          | 341.4            | 402.1            | 462.0             | 523.4             |
| Canada                     | 1,736.3  | 1,693.0  | 1,716.4  | 1,658.2  | 1,589.0  | 1,960.7                        | 2,364.2          | 2,809.0          | 3,230.9           | 3,556.6           |
| France                     | 4,903.0  | 4,825.4  | 4,479.6  | 4,493.7  | 4,338.6  | 2,301.6                        | 2,580.1          | 2,911.6          | 3,292.4           | 3,670.7           |
| Germany <sup>2</sup>       | 650.3    | 596.0    | 423.5    | 392.2    | 319.0    | 529.4                          | 993.0            | 1,199.4          | 1,390.9           | 1,583.4           |
| Hong Kong SAR              | 149.9    | 135.8    | 134.1    | 138.6    | 133.5    | nav                            | nav              | nav              | nav               | nav               |
| Italy                      | 656.8    | 648.7    | 665.2    | 602.0    | 606.2    | 265.0                          | 346.8            | 476.7            | 589.8             | 737.2             |
| Japan                      | 283.4    | 260.1    | 239.3    | 225.9    | 208.9    | 1,275.7                        | 1,497.5          | 1,517.8          | 2,010.6           | 2,250.3           |
| Netherlands <sup>3</sup>   | 64.9     | 46.6     | 26.7     | 14.2     | 5.3      | 524.4                          | 637.1            | 744.4            | 848.3             | 1,001.9           |
| Singapore <sup>4</sup>     | 87.7     | 87.6     | 92.6     | 91.7     | 92.0     | 66.1                           | 73.4             | 75.8             | 85.5              | 96.5              |
| Sweden                     | 18.0     | 4.0      | 4.0      | 2.0      | 2.0      | 169.0                          | 213.0            | 255.0            | 323.0             | 400.0             |
| Switzerland <sup>5</sup>   | 9.3      | 7.7      | 6.7      | 11.2     | 7.2      | 157.6                          | 175.9            | 223.0            | 243.5             | 282.1             |
| United Kingdom             | 3,090.0  | 2,986.0  | 2,859.0  | 2,699.0  | 2,565.0  | 2,631.0                        | 2,960.0          | 3,406.0          | 3,788.0           | 4,257.0           |
| United States <sup>6</sup> | 46,569.4 | 45,169.7 | 43,812.1 | 42,500.0 | 41,222.6 | 16,817.3                       | 19,153.1         | 22,106.4         | 25,734.9          | 29,542.8          |

Note: For an explanation of the footnotes refer to the end of the table.

Table 11 (cont)  
**Use of cashless payment instruments**  
 Total number of transactions, in millions

|                            | Credit transfers |         |         |         |         | Direct debits |         |         |         |         |
|----------------------------|------------------|---------|---------|---------|---------|---------------|---------|---------|---------|---------|
|                            | 1997             | 1998    | 1999    | 2000    | 2001    | 1997          | 1998    | 1999    | 2000    | 2001    |
| Russia <sup>a</sup>        | nav              | nav     | nav     | 459.0   | 594.1   | nav           | 14.5    | 8.6     | 8.0     | 9.2     |
| Belgium                    | 697.3            | 674.7   | 723.0   | 656.8   | 752.4   | 117.9         | 117.4   | 142.3   | 166.2   | 176.8   |
| Canada                     | 391.7            | 463.5   | 508.5   | 569.5   | 591.3   | 318.5         | 361.9   | 405.4   | 444.4   | 488.5   |
| France                     | 1,859.8          | 1,951.8 | 2,050.7 | 2,093.6 | 2,175.5 | 1,430.3       | 1,577.9 | 1,730.6 | 1,968.6 | 2,063.5 |
| Germany <sup>2</sup>       | 5,387.3          | 6,216.6 | 7,025.3 | 6,446.3 | 6,957.9 | 4,867.7       | 4,600.5 | 4,806.0 | 5,026.7 | 5,080.3 |
| Hong Kong SAR              | 13.5             | 14.8    | 15.5    | 16.6    | 18.1    | 31.7          | 32.7    | 33.5    | 35.2    | 37.1    |
| Italy                      | 976.0            | 971.4   | 1,003.4 | 1,018.6 | 1,038.3 | 290.1         | 329.8   | 496.7   | 569.8   | 610.6   |
| Japan                      | 1,105.5          | 1,143.2 | 1,166.9 | 1,215.4 | 1,269.2 | nav           | nav     | nav     | nav     | nav     |
| Netherlands <sup>3</sup>   | 1,053.1          | 1,075.5 | 1,086.2 | 1,140.4 | 1,182.7 | 642.8         | 722.6   | 785.0   | 836.2   | 873.8   |
| Singapore <sup>4</sup>     | 15.1             | 15.7    | 13.9    | 14.6    | 16.8    | 23.2          | 20.7    | 17.4    | 17.3    | 19.0    |
| Sweden                     | 660.0            | 633.0   | 712.0   | 715.0   | 697.0   | 65.0          | 74.0    | 85.0    | 91.0    | 98.0    |
| Switzerland <sup>5</sup>   | 505.0            | 554.0   | 586.0   | 545.2   | 503.0   | 25.0          | 27.0    | 30.4    | 46.1    | 47.6    |
| United Kingdom             | 1,659.0          | 1,726.0 | 1,797.0 | 1,845.0 | 1,931.0 | 1,584.0       | 1,736.0 | 1,863.0 | 2,010.0 | 2,152.0 |
| United States <sup>6</sup> | 2,488.6          | 2,899.2 | 3,167.8 | 3,486.1 | 3,890.3 | 1,347.2       | 1,530.9 | 1,676.9 | 1,947.3 | 2,385.4 |

Note: For an explanation of the footnotes refer to the end of the table.

Table 11 (cont)  
**Use of cashless payment instruments**  
 Total number of transactions, in millions

|                            | Card-based e-money |      |      |       |       | Total <sup>1</sup> |          |          |          |          |
|----------------------------|--------------------|------|------|-------|-------|--------------------|----------|----------|----------|----------|
|                            | 1997               | 1998 | 1999 | 2000  | 2001  | 1997               | 1998     | 1999     | 2000     | 2001     |
| Russia <sup>a</sup>        | nav                | nav  | nav  | nav   | nav   | nav                | nav      | nav      | 488.2    | 633.4    |
| Belgium                    | 9.4                | 28.2 | 45.5 | 51.3  | 60.5  | 1,200.4            | 1,248.5  | 1,393.0  | 1,407.0  | 1,573.1  |
| Canada                     | nav                | nav  | nav  | nav   | nav   | 4,407.2            | 4,882.6  | 5,439.3  | 5,903.0  | 6,225.4  |
| France                     | nap                | nap  | nav  | nav   | 2.8   | 10,494.7           | 10,935.1 | 11,172.5 | 11,848.3 | 12,248.3 |
| Germany <sup>2</sup>       | 4.2                | 13.6 | 20.7 | 26.6  | 29.4  | 11,438.9           | 12,419.7 | 13,474.9 | 13,282.7 | 13,970.0 |
| Hong Kong SAR              | nav                | nav  | nav  | nav   | nav   | 195.0              | 183.3    | 183.2    | 190.3    | 188.8    |
| Italy                      | neg                | neg  | neg  | neg   | neg   | 2,187.9            | 2,296.7  | 2,642.0  | 2,780.2  | 2,992.3  |
| Japan                      | nav                | nav  | nav  | nav   | nav   | 2,664.6            | 2,900.8  | 2,924.0  | 3,451.9  | 3,728.4  |
| Netherlands <sup>3</sup>   | nav                | 17.0 | 22.0 | 25.0  | 31.0  | 2,285.2            | 2,498.8  | 2,664.3  | 2,864.1  | 3,094.7  |
| Singapore <sup>4</sup>     | 0.7                | 26.3 | 77.0 | 100.1 | 102.2 | 192.7              | 223.7    | 276.6    | 309.1    | 326.4    |
| Sweden                     | nav                | 2.0  | 4.2  | 2.9   | 1.5   | 912.0              | 926.0    | 1,060.2  | 1,133.9  | 1,198.5  |
| Switzerland <sup>5</sup>   | nap                | 4.1  | 10.7 | 18.0  | 19.8  | 696.9              | 768.7    | 856.8    | 864.0    | 859.7    |
| United Kingdom             | nav                | nav  | nav  | nav   | nav   | 8,964.0            | 9,408.0  | 9,925.0  | 10,342.0 | 10,905.0 |
| United States <sup>6</sup> | nav                | nav  | nav  | nav   | nav   | 67,222.5           | 68,752.9 | 70,763.2 | 73,668.3 | 77,041.1 |

<sup>1</sup> Sum of the available data.

Russia: <sup>a</sup> Estimated data for 1997-2000. <sup>b</sup> All payments for goods and services are included.

Germany: <sup>2</sup> Payments by debit cards in 1997 exclude POZ and ELV procedures.

Netherlands: <sup>3</sup> Payments by credit/debit cards include cards with a delayed debit function.

Singapore: <sup>4</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).

Switzerland: <sup>5</sup> Includes eurocheques, bank cheques, Swiss banker traveller's cheques and, as from 2000, Postcheques.

United States: <sup>6</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

Table 12  
**Use of cashless payment instruments**  
 Total number of transactions per inhabitant

|                            | Cheques |       |       |       |       | Payments by credit/debit cards |      |                  |                  |                  | Credit transfers |      |      |      |      |
|----------------------------|---------|-------|-------|-------|-------|--------------------------------|------|------------------|------------------|------------------|------------------|------|------|------|------|
|                            | 1997    | 1998  | 1999  | 2000  | 2001  | 1997                           | 1998 | 1999             | 2000             | 2001             | 1997             | 1998 | 1999 | 2000 | 2001 |
| Russia <sup>a</sup>        | nav     | nav   | nav   | neg   | neg   | neg                            | neg  | 0.1 <sup>b</sup> | 0.1 <sup>b</sup> | 0.2 <sup>b</sup> | nav              | nav  | nav  | 3.2  | 4.1  |
| Belgium                    | 9.4     | 8.5   | 7.8   | 6.9   | 5.8   | 27.5                           | 33.5 | 39.3             | 45.1             | 50.9             | 68.5             | 66.1 | 70.7 | 64.1 | 73.2 |
| Canada                     | 57.7    | 55.8  | 56.1  | 53.7  | 50.9  | 65.2                           | 77.9 | 91.8             | 104.6            | 114.0            | 13.0             | 15.3 | 16.6 | 18.4 | 18.9 |
| France                     | 81.9    | 80.4  | 74.3  | 74.2  | 71.2  | 38.5                           | 43.0 | 48.3             | 54.3             | 60.3             | 31.1             | 32.5 | 34.0 | 34.6 | 35.7 |
| Germany <sup>2</sup>       | 7.9     | 7.3   | 5.2   | 4.8   | 3.9   | 6.5                            | 12.1 | 14.6             | 16.9             | 19.2             | 65.7             | 75.8 | 85.6 | 78.4 | 84.5 |
| Hong Kong SAR              | 23.1    | 20.8  | 20.3  | 20.8  | 19.9  | nav                            | nav  | nav              | nav              | nav              | 2.1              | 2.3  | 2.4  | 2.5  | 2.7  |
| Italy                      | 11.4    | 11.3  | 11.5  | 10.4  | 10.5  | 4.6                            | 6.0  | 8.3              | 10.2             | 12.7             | 17.0             | 16.9 | 17.4 | 17.6 | 17.9 |
| Japan                      | 2.2     | 2.1   | 1.9   | 1.8   | 1.6   | 10.1                           | 11.8 | 12.0             | 15.8             | 17.7             | 8.8              | 9.0  | 9.2  | 9.6  | 10.0 |
| Netherlands <sup>3</sup>   | 4.2     | 3.0   | 1.7   | 0.9   | 0.3   | 33.6                           | 40.6 | 47.1             | 53.3             | 62.5             | 67.5             | 68.5 | 68.7 | 71.6 | 73.7 |
| Singapore <sup>4</sup>     | 23.1    | 22.3  | 23.4  | 22.8  | 22.3  | 17.4                           | 18.7 | 19.2             | 21.3             | 23.4             | 4.0              | 4.0  | 3.5  | 3.6  | 4.1  |
| Sweden                     | 2.0     | 0.5   | 0.5   | 0.2   | 0.2   | 19.1                           | 24.1 | 28.8             | 36.4             | 45.0             | 74.6             | 71.5 | 80.4 | 80.6 | 78.3 |
| Switzerland                | 1.3     | 1.1   | 0.9   | 1.6   | 1.0   | 22.2                           | 24.7 | 31.1             | 33.8             | 38.9             | 71.0             | 77.7 | 81.8 | 75.7 | 69.3 |
| United Kingdom             | 52.4    | 50.4  | 48.0  | 45.2  | 42.8  | 44.6                           | 50.0 | 57.2             | 63.4             | 71.0             | 28.1             | 29.1 | 30.2 | 30.9 | 32.2 |
| United States <sup>5</sup> | 173.7   | 167.0 | 160.5 | 154.3 | 144.6 | 62.7                           | 70.8 | 81.0             | 93.5             | 103.7            | 9.3              | 10.7 | 11.6 | 12.7 | 13.6 |

Note: For an explanation of the footnotes refer to the end of the table.

Table 12 (cont)

**Use of cashless payment instruments**

Total number of transactions per inhabitant

|                            | Direct debits |      |      |      |      | Card-based e-money |      |      |      |      | Total <sup>1</sup> |       |       |       |       |
|----------------------------|---------------|------|------|------|------|--------------------|------|------|------|------|--------------------|-------|-------|-------|-------|
|                            | 1997          | 1998 | 1999 | 2000 | 2001 | 1997               | 1998 | 1999 | 2000 | 2001 | 1997               | 1998  | 1999  | 2000  | 2001  |
| Russia <sup>a</sup>        | nav           | nav  | nav  | 0.1  | 0.1  | nav                | nav  | nav  | nav  | nav  | nav                | nav   | nav   | 3.5   | 4.4   |
| Belgium                    | 11.6          | 11.5 | 13.9 | 16.2 | 17.2 | 0.9                | 2.8  | 4.4  | 5.0  | 5.9  | 117.9              | 122.4 | 136.3 | 137.3 | 153.0 |
| Canada                     | 10.6          | 11.9 | 13.2 | 14.4 | 15.7 | nav                | nav  | nav  | nav  | nav  | 146.5              | 161.0 | 177.8 | 191.2 | 199.5 |
| France                     | 23.9          | 26.3 | 28.7 | 32.5 | 33.9 | nav                | nav  | nav  | nav  | neg  | 175.4              | 182.1 | 185.3 | 195.6 | 201.1 |
| Germany <sup>2</sup>       | 59.3          | 56.1 | 58.5 | 61.2 | 61.7 | 0.1                | 0.2  | 0.3  | 0.3  | 0.4  | 139.4              | 151.4 | 164.2 | 161.6 | 169.7 |
| Hong Kong SAR              | 4.9           | 5.0  | 5.1  | 5.3  | 5.5  | nav                | nav  | nav  | nav  | nav  | 30.0               | 28.0  | 27.7  | 28.6  | 28.1  |
| Italy                      | 5.0           | 5.7  | 8.6  | 9.9  | 10.5 | neg                | neg  | neg  | neg  | neg  | 38.0               | 39.9  | 45.8  | 48.2  | 51.7  |
| Japan                      | nav           | nav  | nav  | nav  | nav  | nav                | nav  | nav  | nav  | nav  | 21.1               | 22.9  | 23.1  | 27.2  | 29.3  |
| Netherlands <sup>3</sup>   | 41.2          | 46.0 | 49.7 | 52.5 | 54.5 | nav                | 1.1  | 1.4  | 1.6  | 1.9  | 146.4              | 159.1 | 168.5 | 179.9 | 192.9 |
| Singapore <sup>4</sup>     | 6.1           | 5.3  | 4.4  | 4.3  | 4.6  | 0.2                | 6.7  | 19.5 | 24.9 | 24.7 | 50.8               | 57.0  | 70.0  | 76.9  | 79.0  |
| Sweden                     | 7.3           | 8.4  | 9.6  | 10.3 | 11.0 | nav                | 0.2  | 0.5  | 0.3  | 0.2  | 103.1              | 104.6 | 119.7 | 127.8 | 134.7 |
| Switzerland                | 3.5           | 3.8  | 4.2  | 6.4  | 6.6  | nav                | 0.6  | 1.5  | 2.5  | 2.7  | 98.0               | 107.8 | 119.5 | 119.9 | 118.4 |
| United Kingdom             | 26.8          | 29.3 | 31.3 | 33.6 | 35.9 | nav                | nav  | nav  | nav  | nav  | 151.9              | 158.8 | 166.8 | 173.1 | 181.9 |
| United States <sup>5</sup> | 5.0           | 5.7  | 6.1  | 7.1  | 8.4  | nav                | nav  | nav  | nav  | nav  | 250.8              | 254.2 | 259.3 | 267.3 | 270.3 |

<sup>1</sup> Sum of the available data.Russia: <sup>a</sup> Estimated data for 1997-2000. <sup>b</sup> All payments for goods and services are included.Germany: <sup>2</sup> Payments by debit cards in 1997 exclude POZ and ELV procedures.Netherlands: <sup>3</sup> Payments by credit/debit cards include cards with a delayed debit function.Singapore: <sup>4</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).United States: <sup>5</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.



Table 13  
**Relative importance of cashless payment instruments**  
 Percentage of total volume of cashless transactions<sup>1</sup>

|                            | Cheques |      |      |      |      | Payments by credit/debit cards |      |      |                  |                  | Credit transfers |      |      |      |      |
|----------------------------|---------|------|------|------|------|--------------------------------|------|------|------------------|------------------|------------------|------|------|------|------|
|                            | 1997    | 1998 | 1999 | 2000 | 2001 | 1997                           | 1998 | 1999 | 2000             | 2001             | 1997             | 1998 | 1999 | 2000 | 2001 |
| Russia <sup>a</sup>        | nav     | nav  | nav  | 0.2  | 0.2  | nav                            | nav  | nav  | 4.4 <sup>b</sup> | 4.5 <sup>b</sup> | nav              | nav  | nav  | 93.8 | 93.8 |
| Belgium                    | 8.0     | 7.0  | 5.8  | 5.0  | 3.8  | 23.3                           | 27.3 | 28.9 | 32.8             | 33.3             | 58.1             | 54.0 | 51.9 | 46.7 | 47.8 |
| Canada                     | 39.4    | 34.7 | 31.6 | 28.1 | 25.5 | 44.5                           | 48.4 | 51.6 | 54.7             | 57.1             | 8.9              | 9.5  | 9.3  | 9.6  | 9.5  |
| France                     | 46.7    | 44.1 | 40.1 | 37.9 | 35.4 | 21.9                           | 23.6 | 26.1 | 27.8             | 30.0             | 17.7             | 17.9 | 18.4 | 17.7 | 17.8 |
| Germany <sup>2</sup>       | 5.7     | 4.8  | 3.1  | 3.0  | 2.3  | 4.6                            | 8.0  | 8.9  | 10.5             | 11.3             | 47.1             | 50.1 | 52.1 | 48.5 | 49.8 |
| Hong Kong SAR              | 76.8    | 74.1 | 73.2 | 72.8 | 70.7 | nav                            | nav  | nav  | nav              | nav              | 6.9              | 8.0  | 8.5  | 8.7  | 9.6  |
| Italy                      | 30.0    | 28.2 | 25.2 | 21.7 | 20.3 | 12.1                           | 15.1 | 18.0 | 21.2             | 24.6             | 44.6             | 42.3 | 38.0 | 36.6 | 34.7 |
| Japan                      | 10.6    | 9.0  | 8.2  | 6.5  | 5.6  | 47.9                           | 51.6 | 51.9 | 58.2             | 60.4             | 41.5             | 39.4 | 39.9 | 35.2 | 34.0 |
| Netherlands <sup>3</sup>   | 2.8     | 1.9  | 1.0  | 0.5  | 0.2  | 22.9                           | 25.5 | 27.9 | 29.6             | 32.4             | 46.1             | 43.0 | 40.8 | 39.8 | 38.2 |
| Singapore <sup>4</sup>     | 45.5    | 39.2 | 33.5 | 29.6 | 28.2 | 34.3                           | 32.8 | 27.4 | 27.7             | 29.6             | 7.8              | 7.0  | 5.0  | 4.7  | 5.1  |
| Sweden                     | 2.0     | 0.4  | 0.4  | 0.2  | 0.2  | 18.5                           | 23.0 | 24.1 | 28.5             | 33.4             | 72.4             | 68.4 | 67.2 | 63.1 | 58.2 |
| Switzerland                | 1.3     | 1.0  | 0.8  | 1.3  | 0.8  | 22.6                           | 22.9 | 26.0 | 28.2             | 32.8             | 72.5             | 72.1 | 68.4 | 63.1 | 58.5 |
| United Kingdom             | 34.5    | 31.7 | 28.8 | 26.1 | 23.5 | 29.3                           | 31.5 | 34.3 | 36.6             | 39.0             | 18.5             | 18.3 | 18.1 | 17.8 | 17.7 |
| United States <sup>5</sup> | 69.3    | 65.7 | 61.9 | 57.7 | 53.5 | 25.0                           | 27.9 | 31.2 | 34.9             | 38.3             | 3.7              | 4.2  | 4.5  | 4.7  | 5.0  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 13 (cont)

**Relative importance of cashless payment instruments**Percentage of total volume of cashless transactions<sup>1</sup>

|                            | Direct debits |      |      |      |      | Card-based e-money |      |      |      |      |
|----------------------------|---------------|------|------|------|------|--------------------|------|------|------|------|
|                            | 1997          | 1998 | 1999 | 2000 | 2001 | 1997               | 1998 | 1999 | 2000 | 2001 |
| Russia <sup>a</sup>        | nav           | nav  | nav  | 1.6  | 1.4  | nav                | nav  | nav  | nav  | nav  |
| Belgium                    | 9.8           | 9.4  | 10.2 | 11.8 | 11.2 | 0.8                | 2.3  | 3.3  | 3.6  | 3.8  |
| Canada                     | 7.2           | 7.4  | 7.5  | 7.5  | 7.8  | nav                | nav  | nav  | nav  | nav  |
| France                     | 13.6          | 14.4 | 15.5 | 16.6 | 16.8 | nap                | nap  | nav  | nav  | neg  |
| Germany <sup>2</sup>       | 42.6          | 37.0 | 35.7 | 37.8 | 36.4 | neg                | 0.1  | 0.2  | 0.2  | 0.2  |
| Hong Kong SAR              | 16.2          | 17.8 | 18.3 | 18.5 | 19.7 | nav                | nav  | nav  | nav  | nav  |
| Italy                      | 13.3          | 14.4 | 18.8 | 20.5 | 20.4 | neg                | neg  | neg  | neg  | neg  |
| Japan                      | nav           | nav  | nav  | nav  | nav  | nav                | nav  | nav  | nav  | nav  |
| Netherlands <sup>3</sup>   | 28.1          | 28.9 | 29.5 | 29.2 | 28.2 | nav                | 0.7  | 0.8  | 0.9  | 1.0  |
| Singapore <sup>4</sup>     | 12.0          | 9.2  | 6.3  | 5.6  | 5.8  | 0.4                | 11.8 | 27.8 | 32.4 | 31.3 |
| Sweden                     | 7.1           | 8.0  | 8.0  | 8.0  | 8.2  | nav                | 0.2  | 0.4  | 0.3  | 0.1  |
| Switzerland                | 3.6           | 3.5  | 3.5  | 5.3  | 5.5  | nap                | 0.5  | 1.2  | 2.1  | 2.3  |
| United Kingdom             | 17.7          | 18.5 | 18.8 | 19.4 | 19.7 | nav                | nav  | nav  | nav  | nav  |
| United States <sup>5</sup> | 2.0           | 2.2  | 2.4  | 2.6  | 3.1  | nav                | nav  | nav  | nav  | nav  |

<sup>1</sup> Where the total is the sum of the available data.Russia: <sup>a</sup> Estimated data for 2000. <sup>b</sup> All payments for goods and services are included.Germany: <sup>2</sup> Payments by debit cards in 1997 exclude POZ and ELV procedures.Netherlands: <sup>3</sup> Payments by credit/debit cards include cards with a delayed debit function.Singapore: <sup>4</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).United States: <sup>5</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

Table 14  
**Relative importance of cashless payment instruments**  
 Percentage of total value of cashless transactions<sup>1</sup>

|                            | Cheques |      |      |      |      | Payments by credit/debit cards |      |      |                  |                  | Credit transfers |      |      |      |      |
|----------------------------|---------|------|------|------|------|--------------------------------|------|------|------------------|------------------|------------------|------|------|------|------|
|                            | 1997    | 1998 | 1999 | 2000 | 2001 | 1997                           | 1998 | 1999 | 2000             | 2001             | 1997             | 1998 | 1999 | 2000 | 2001 |
| Russia <sup>a</sup>        | nav     | nav  | nav  | 0.1  | 0.1  | nav                            | nav  | nav  | neg <sup>b</sup> | neg <sup>b</sup> | nav              | nav  | nav  | 99.3 | 99.5 |
| Belgium                    | 2.9     | 3.2  | 0.6  | 0.5  | 0.6  | 0.2                            | 0.2  | 0.1  | 0.2              | 0.2              | 96.7             | 96.3 | 98.9 | 99.0 | 99.0 |
| Canada                     | 97.0    | 96.5 | 21.5 | 14.5 | 12.7 | 0.7                            | 0.8  | 0.5  | 0.6              | 0.5              | 1.8              | 2.1  | 77.5 | 84.8 | 86.1 |
| France                     | 3.9     | 2.6  | 2.9  | 2.9  | 2.4  | 0.2                            | 0.1  | 0.2  | 0.2              | 0.2              | 95.1             | 96.6 | 96.2 | 96.2 | 96.6 |
| Germany                    | 7.9     | 7.1  | 3.6  | 3.1  | 2.7  | 0.2                            | 0.3  | 0.3  | 0.4              | 0.4              | 78.2             | 78.1 | 83.2 | 85.4 | 84.2 |
| Hong Kong SAR              | 97.3    | 94.2 | 93.2 | 93.1 | 90.6 | nav                            | nav  | nav  | nav              | nav              | 2.3              | 5.0  | 6.0  | 6.1  | 8.4  |
| Italy                      | 3.3     | 2.9  | 3.7  | 3.2  | 3.0  | 0.1                            | 0.1  | 0.1  | 0.1              | 0.1              | 95.9             | 96.2 | 94.6 | 95.1 | 95.1 |
| Japan                      | 3.0     | 2.4  | 2.7  | 2.7  | 3.0  | neg                            | neg  | neg  | 0.1              | 0.1              | 96.9             | 97.5 | 97.2 | 97.3 | 96.9 |
| Netherlands <sup>2</sup>   | 0.2     | 0.1  | 0.1  | 0.1  | neg  | 1.0                            | 1.2  | 1.3  | 1.3              | 1.4              | 93.9             | 93.8 | 93.4 | 93.5 | 93.6 |
| Singapore <sup>3</sup>     | 5.9     | 4.9  | 5.1  | 4.7  | 3.6  | 0.1                            | 0.2  | 0.2  | 0.2              | 0.2              | 93.7             | 94.8 | 94.6 | 95.0 | 96.1 |
| Sweden                     | nav     | 0.5  | 0.4  | 0.3  | 0.2  | 1.6                            | 1.9  | 2.3  | 2.6              | 3.2              | 95.8             | 94.9 | 94.3 | 93.9 | 93.3 |
| Switzerland                | neg     | neg  | neg  | 0.1  | neg  | neg                            | neg  | 0.1  | 0.1              | 0.1              | 99.8             | 99.8 | 99.8 | 99.7 | 99.7 |
| United Kingdom             | 5.0     | 4.4  | 2.8  | 2.5  | 2.2  | 0.3                            | 0.3  | 0.2  | 0.2              | 0.2              | 93.8             | 94.4 | 96.3 | 96.6 | 97.0 |
| United States <sup>4</sup> | 5.8     | 5.5  | 5.6  | 5.4  | 4.9  | 0.2                            | 0.2  | 0.2  | 0.3              | 0.3              | 93.0             | 93.3 | 93.0 | 93.2 | 93.8 |

Note: For an explanation of the footnotes refer to the end of the table.

Table 14 (cont)

**Relative importance of cashless payment instruments**Percentage of total value of cashless transactions<sup>1</sup>

|                            | Direct debits |      |      |      |      | Card-based e-money |      |      |      |      |
|----------------------------|---------------|------|------|------|------|--------------------|------|------|------|------|
|                            | 1997          | 1998 | 1999 | 2000 | 2001 | 1997               | 1998 | 1999 | 2000 | 2001 |
| Russia <sup>a</sup>        | nav           | nav  | nav  | 0.6  | 0.4  | nav                | nav  | nav  | nav  | nav  |
| Belgium                    | 0.3           | 0.3  | 0.3  | 0.3  | 0.3  | neg                | neg  | neg  | neg  | neg  |
| Canada                     | 0.6           | 0.7  | 0.5  | 0.5  | 0.6  | nav                | nav  | nav  | nav  | nav  |
| France                     | 0.8           | 0.6  | 0.7  | 0.8  | 0.8  | nap                | nap  | nav  | nav  | neg  |
| Germany                    | 13.7          | 14.4 | 12.8 | 11.1 | 12.8 | neg                | neg  | neg  | neg  | neg  |
| Hong Kong SAR              | 0.4           | 0.8  | 0.8  | 0.8  | 1.0  | nav                | nav  | nav  | nav  | nav  |
| Italy                      | 0.8           | 0.9  | 1.6  | 1.6  | 1.7  | neg                | neg  | neg  | neg  | neg  |
| Japan                      | nav           | nav  | nav  | nav  | nav  | nav                | nav  | nav  | nav  | nav  |
| Netherlands <sup>2</sup>   | 4.9           | 4.9  | 5.2  | 5.1  | 5.0  | nav                | neg  | neg  | neg  | neg  |
| Singapore <sup>3</sup>     | 0.2           | 0.2  | 0.2  | 0.2  | 0.2  | neg                | neg  | neg  | neg  | neg  |
| Sweden                     | 2.5           | 2.7  | 3.0  | 3.2  | 3.3  | nav                | neg  | neg  | neg  | neg  |
| Switzerland                | 0.1           | 0.1  | 0.1  | 0.2  | 0.2  | nap                | neg  | neg  | neg  | neg  |
| United Kingdom             | 1.0           | 1.0  | 0.7  | 0.7  | 0.6  | neg                | neg  | nav  | nav  | nav  |
| United States <sup>4</sup> | 1.0           | 1.1  | 1.2  | 1.1  | 1.1  | nav                | nav  | nav  | nav  | nav  |

<sup>1</sup> Where the total is the sum of the available data.Russia: <sup>a</sup> Estimated data 2000. <sup>b</sup> All payments for goods and services are included.Netherlands: <sup>2</sup> Payments by credit/debit cards include cards with a delayed debit function.Singapore: <sup>3</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).United States: <sup>4</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

Table 15  
**Features of selected interbank funds transfer systems**  
 End of 2001, unless otherwise noted

|   | Type <sup>1</sup> | Owner/manager <sup>2</sup> | Number of participants |                     | Processing <sup>3</sup> | Settlement <sup>4</sup> | Membership <sup>5</sup> |
|---|-------------------|----------------------------|------------------------|---------------------|-------------------------|-------------------------|-------------------------|
|   |                   |                            | Total                  | Of which:<br>Direct |                         |                         |                         |
| Russia                                    |                   |                            |                        |                     |                         |                         |                         |
| <i>Intraregional electronic payments</i>  | <i>L+R</i>        | <i>CB</i>                  | <i>4,051</i>           | <i>4,051</i>        | <i>RTT/ACH/M</i>        | <i>GS</i>               | <i>RM</i>               |
| <i>Inter-regional electronic payments</i> | <i>L+R</i>        | <i>CB</i>                  | <i>3,861</i>           | <i>3,861</i>        | <i>RTT/ACH/M</i>        | <i>GS</i>               | <i>RM</i>               |
| <i>Paper-based payments</i>               | <i>L+R</i>        | <i>CB</i>                  | <i>4,315</i>           | <i>4,315</i>        | <i>M</i>                | <i>GS</i>               | <i>O</i>                |
| Belgium                                   |                   |                            |                        |                     |                         |                         |                         |
| <i>ELLIPS</i>                             | <i>L</i>          | <i>B+CB</i>                | <i>96</i>              | <i>17</i>           | <i>RTT</i>              | <i>RTGS</i>             | <i>O</i>                |
| <i>Clearing House</i>                     | <i>R</i>          | <i>B+CB</i>                | <i>94</i>              | <i>34</i>           | <i>RTT</i>              | <i>N</i>                | <i>O</i>                |
| <i>CEC</i>                                | <i>R</i>          | <i>B+CB</i>                | <i>94</i>              | <i>33</i>           | <i>RTT</i>              | <i>N</i>                | <i>O</i>                |
| Canada                                    |                   |                            |                        |                     |                         |                         |                         |
| <i>LVTS</i>                               | <i>L</i>          | <i>PA</i>                  | <i>14</i>              | <i>14</i>           | <i>RTT</i>              | <i>N</i>                | <i>O</i>                |
| France                                    |                   |                            |                        |                     |                         |                         |                         |
| <i>CH Paris</i>                           | <i>R</i>          | <i>B/PA</i>                | <i>331</i>             | <i>27</i>           | <i>M</i>                | <i>N</i>                | <i>RM</i>               |
| <i>CH Province</i>                        | <i>R</i>          | <i>CB</i>                  | <i>267</i>             | <i>219</i>          | <i>M</i>                | <i>N</i>                | <i>O</i>                |
| <i>SIT</i>                                | <i>R</i>          | <i>CB+B/PA</i>             | <i>677</i>             | <i>17</i>           | <i>RTT</i>              | <i>N</i>                | <i>O</i>                |
| <i>CREIC</i>                              | <i>R</i>          | <i>B/CB</i>                | <i>28</i>              | <i>28</i>           | <i>ACH</i>              | <i>N</i>                | <i>O</i>                |
| <i>TBF</i>                                | <i>L</i>          | <i>CB</i>                  | <i>646</i>             | <i>195</i>          | <i>RTT</i>              | <i>RTGS</i>             | <i>O</i>                |
| <i>PNS</i>                                | <i>L</i>          | <i>CB+B/PA</i>             | <i>468</i>             | <i>24</i>           | <i>RTT</i>              | <i>N/BN/RTGS</i>        | <i>RM</i>               |
| Germany                                   |                   |                            |                        |                     |                         |                         |                         |
| <i>RPS (former DTA)</i>                   | <i>R</i>          | <i>CB</i>                  | <i>2,325</i>           | <i>2,325</i>        | <i>ACH</i>              | <i>GS</i>               | <i>O</i>                |
| <i>RTGS<sup>plus 9, 10</sup></i>          | <i>L</i>          | <i>CB</i>                  | <i>1,612</i>           | <i>59</i>           | <i>RTT</i>              | <i>RTGS</i>             | <i>RM</i>               |
| <i>ELS<sup>9</sup></i>                    | <i>nap</i>        | <i>nap</i>                 | <i>nap</i>             | <i>nap</i>          | <i>nap</i>              | <i>nap</i>              | <i>nap</i>              |
| <i>EAF (former EAF2)<sup>9</sup></i>      | <i>nap</i>        | <i>nap</i>                 | <i>nap</i>             | <i>nap</i>          | <i>nap</i>              | <i>nap</i>              | <i>nap</i>              |
| Hong Kong SAR                             |                   |                            |                        |                     |                         |                         |                         |
| <i>HKD CHATS</i>                          | <i>All value</i>  | <i>CMA<sup>11</sup></i>    | <i>134</i>             | <i>134</i>          | <i>RTT</i>              | <i>RTGS</i>             | <i>RM</i>               |
| <i>USD CHATS</i>                          | <i>All value</i>  | <i>B</i>                   | <i>180</i>             | <i>65</i>           | <i>RTT</i>              | <i>RTGS</i>             | <i>O</i>                |

Note: For an explanation of the footnotes refer to the end of the table.

Table 15 (cont)

## Features of selected interbank funds transfer systems

End of 2001, unless otherwise noted

|                               | Type <sup>1</sup> | Owner/manager <sup>2</sup> | Number of participants |                     | Processing <sup>3</sup> | Settlement <sup>4</sup> | Membership <sup>5</sup> |
|-------------------------------|-------------------|----------------------------|------------------------|---------------------|-------------------------|-------------------------|-------------------------|
|                               |                   |                            | Total                  | Of which:<br>Direct |                         |                         |                         |
| Italy                         |                   |                            |                        |                     |                         |                         |                         |
| BI-REL                        | L                 | CB                         | 863                    | 682                 | RTT                     | RTGS                    | RM                      |
| Local Clearing                | R                 | CB                         | 124                    | 124                 | RTT <sup>14</sup>       | N                       | O                       |
| Retail                        | R                 | CB <sup>15</sup>           | nav                    | 209                 | ACH                     | N                       | O                       |
| Japan                         |                   |                            |                        |                     |                         |                         |                         |
| FXYCS                         | L                 | B                          | 244                    | 40                  | RTT                     | N/RTGS                  | RM                      |
| BOJ-NET Funds Transfer System | L                 | CB                         | 383                    | 383                 | RTT                     | RTGS                    | RM                      |
| Netherlands                   |                   |                            |                        |                     |                         |                         |                         |
| Interpay                      | R                 | B                          | 72                     | 72                  | ACH                     | N                       | RM                      |
| TOP                           | L                 | CB                         | 164                    | 108                 | RTT                     | RTGS                    | RM                      |
| Singapore                     |                   |                            |                        |                     |                         |                         |                         |
| SGDCCS                        | R                 | PA                         | 104                    | 40                  | ACH                     | N                       | O                       |
| USDCCS                        | R                 | PA                         | 53                     | 31                  | ACH                     | GS                      | O                       |
| Interbank GIRO                | R                 | PA                         | 45                     | 41                  | ACH                     | N                       | O                       |
| EFTPOS                        | R                 | B                          | 5                      | 5                   | RTT                     | N                       | RM                      |
| MEPS                          | L                 | CB                         | 130                    | 86                  | RTT                     | RTGS                    | O                       |
| Sweden                        |                   |                            |                        |                     |                         |                         |                         |
| K-RIX                         | L                 | CB                         | 20                     | 20                  | RTT                     | RTGS                    | RM                      |
| E-RIX                         | L                 | CB                         | 15                     | 15                  | RTT                     | RTGS                    | RM                      |
| Bankgirot                     | R                 | B                          | 21                     | 21                  | ACH                     | N                       | O                       |
| Dataclearing                  | R                 | B                          | 21                     | 21                  | ACH                     | N                       | O                       |
| Postgirot <sup>21</sup>       | R                 | B                          | 1,200,000              | 1,200,000           | ACH                     | GS                      | O                       |
| Switzerland                   |                   |                            |                        |                     |                         |                         |                         |
| SIC                           | L+R               | B+CB                       | 313                    | 313                 | RTT                     | RTGS                    | O <sup>23</sup>         |
| DTA/LSV                       | R                 | B                          | 155                    | 155                 | ACH                     | GS                      | O <sup>23</sup>         |

Note: For an explanation of the footnotes refer to the end of the table.

Table 15 (cont)  
**Features of selected interbank funds transfer systems**  
 End of 2001, unless otherwise noted

|                          | Type <sup>1</sup> | Owner/manager <sup>2</sup> | Number of participants |                     | Processing <sup>3</sup> | Settlement <sup>4</sup> | Membership <sup>5</sup> |
|--------------------------|-------------------|----------------------------|------------------------|---------------------|-------------------------|-------------------------|-------------------------|
|                          |                   |                            | Total                  | Of which:<br>Direct |                         |                         |                         |
| United Kingdom           |                   |                            |                        |                     |                         |                         |                         |
| CHAPS Sterling           | L                 | B+CB                       | 369                    | 13                  | RTT                     | RTGS                    | RM                      |
| CHAPS Euro <sup>24</sup> | L                 | B+CB                       | 85                     | 20                  | RTT                     | RTGS                    | RM                      |
| BACS                     | R                 | B                          | 62,000                 | 14                  | ACH                     | N                       | RM                      |
| Cheque/credit            | R                 | B                          | 516                    | 12                  | M                       | N                       | RM                      |
| United States            |                   |                            |                        |                     |                         |                         |                         |
| Fedwire                  | L                 | CB                         | 8,110 <sup>27</sup>    | 8,110 <sup>27</sup> | RTT                     | RTGS                    | O                       |
| CHIPS <sup>26</sup>      | L                 | B                          | 58                     | 58                  | RTT                     | N/BN                    | RM                      |
| European Union           |                   |                            |                        |                     |                         |                         |                         |
| EURO1                    | L                 | B                          | 73                     | 73                  | RTT                     | SOS <sup>28</sup>       | RM                      |
| TARGET <sup>29</sup>     | L                 | CB                         | 3,888                  | 1,579               | RTT                     | RTGS                    | RM                      |

Note: For an explanation of the footnotes refer to the end of the table.

Table 15 (cont)  
**Features of selected interbank funds transfer systems**  
 End of 2001, unless otherwise noted

|   | Degree of centralisation <sup>6</sup> | Pricing <sup>7</sup> | Closing time for same day transactions (local time) | Number of transactions (thousands) |                  | Value of transactions (USD billions) <sup>8</sup> |               | Ratio of transactions value to GDP (at annual rate) |             |
|---|---------------------------------------|----------------------|---|------------------------------------|------------------|---|---------------|---|-------------|
|   |                                       |                      |   | 2000                               | 2001             | 2000  | 2001          | 2000  | 2001        |
| Russia                                    |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>Intraregional electronic payments</i>  | <i>C/D</i>                            | <i>S/N</i>           | <i>21:00<sup>a</sup></i>                            | <i>181,886</i>                     | <i>224,187</i>   | <i>1,002</i>                                      | <i>1,453</i>  | <i>4.1</i>  | <i>4.7</i>  |
| <i>Inter-regional electronic payments</i> | <i>D</i>                              | <i>S/N</i>           | <i>16:30<sup>a, b</sup></i>                         | <i>17,225</i>                      | <i>26,811</i>    | <i>205</i>  | <i>322</i>    | <i>0.8</i>  | <i>1.0</i>  |
| <i>Paper-based payments</i>               | <i>C/D</i>                            | <i>S/N</i>           | <i>nap</i>  | <i>45,032</i>                      | <i>28,193</i>    | <i>321</i>  | <i>301</i>    | <i>1.3</i>  | <i>1.0</i>  |
| Belgium                                   |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>ELLIPS</i>                             | <i>C</i>                              | <i>F</i>             | <i>18:00</i>  | <i>1,780</i>                       | <i>1,842</i>     | <i>11,720</i>                                     | <i>12,818</i> | <i>51.3</i>   | <i>56.3</i> |
| <i>Clearing House</i>                     | <i>D</i>                              | <i>V</i>             | <i>15:00</i>  | <i>4,190</i>                       | <i>3,528</i>     | <i>97</i>   | <i>80</i>     | <i>0.4</i>  | <i>0.3</i>  |
| <i>CEC</i>                                | <i>C</i>                              | <i>F</i>             | <i>15:00</i>  | <i>885,220</i>                     | <i>919,044</i>   | <i>447</i>  | <i>455</i>    | <i>2.0</i>  | <i>2.0</i>  |
| Canada                                    |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>LVTS</i>                               | <i>C</i>                              | <i>F</i>             | <i>18:30</i>  | <i>3,544</i>                       | <i>3,740</i>     | <i>17,105</i>                                     | <i>18,061</i> | <i>24.5</i>   | <i>26.1</i> |
| France                                    |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>CH Paris</i>                           | <i>C</i>                              | <i>F</i>             | <i>nap</i>  | <i>682,210</i>                     | <i>677,765</i>   | <i>669</i>  | <i>683</i>    | <i>0.5</i>  | <i>0.5</i>  |
| <i>CH Province</i>                        | <i>D</i>                              | <i>N</i>             | <i>nap</i>  | <i>2,771,691</i>                   | <i>2,469,057</i> | <i>1,071</i>                                      | <i>883</i>    | <i>0.8</i>  | <i>0.7</i>  |
| <i>SIT</i>                                | <i>C</i>                              | <i>F</i>             | <i>13:30</i>  | <i>6,485,332</i>                   | <i>7,131,087</i> | <i>2,264</i>                                      | <i>2,187</i>  | <i>1.7</i>  | <i>1.7</i>  |
| <i>CREIC</i>                              | <i>D</i>                              | <i>V</i>             | <i>nap</i>  | <i>307,724</i>                     | <i>270,165</i>   | <i>24</i>   | <i>21</i>     | <i>neg</i>  | <i>neg</i>  |
| <i>TBF domestic</i>                       | <i>C</i>                              | <i>F</i>             | <i>18:00</i>  | <i>3,025</i>                       | <i>3,801</i>     | <i>62,765</i>                                     | <i>78,365</i> | <i>48.1</i>   | <i>59.8</i> |
| <i>PNS</i>                                | <i>C</i>                              | <i>F</i>             | <i>16:00</i>  | <i>5,515</i>                       | <i>8,004</i>     | <i>20,117</i>                                     | <i>19,977</i> | <i>15.4</i>   | <i>15.3</i> |
| Germany                                   |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>RPS (former DTA)</i>                   | <i>D</i>                              | <i>F</i>             | <i>nap</i>  | <i>2,226,589</i>                   | <i>2,197,487</i> | <i>2,067</i>                                      | <i>1,971</i>  | <i>1.1</i>  | <i>1.1</i>  |
| <i>RTGS<sup>plus 9, 10</sup></i>          | <i>C</i>                              | <i>F</i>             | <i>18:00</i>  | <i>nap</i>                         | <i>4,829</i>     | <i>nap</i>  | <i>17,392</i> | <i>nap</i>  | <i>9.4</i>  |
| <i>ELS<sup>9</sup></i>                    | <i>nap</i>                            | <i>nap</i>           | <i>18:00</i>  | <i>21,534</i>                      | <i>19,031</i>    | <i>48,158</i>                                     | <i>44,109</i> | <i>25.8</i>   | <i>23.8</i> |
| <i>EAF (former EAF2)<sup>9</sup></i>      | <i>nap</i>                            | <i>nap</i>           | <i>nap</i>  | <i>12,988</i>                      | <i>11,014</i>    | <i>38,237</i>                                     | <i>31,343</i> | <i>20.5</i>   | <i>16.9</i> |
| Hong Kong SAR                             |                                       |                      |   |                                    |                  |   |               |   |             |
| <i>HKD CHATS</i>                          | <i>C</i>                              | <i>F</i>             | <i>17:30<sup>12</sup></i>                           | <i>3,410</i>                       | <i>3,470</i>     | <i>11,678</i>                                     | <i>11,134</i> | <i>70.6</i>   | <i>67.9</i> |
| <i>USD CHATS</i>                          | <i>C</i>                              | <i>F</i>             | <i>17:30</i>  | <i>185<sup>13</sup></i>            | <i>691</i>       | <i>242<sup>13</sup></i>                           | <i>931</i>    | <i>4.5</i>  | <i>5.7</i>  |

Note: For an explanation of the footnotes refer to the end of the table.



Table 15 (cont)  
**Features of selected interbank funds transfer systems**  
 End of 2001, unless otherwise noted

|                                      | Degree of centralisation <sup>6</sup> | Pricing <sup>7</sup> | Closing time for same day transactions (local time) | Number of transactions (thousands) |           | Value of transactions (USD billions) <sup>8</sup> |         | Ratio of transactions value to GDP (at annual rate) |            |
|--------------------------------------|---------------------------------------|----------------------|---|------------------------------------|-----------|---|---------|---|------------|
|                                      |                                       |                      |   | 2000                               | 2001      | 2000  | 2001    | 2000  | 2001       |
| Italy                                |                                       |                      |   |                                    |           |   |         |   |            |
| <i>BI-REL</i>                        | C                                     | F                    | 18:00   | 10,401                             | 10,247    | 25,584  | 24,291  | 23.9  | 22.3       |
| <i>Local Clearing</i>                | C                                     | V                    | 12:00   | 109,438                            | 105,360   | 663   | 641     | 0.6   | 0.6        |
| <i>Retail</i>                        | C                                     | F                    | <i>nap</i> <sup>16</sup>                            | 1,005,362                          | 1,269,828 | 1,416   | 1,551   | 1.3   | 1.4        |
| Japan                                |                                       |                      |   |                                    |           |   |         |   |            |
| <i>FXYCS</i>                         | C                                     | V <sup>17</sup>      | 13:45(N)/17:00(G)                                   | 9,298                              | 9,564     | 57,961  | 56,587  | 12.2  | 13.6       |
| <i>BOJ-NET Funds Transfer System</i> | C                                     | V <sup>17</sup>      | 17:00   | 4,715                              | 5,046     | 328,430   | 156,640 | 69.0  | 37.5       |
| Netherlands                          |                                       |                      |   |                                    |           |   |         |   |            |
| <i>Interpay</i>                      | C                                     | F                    | 17:00   | 2,328,445                          | 2,558,284 | 1,342   | 1,409   | 3.6   | 3.7        |
| <i>TOP</i>                           | C                                     | F                    | 18:00   | 3,725                              | 4,023     | 16,552  | 18,514  | 44.6  | 48.2       |
| Singapore                            |                                       |                      |   |                                    |           |   |         |   |            |
| <i>SGDCCS</i>                        | C                                     | V                    | 16:45 <sup>18</sup>                                 | 91,259                             | 91,599    | 262   | 233     | 2.9   | 2.7        |
| <i>USDCCS</i>                        | C                                     | V                    | 15:30   | 390                                | 399       | 12  | 11      | 0.1   | 0.1        |
| <i>Interbank GIRO</i>                | C                                     | V                    | 12:00 <sup>19</sup>                                 | 29,980                             | 33,640    | 42  | 45      | 0.5   | 0.5        |
| <i>EFTPOS</i>                        | C                                     | V                    | 23:59   | 76,932                             | 87,728    | 2.7   | 3.1     | <i>neg</i>  | <i>neg</i> |
| <i>MEPS</i>                          | C                                     | V                    | 18:30 <sup>20</sup>                                 | 1,908                              | 2,065     | 5,542   | 6,447   | 60.3  | 75.3       |
| Sweden                               |                                       |                      |   |                                    |           |   |         |   |            |
| <i>K-RIX</i>                         | C                                     | F                    | 17:00   | 510                                | 655       | 11,689  | 10,962  | 51.1  | 52.3       |
| <i>E-RIX</i>                         | C                                     | F                    | 17:00   | 62                                 | 70        | 1,582   | 1,265   | 6.9   | 6.0        |
| <i>Bankgirot</i>                     | C                                     | F                    | .22   | 351,410                            | 345,200   | 407   | 376     | 1.8   | 1.8        |
| <i>Dataclearing</i>                  | C                                     | F                    | .22   | 78,217                             | 66,910    | 147   | 107     | 0.6   | 0.5        |
| <i>Postgirot</i> <sup>21</sup>       | C                                     | F                    | .22   | 454,000                            | 450,000   | 445   | 367     | 1.9   | 1.8        |
| Switzerland                          |                                       |                      |   |                                    |           |   |         |   |            |
| <i>SIC</i>                           | C                                     | F                    | 16:15   | 149,500                            | 161,200   | 26,425  | 26,905  | 110.0   | 109.4      |
| <i>DTA/LSV</i>                       | C                                     | F                    | 09:00   | 105,900                            | 103,700   | 228   | 225     | 0.9   | 0.9        |

Note: For an explanation of the footnotes refer to the end of the table.

Table 15 (cont)

## Features of selected interbank funds transfer systems

End of 2001, unless otherwise noted

|                          | Degree of centralisation <sup>6</sup> | Pricing <sup>7</sup> | Closing time for same day transactions (local time) | Number of transactions (thousands) |           | Value of transactions (USD billions) <sup>8</sup> |         | Ratio of transactions value to GDP (at annual rate) |      |
|--------------------------|---------------------------------------|----------------------|---|------------------------------------|-----------|---|---------|---|------|
|                          |                                       |                      |   | 2000                               | 2001      | 2000  | 2001    | 2000  | 2001 |
| United Kingdom           |                                       |                      |   |                                    |           |   |         |   |      |
| CHAPS Sterling           | C                                     | F                    | 17:00   | 21,705                             | 23,962    | 74,464  | 76,189  | 51.7  | 53.6 |
| CHAPS Euro <sup>24</sup> | C                                     | F                    | 17:00   | 3,250                              | 2,580     | 38,358  | 26,844  | 26.6  | 18.9 |
| BACS                     | C                                     | F                    | 17:00 <sup>25</sup>                                 | 3,316,213                          | 3,527,340 | 2,912   | 3,119   | 2.0   | 2.2  |
| Cheque/credit            | D                                     | F                    | 17:00 <sup>25</sup>                                 | 2,033,000                          | 1,940,000 | 2,202   | 2,073   | 1.5   | 1.5  |
| United States            |                                       |                      |   |                                    |           |   |         |   |      |
| Fedwire                  | C                                     | F                    | 18:30   | 108,300                            | 112,500   | 379,756   | 423,867 | 38.7  | 42.0 |
| CHIPS <sup>26</sup>      | C                                     | F                    | 17:00   | 59,800                             | 60,400    | 292,147   | 311,707 | 29.7  | 30.9 |
| European Union           |                                       |                      |   |                                    |           |   |         |   |      |
| EURO1                    | C                                     | F                    | 16:00   | 24,692                             | 28,633    | 49,644  | 58,101  | nap   | nap  |
| TARGET <sup>29</sup>     | D                                     | F                    | 18:00   | 47,980                             | 53,664    | 263,291   | 368,469 | nap   | nap  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 15 (cont)

**Features of selected interbank funds transfer systems**

End of 2001, unless otherwise noted

<sup>1</sup> L = large-value system; R = retail system. <sup>2</sup> B = bank(s); CB = central bank(s); PA = payment association. <sup>3</sup> M = manual; ACH = automated clearing house (offline); RTT = real-time transmission. <sup>4</sup> N = multilateral netting; BN = bilateral netting; RTGS = real-time gross settlement; GS = other gross settlement. <sup>5</sup> O = open membership (any bank can apply); RM = restricted membership (subject to criteria). <sup>6</sup> Degree of centralisation: C = centralised (one processing centre where all settlement instructions are processed and accounts settled); D = decentralised (presence of more than one such processing centre). <sup>7</sup> Prices charged to participants: F = full cost (including investments); V = variable costs; S = symbolic cost (below variable cost); N = no cost. <sup>8</sup> Converted at yearly average exchange rates.

Russia: <sup>a</sup> The times shown are for the Moscow region, where the majority of the total volume of payments is processed. <sup>b</sup> Other territorial branches of the Bank of Russia may have later times.

Germany: <sup>9</sup> RTGS<sup>plus</sup>, the new RTGS system, opened for business on 5 November 2001. On the same day, ELS (the former RTGS system) and EAF were closed down. For the time being, ELS serves as a procedure for accessing RGTS<sup>plus</sup>. <sup>10</sup> The number of participants solely includes direct participants and indirect participants of the Deutsche Bundesbank. Others, which are addressable via RTGS<sup>plus</sup>, are not included.

Hong Kong: <sup>11</sup> Central Monetary Authority. <sup>12</sup> 12:00 on Saturdays. <sup>13</sup> From 21 August.

Italy: <sup>14</sup> Transactions can also be submitted on floppy disk. <sup>15</sup> System managed by SIA (Interbank Company for Automation) in the name and on behalf of the Bank of Italy. <sup>16</sup> Except for credit transfers entered before 10:00 which are settled on the same day.

Japan: <sup>17</sup> Prices are set on the principle that the institutions that are to benefit from online processing should pay the relevant fees.

Singapore: <sup>18</sup> 13:15 on Saturdays. <sup>19</sup> 09:00 on Saturdays. <sup>20</sup> 14:45 on Saturdays.

Sweden: <sup>21</sup> Postgirot is a "quasi system", ie transfer between accounts in special purpose bank. Non-banks can have accounts. <sup>22</sup> No same day transactions.

Switzerland: <sup>23</sup> With restriction criteria for remote members.

United Kingdom: <sup>24</sup> Quantitative figures for 2000 include domestic and all cross-border (inward and outward) payments across TARGET. Figures for 2001 exclude inward cross-border payments. <sup>25</sup> No same day transactions.

United States: <sup>26</sup> In January 2001, CHIPCo converted CHIPS from an end-of-day, multilateral net settlement system to a real-time final settlement system that continuously matches, nets and settles payment orders during the operating day. <sup>27</sup> Number of depository institutions that used the Fedwire Funds Transfer Service in 2001. Other Fedwire Funds Transfer participants not included here, are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations.

European Union: <sup>28</sup> The legal structure of EURO1 is based on the Single Obligation Structure (SOS), whereby on each settlement day, at any given time, each participant will have only one single payment obligation or claim with respect to the community of the other participants as joint creditors/debtors, which will be settled at the end of the day. In accordance with the SOS, no bilateral payments, claims or obligations between participants will be created by the processing of payments in the system. Nor will there be any form of setoff, novation or netting resulting from the continuous adjustment of the participants' single claim or obligation. <sup>29</sup> The RTGS systems of the countries which have adopted the euro and the ECB payment mechanism are integral parts of the TARGET system. The euro RTGS systems of Denmark, Greece, Sweden and the United Kingdom were allowed to connect to TARGET on the basis of a decision taken by the Governing Council of the ECB in July 1998. On 1 January 2001 Greece joined the euro area. The HERMES Payment System in drachmas and the EURO-HERMES System were unified into a single HERMES Payment System. The figure of TARGET participants is based on a survey of direct and indirect participants. The previously published number of indirect participants was an estimate. In addition, there is a substantial change in the number of direct participants due to the fact that EAF closed down when RTGS plus opened for business on 5 November 2001.

Table 16  
**Operating hours of selected large-value interbank funds transfer systems**  
 End of 2001

| System                                    | Gross or net | Opening and closing time for same day value<br>(local time) | Settlement finality<br>(local time)            | Cutoff for all third-party payment orders<br>(local time) | Cutoff for international correspondents' payment orders<br>(local time) | <i>Memo item: standard money market hours<br/>(local time)</i> |
|---|--------------|---|--|---|---|--|
| Russia                                    |              |   |  |   |   |  |
| <i>Intraregional electronic payments</i>  |              |   |  |   |   |  |
| <i>Continuous settlement</i>              | Gross        | 09:00-17:30 <sup>a</sup>                                    | 09:00-17:30                                    | 17:00   | nap   | nap <sup>b</sup>   |
| <i>Designated time settlement</i>         | Gross        | 10:00-22:00 <sup>c</sup>                                    | 12:00, 15:00, 17:00, 20:00, 22:00 <sup>c</sup> | 21:00 <sup>c</sup>  | nap   | nap <sup>b</sup>   |
| <i>Inter-regional electronic payments</i> | Gross        | 09:00-16:30 <sup>a</sup>                                    | 1-2 days <sup>d</sup>                          | 16:30   | nap   | nap <sup>b</sup>   |
| Belgium                                   |              |   |  |   |   |  |
| ELLIPS                                    | Gross        | 07:00-18:00   | 07:00-18:00                                    | 17:00   | 18:00   | 07:00-18:00  |
| Canada <sup>1</sup>                       |              |   |  |   |   |  |
| LVTS                                      | Net          | 07:00-18:30 <sup>2</sup>                                    | 19:30  | 18:00   | 18:00   | nap <sup>3</sup>   |
| France                                    |              |   |  |   |   |  |
| TBF                                       | Gross        | 07:00-18:00   | real-time                                      | 17:00   | nap   | 09:00-17:00  |
| PNS                                       | Gross/Net    | 08:00-16:00   | real-time                                      | 16:00   | nap   | 09:00-17:00  |
| Germany <sup>4</sup>                      |              |   |  |   |   |  |
| RTGS <sup>plus</sup>                      | Gross        | 07:00-18:00   | 07:00-18:00                                    | 17:00   | nap   | 08:30-18:00  |
| EAF (former EAF2)                         | nap          | nap   | nap  | nap   | nap   | nap  |
| ELS                                       | nap          | nap   | nap  | nap   | nap   | nap  |
| Hong Kong SAR                             |              |   |  |   |   |  |
| HKD CHATS                                 | Gross        | 09:00-17:30 <sup>5</sup>                                    | 09:00-17:30 <sup>5</sup>                       | 17:00   | 17:30   | 09:00-17:30  |
| USD CHATS                                 | Gross        | 09:00-17:30   | 09:00-17:30                                    | 17:00   | 17:30   | 09:00-17:30  |
| Italy                                     |              |   |  |   |   |  |
| BI-REL                                    | Gross        | 07:00-18:00   | 07:00-18:00                                    | 17:00   | nap   | 07:00-18:00  |
| Japan                                     |              |   |  |   |   |  |
| FXYCS                                     | Net          | 09:00-13:45   | 14:30  | 13:45   | 13:45   | 09:00-17:00  |
|   | Gross        | 09:00-17:00   | 09:00-17:00                                    | 17:00   | 17:00   | 09:00-17:00  |
| BOJ-NET Funds Transfer System             | Gross        | 09:00-17:00   | 09:00-17:00                                    | 14:00   | 14:00   | 09:00-17:00  |
| Netherlands                               |              |   |  |   |   |  |
| TOP                                       | Gross        | 07:00-18:00   | 07:00-18:00                                    | 17:00   | 17:00   | 07:00-18:00  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 16 (cont)  
**Operating hours of selected large-value interbank funds transfer systems**  
 End of 2001

| System  | Gross or net | Opening/closing<br>time for same day<br>value<br>(local time) | Settlement finality<br>(local time) | Cutoff for all third-<br>party payment<br>orders<br>(local time) | Cutoff for<br>international<br>correspondents'<br>payment orders<br>(local time) | <i>Memo item:<br/>standard money<br/>market hours<br/>(local time)</i> |
|---|--------------|---|-------------------------------------|--|--|--|
| Singapore<br><i>MEPS</i>                      | <i>Gross</i> | <i>06:00-20:00</i> <sup>6, 7</sup>                            | <i>09:00-18:30</i> <sup>8, 9</sup>  | <i>18:30</i> <sup>10, 11</sup>                                   | <i>nap</i> <sup>12</sup>   | <i>09:00-18:30</i> <sup>7</sup>  |
| Sweden<br><i>K-RIX</i>                        | <i>Gross</i> | <i>07:00-17:00</i>  | <i>07:00-17:00</i>                  | <i>17:00</i>   | <i>17:00</i>   | <i>09:00-16:15</i>   |
| <i>E-RIX</i>                                  | <i>Gross</i> | <i>07:00-18:00</i>  | <i>07:00-18:00</i>                  | <i>17:00</i>   | <i>18:00</i>   | <i>09:00-16:15</i>   |
| Switzerland<br><i>SIC</i>                     | <i>Gross</i> | <i>18:00-16:15</i> <sup>13</sup>                              | <i>18:00-16:15</i>                  | <i>15:00</i>   | <i>08:00</i>   | <i>09:00-16:00</i>   |
| United Kingdom<br><i>CHAPS Sterling</i>       | <i>Gross</i> | <i>06:00-17:00</i>  | –                                   | <i>16:00</i>   | <i>16:00</i>   | <i>07:00-16:00</i>   |
| <i>CHAPS Euro</i>                             | <i>Gross</i> | <i>06:00-17:00</i>  | –                                   | <i>16:00</i>   | <i>16:00</i>   | –  |
| United States <sup>14</sup><br><i>Fedwire</i> | <i>Gross</i> | <i>00:30-18:30</i>  | <i>00:30-18:30</i>                  | <i>18:00</i>   | <i>17:00</i>   | <i>08:30-18:30</i> <sup>16</sup>                                       |
| <i>CHIPS</i>                                  | <i>Net</i>   | <i>00:30-17:00</i>  | <i>intra-day</i> <sup>15</sup>      | <i>16:30</i>   | <i>16:30</i>   | <i>08:30-18:30</i> <sup>16</sup>                                       |
| European Union<br><i>EURO1</i>                | <i>Net</i>   | <i>07:30-16:00</i>  | <i>after 16:00</i>                  | <i>16:00</i>   | <i>16:00</i>   | <i>07:00-18:00</i>   |
| <i>TARGET</i>                                 | <i>Gross</i> | <i>07:00-18:00</i>  | <i>real-time</i>                    | <i>17:00</i>   | <i>nap</i>   | <i>07:00-18:00</i>   |

Note: For an explanation of the footnotes refer to the end of the table.

Table 16 (cont)

**Operating hours of selected large-value interbank funds transfer systems**

End of 2001

Russia: <sup>a</sup> Depending on the region, the situation may be slightly different. <sup>b</sup> No standard hours. <sup>c</sup> The times shown are for the Moscow region, where the majority of the total volume of payments is processed. <sup>d</sup> See Section 4.2.1.2

Canada: <sup>1</sup> Local times are Eastern time. <sup>2</sup> The initialisation period, for collateral pledging/valuation, setting of bilateral limits, etc, begins at 07:00. The payment message exchange period begins at 08:00. <sup>3</sup> No standard hours.

Germany: <sup>4</sup> RTGS<sup>plus</sup>, the new RTGS system, opened for business on 5 November 2001. On the same day, ELS (the former RTGS system) and EAF were closed down. For the time being, ELS serves as a procedure for accessing RGTS<sup>plus</sup>.

Hong Kong: <sup>5</sup> To 12:00 on Saturdays.

Singapore: <sup>6</sup> The initialisation period for collateral pledging/valuation, setting of bilateral limits, etc begins at 07:00. The payment message exchange period begins at 08:00. <sup>7</sup> To 15:00 on Saturdays. <sup>8</sup> For net settlement systems. <sup>9</sup> To 14:30 on Saturdays. <sup>10</sup> For same day clearing. <sup>11</sup> To 14:45 on Saturdays. <sup>12</sup> MEPS is used for domestic payment orders only.

Switzerland: <sup>13</sup> The system is open for input 24 hours a day. Settlement services are limited by the indicated opening and closing times. A value day starts at 18:00 local time on the previous business day and ends at 16:15 on the value day. Third-party payments may be entered for same day settlement until 15:00. Between 15:00 (cutoff 1) and 16:00 (cutoff 2) only cover (bank-to-bank) payments are accepted for same day settlement. From 16:00 to 16:15 transactions are restricted to the processing of lombard credits (collateralised loans from the Swiss National Bank at a penalty rate).

United States: <sup>14</sup> Local times are Eastern time. <sup>15</sup> Trading occurs among dealers for funds on deposit at Federal Reserve Banks (ie federal funds) as early as 06:30. <sup>16</sup> Payments over CHIPS become final on completion of settlement, which occurs throughout the day. Rules are designed to ensure that settlement takes place no later than 18:00.

Table 17  
**Features of selected securities settlement systems**  
 End of 2001

| Name of system                                      | Russia                       |                       | Belgium               |              |  | Canada   |                       |
|---|------------------------------|-----------------------|-----------------------|--------------|--|----------|-----------------------|
|   | MICEX settlement system      | RTS settlement system | NBB SSS               | Euronext-CIK | Euroclear                                | SSS/BBS  | DCS                   |
| Type of securities <sup>1</sup>                     | B,G,S,O                      | B, S, O               | G, O                  | E, O         | G, E, O                                  | S, B, O  | B, G, O               |
| Owner/manager <sup>2</sup>                          | CB, B, SE                    | B, SE, O              | CB                    | B            | B  | B, SE, O | B, SE, O              |
| Number of participants                              | 470                          | 158                   | 130                   | 104          | 1,750                                    | 107      | 82                    |
| Of which: direct participants                       | 470                          | 158                   | 130                   | 104          | 1,750                                    | nav      | 6                     |
| Settlement of cash leg <sup>3</sup>                 | N                            | G                     | G                     | G            | G/N                                      | N        | N                     |
| Securities settlement (delivery) <sup>3</sup>       | N                            | G                     | G                     | N            | G/N                                      | N        | G                     |
| Delivery lag (T+n)                                  | from T+0 to T+n <sup>a</sup> | T+0,T+n <sup>b</sup>  | T+2, T+3 <sup>5</sup> | T+3          | T+3, T+n (OTC)                           | T+3      | T+0, T+1 <sup>7</sup> |
| DVP mechanism                                       | DVP3                         | DVP1                  | DVP1                  | DVP1         | DVP1                                     | 3        | 2                     |
| Intraday finality                                   | Yes                          | Yes/No <sup>b</sup>   | Yes                   | Yes          | Yes                                      | No       | Yes                   |
| Central securities depository                       | NDC                          | DCC, SDC <sup>c</sup> | NBB                   | CIK          | Euroclear (Eurobonds)<br>+ Others        | CDS      | CDS                   |
| Cash settlement agent <sup>2</sup>                  | MICEX SH                     | RTS SC                | NBB                   | NBB          | Euroclear/NBB                            | B        | CB                    |
| Number of transactions (thousands)                  | 291                          | 61                    | 145                   | 356          | 161,000<br>(before netting) <sup>6</sup> | 31,400   | 1,780                 |
| Value of transactions (USD billions) <sup>4</sup>   | 35                           | 6                     | 2,483                 | 90           | 117,000 <sup>6</sup>                     | 1,520    | 18,570                |
| Ratio of transactions value to GDP (at annual rate) | 0.1                          | neg                   | 10.9                  | 0.4          | nap                                      | 2.2      | 26.8                  |

Note: For an explanation of the footnotes refer to the end of the table.

Table 17 (cont)  
**Features of selected securities settlement systems**  
 End of 2001

| Name of system                                      | France              |                  | Germany                             | Hong Kong SAR |                   | Italy                                |                   |                     |
|---|---------------------|------------------|-------------------------------------|---------------|-------------------|--------------------------------------|-------------------|---------------------|
|   | RGV                 | RELIT            | Clearstream Banking Frankfurt (CBF) | CCASS         | CMU               | LDT                                  | EXPRESS           | Monte Titoli        |
| Type of securities <sup>1</sup>                     | B, C, G, O          | B, C, G, O, S    | G, S, B, O                          | S, O          | G, O              | G, S, B, O                           | G, S, B, O        | G, S, B, O          |
| Owner/manager <sup>2</sup>                          | Euroclear France    | Euroclear France | SE                                  | SE            | CMA <sup>10</sup> | CB                                   | Monte Titoli      | Monte Titoli        |
| Number of participants                              | 658 <sup>8</sup>    |                  | 422                                 | 527           | 166 <sup>11</sup> | 281                                  | 255 <sup>13</sup> | 1,867               |
| <i>Of which: direct participants</i>                | 331 <sup>8</sup>    |                  | 422                                 | 527           | 166 <sup>11</sup> | 281                                  | 116 <sup>13</sup> | 653                 |
| Settlement of cash leg <sup>3</sup>                 | RTGS                | N                | RTGS, N                             | G/N           | G/N               | N                                    | G                 | nav                 |
| Securities settlement (delivery) <sup>3</sup>       | RTGS                | GS               | RTGS, G                             | G/N           | G/N               | N                                    | G                 | G                   |
| Delivery lag (T+n)                                  | from T to T+100     | from T to T+30   | T+0 to T+40                         | T+2           | T+0               | G, B: T+3 <sup>12</sup><br>S, O: T+5 | T                 | T                   |
| DVP mechanism                                       | DVP1                | DVP2             | DVP1<br>DVP2/DVP3 <sup>9</sup>      | Yes           | Yes               | DVP3                                 | DVP1              | No                  |
| Intraday finality                                   | Yes                 | No               | Yes                                 | No            | Yes               | No                                   | Yes               | nav                 |
| Central securities depository                       | Euroclear France    |                  | CBF                                 | CCASS         | CMU               | Monte Titoli                         | Monte Titoli      | Monte Titoli        |
| Cash settlement agent <sup>2</sup>                  | CB                  |                  | CB                                  | B             | CMA <sup>10</sup> | CB                                   | CB                | nav                 |
| Number of transactions (thousands)                  | 31,400 <sup>8</sup> |                  | 105,121                             | 29,361        | 43                | 42,350                               | 97                | 1,830 <sup>14</sup> |
| Value of transactions (USD billions) <sup>4</sup>   | 39,047 <sup>8</sup> |                  | nav                                 | 989           | 683               | 26,090                               | 1,009             | nav                 |
| Ratio of transactions value to GDP (at annual rate) | 29.8 <sup>8</sup>   |                  | nav                                 | 6.0           | 4.2               | 24.0                                 | 0.9               | nav                 |

Note: For an explanation of the footnotes refer to the end of the table.



Table 17 (cont)  
**Features of selected securities settlement systems**  
 End of 2001

| Name of system   | Japan  |                      | Netherlands | Singapore                |                   |           |
|--|--|----------------------|-------------|--------------------------|-------------------|-----------|
|  | BOJ-NET<br>JGB Services                                | JASDEC <sup>16</sup> | Necigef     | CDP                      | DCSS              | MEPS-SGS  |
| Type of securities <sup>1</sup>                        | G  | S                    | G, B, S     | E,O                      | O                 | G         |
| Owner/manager <sup>2</sup>                             | CB   | B, SE, O             | Euroclear   | SE                       | SE                | CB        |
| Number of participants                                 | 360 (Book-entry System) /<br>398 (Registration System) | 290                  | 56          | 85                       | 50                | 130       |
| <i>Of which: direct participants</i>                   | <i>360/398</i>   | <i>290</i>           | <i>56</i>   | <i>31</i>                | <i>50</i>         | <i>86</i> |
| Settlement of cash leg <sup>3</sup>                    | RTGS   | G/N                  | RTGS        | N                        | G                 | RTGS      |
| Securities settlement<br>(delivery) <sup>3</sup>       | RTGS   | G/N                  | RTGS        | G                        | G                 | G         |
| Delivery lag (T+n)                                     | T+0 to T+3 <sup>15</sup>                               | T+3                  | T+3         | T+3                      | T+n <sup>19</sup> | T+0       |
| DVP mechanism  | DVP1   | DVP3 <sup>17</sup>   | DVP1        | DVP2                     | DVP1              | DVP1      |
| Intraday finality                                      | Yes  | Yes                  | Yes         | Yes                      | Yes               | Yes       |
| Central securities<br>depository                       | CB   | JASDEC               | Necigef     | CDP                      | CDP               | CB        |
| Cash settlement agent <sup>2</sup>                     | CB   | CB, B                | CB, B       | B                        | CB                | CB        |
| Number of transactions<br>(thousands)                  | 2,838/23   | 36,257               | 3,073       | 93,066,000 <sup>18</sup> | 4.5               | 47        |
| Value of transactions<br>(USD billions) <sup>4</sup>   | 85,650/122   | nav                  | 858         | 74                       | 5                 | 262       |
| Ratio of transactions value<br>to GDP (at annual rate) | 20.5/neg   | nav                  | 2.2         | 0.9                      | neg               | 3.1       |

Note: For an explanation of the footnotes refer to the end of the table.

Table 17 (cont)  
**Features of selected securities settlement systems**  
 End of 2001

| Name of system                                      | Sweden           |                    | Switzerland          | United Kingdom |          | United States        |                   |
|---|------------------|--------------------|----------------------|----------------|----------|----------------------|-------------------|
|   | Stockholmsbörsen | VPC                | SECOM                | CREST          | CMO      | NBES <sup>20</sup>   | DTC               |
| Type of securities <sup>1</sup>                     | O                | G, E, O            | G, B, S, O           | G, B, S, O     | G, C, O  | G                    | S, O, B           |
| Owner/manager <sup>2</sup>                          | O                | B, O               | B, O                 | B, CB, SE, O   | B, CB, O | CB                   | B, SE, O          |
| Number of participants                              | 72               | 47                 | 433                  | 41,227         | 64       | 1,888 <sup>21</sup>  | 475               |
| of which: direct participants                       | 72               | 47                 | 433                  | nap            | nap      | 1,888 <sup>21</sup>  | 475               |
| Settlement of cash leg <sup>3</sup>                 | N                | G/N                | G                    | RTGS           | N        | RTGS                 | N                 |
| Securities settlement (delivery) <sup>3</sup>       | N                | G                  | G                    | RTGS           | RTGS     | RTGS                 | G                 |
| Delivery lag (T+n)                                  | T+3              | T+2, T+3           | T+3                  | T+3            | T        | T, T+1 <sup>22</sup> | T+3 <sup>23</sup> |
| DVP mechanism                                       | No               | DVP2/<br>DVP3/DVP1 | DVP1                 | DVP1           | DVP2     | DVP1                 | DVP2              |
| Intraday finality                                   | Yes              | Yes                | Yes                  | Yes            | Yes      | Yes                  | No                |
| Central securities depository                       | OM               | VPC                | SIS SegalInterSettle | nap            | CMO      | CB                   | DTC               |
| Cash settlement agent <sup>2</sup>                  | CB               | CB                 | CB                   | B, CB          | CB       | CB                   | DTC               |
| Number of transactions (thousands)                  | 66,575           | 7,740              | 13,400               | 73,400         | 200      | 15,000               | 350,000           |
| Value of transactions (USD billions) <sup>4</sup>   | 386              | 8,492              | 3,822                | 74,909         | 3,247    | 212,300              | 89,000            |
| Ratio of transactions value to GDP (at annual rate) | 1.8              | 40.5               | 15.5                 | 52.7           | 2.3      | 21.1                 | 8.8               |

Note: For an explanation of the footnotes refer to the end of the table.

Table 17 (cont)

**Features of selected securities settlement systems**

End of 2001

<sup>1</sup> B = bonds; C = CDs; G = government securities; S = shares; O = others. <sup>2</sup> B = bank(s); CB = central bank(s); SE = stock exchange; O = other. <sup>3</sup> G = gross; N = net; RTGS = real-time gross settlement. <sup>4</sup> Converted at yearly average exchange rates.

Russia: <sup>a</sup> For GKO-OFZ, T+0, for shares and bonds, T+0 to T+30; <sup>b</sup> Settlements on the stock market are carried out on T+0, settlements on the OTC market are carried out on T+n; <sup>c</sup> Settlement Depository Company is the CSD for deals with "Gazprom".

Belgium: <sup>5</sup> For Treasury bills, T+2; for bonds, T+3. <sup>6</sup> Including Euroclear France.

Canada: <sup>7</sup> Although all securities have the potential for T+0 delivery, money market mutual funds tend to be T+1.

France: <sup>8</sup> RGV and RELIT combined.

Germany: <sup>9</sup> Mixture of DVP 2 + DVP 3 (securities disposition on a gross basis without finality until final settlement of net cash position).

Hong Kong: <sup>10</sup> Central Monetary Authority. <sup>11</sup> Recognised dealer for Exchange Fund Bills and Notes.

Italy: <sup>12</sup> For government bills, T+2. <sup>13</sup> Number of accounts. <sup>14</sup> Free of payment (FOP) transfers not including multilateral net balances from LdT.

Japan: <sup>15</sup> T+3 is the norm for outright transactions. Most repo transactions are settled on a T+2 to T+3 basis. Settlement for the BOJ's open market operations takes place on a T+0 to T+3 basis.

<sup>16</sup> End-March 2002. <sup>17</sup> For stocks traded on the Tokyo Stock Exchange and the Osaka Securities Exchange.

Singapore: <sup>18</sup> Number of securities cleared. <sup>19</sup> By mutual agreement between counterparties.

United States: <sup>20</sup> NBES is the Federal Reserve's National Book-Entry System. <sup>21</sup> Number of depository institutions that used the Federal Reserve's National Book-Entry System in 2001. Other participants not included here, are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations. <sup>22</sup> Securities are settled on a same-day basis within the Federal Reserve's National Book-Entry System. The market convention for the settlement of repurchase agreements is T+0. The convention for government securities is T+1. <sup>23</sup> The market convention for the settlement of corporate equities is T+3.