



EUROPEAN CENTRAL BANK

EUROPEAN CENTRAL BANK

August 2002

Payment and securities settlement systems in accession countries

ECB EZB EKT BCE EKP

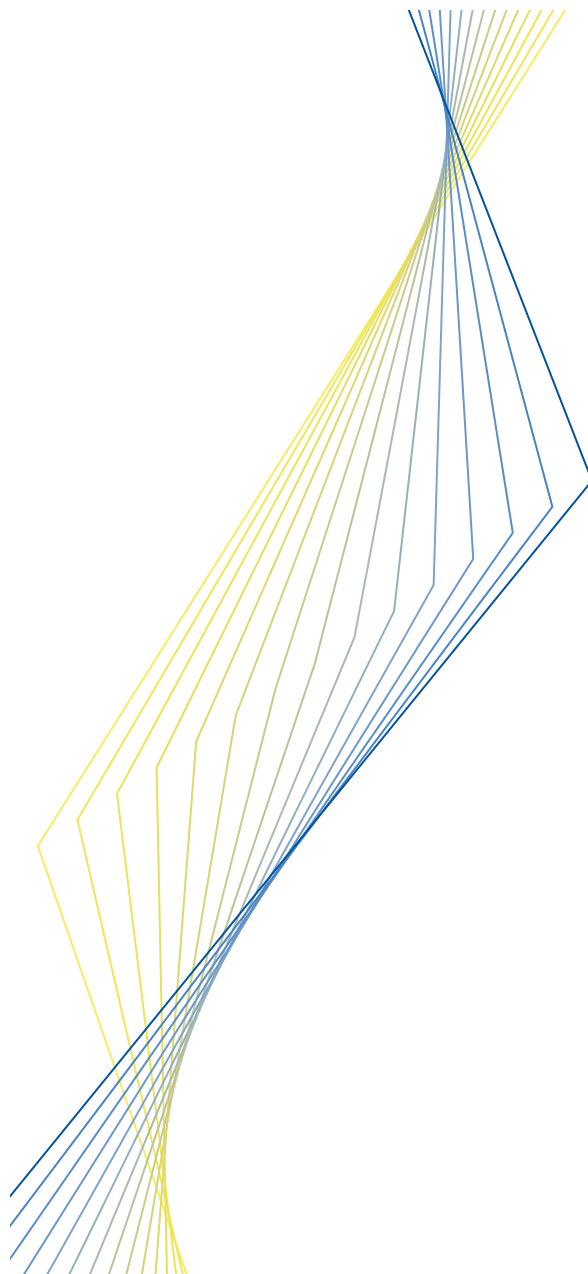
BLUE BOOK

**Payment and securities
settlement systems
in accession countries**

August 2002



EUROPEAN CENTRAL BANK



BLUE BOOK

**Payment and securities
settlement systems
in accession countries**

August 2002

© European Central Bank, 2002

Address	Kaiserstrasse 29 D-60311 Frankfurt am Main Germany
Postal address	Postfach 16 03 19 D-60066 Frankfurt am Main Germany
Telephone	+49 69 1344 0
Internet	http://www.ecb.int
Fax	+49 69 1344 6000
Telex	411 144 ecb d

*The country chapters in this Blue Book are published under the responsibility of the respective national central banks.
All rights reserved.*

Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

ISBN 92-9181-312-5

Contents

Foreword	5
Introduction	7
General terms and acronyms	9
Chapters	
1 Bulgaria	11
2 Cyprus	41
3 Czech Republic	65
4 Estonia	91
5 Hungary	121
6 Latvia	155
7 Lithuania	183
8 Malta	205
9 Poland	225
10 Romania	255
11 Slovakia	287
12 Slovenia	317
Annexes	
1 Comparative tables	349
2 Country tables	381
3 Methodology for the statistical data	509
4 Glossary	521
5 Co-ordination Group members	553

In general, the accession country Blue Book describes systems as at November 2001, although more recent information has been used for some systems. Data used in this publication are as at end-2001 unless otherwise indicated.

Conventions used in the statistical tables:

nav data not available
nap not applicable
neg negligible
0 exactly zero or none

Country tables (1996-2001):

Figures are presented in the respective national currency.

Comparative tables (1996-2001, unless otherwise indicated):

Figures have been converted into euro for all countries using the exchange rate shown in Table 1 of the respective country table.

Foreword

There are currently 12 countries conducting accession negotiations for membership of the European Union (EU). These accession countries are Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. Turkey is also an official candidate country for EU membership, but accession negotiations have not yet started.

This report, entitled “Payment and securities settlement systems in accession countries”, is the second edition of what has come to be known as the “accession country Blue Book”. It comprises a description of payment and settlement systems in the 12 accession countries, including the related statistical data. The first report of this kind, which was entitled “Payment and securities settlement systems in countries that have applied for membership of the European Union”, was published in August 1999. For EU countries, such information is contained in the report entitled “Payment and securities settlement systems in the European Union”, also known as the “EU Blue Book”. The EU Blue Book is a descriptive guide to the payment and settlement systems in EU Member States. The third edition was published by the European Central Bank in June 2001.

The importance of payment and securities settlement systems in modern economies has been growing considerably over the past decades. Central banks not only face the task of steering the monetary conditions in the economy, but also have a direct interest in the prudent design and operation of the payment and settlement systems processing their currency. Payment systems play a pivotal role in a modern economy, as most economic activity relies on them. As the settlement infrastructure for securities markets is also crucial to the functioning of financial markets, payment and securities clearing and settlement systems need to be safe and efficient.

It is essential that central banks have comprehensive information available to them to support them in their endeavours to promote the soundness and efficiency of payment and securities clearing and settlement systems.

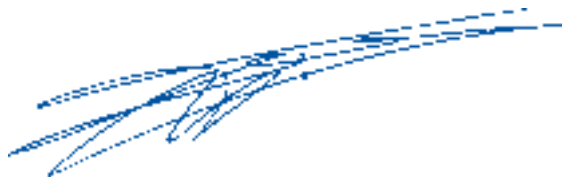
The variety and structure of payment and securities clearing and settlement systems differ from country to country, both for historical reasons and on account of differences in the legal, regulatory and institutional environment. Furthermore, payment and settlement systems are not static in nature. They are dynamic systems which have evolved over time and which will continue to do so. In view of EU accession, a large number of reforms are taking place in the countries concerned. It is one of the priorities of accession countries to develop modern, robust and efficient market infrastructures which serve the needs of their economies, facilitate the development of safe and efficient financial markets and allow a smooth integration into the Single Market. As payment and securities clearing and settlement systems are part of the market infrastructure, many projects in accession countries are related to them. For example, real-time gross settlement (RTGS) systems are being introduced, and progress has been made towards implementing systems and procedures allowing the introduction of delivery versus payment (DVP) mechanisms and the effective management of collateral. The aim is twofold: first, to ensure that accession countries’ payment and securities clearing and settlement systems infrastructure is sufficiently robust to avoid systemic risks and possible contagion effects across the EU in the event of problems. Second, to ensure that accession countries’ domestic infrastructures are efficient enough to allow local market participants to compete with other EU market participants. Most infrastructures and procedures – including the underlying regulatory framework – have been

or are being brought into line with EU requirements, a process which often involves substantial investment.

The information in this accession country Blue Book shows the extensive restructuring work that has been undertaken in payment and settlement systems in accession countries in recent years. It also provides information useful in assessing whether further preparatory work needs to be undertaken in these countries in order to ensure their smooth entry to the EU and the smooth functioning of their payment and settlement systems in an EU environment.

This publication has been produced in collaboration with the central banks of the accession countries and the national central banks of the EU. I should like to thank all of the central banks involved, in particular those of the accession countries, for their efforts. Their assistance in the preparation of this publication has been invaluable.

Frankfurt am Main, 27 August 2002



Willem F. Duisenberg
President

Introduction

The aim of the accession country Blue Book is to provide a comprehensive description of the main payment and securities settlement systems operating in the 12 countries conducting negotiations for membership of the European Union (EU).¹ It now includes Malta, which was not covered in the first edition of the accession country Blue Book published by the European Central Bank in August 1999, as the preparations for its publication were already well advanced by the time accession negotiations with Malta began. The range of country-specific schemes covered is not necessarily exhaustive and the selection is not intended to indicate their relative importance.

For historical reasons and on account of differences in the legal, regulatory and institutional framework, the variety and structure of payment and securities settlement systems differs from country to country. Thus, each chapter deals with individual domestic features and includes a list of country-specific abbreviations. However, in order to allow direct comparison of the various payment and securities settlement systems (SSSs) and make it possible to compare these systems with those existing in EU countries – most recently described in the third edition of the EU Blue Book published by the European Central Bank in June 2001 – all 12 country chapters follow a commonly agreed outline.

Country chapters are divided into four sections which, compared with the first edition of the accession country Blue Book, have expanded on particular issues. The first section provides an overview of the institutional aspects which have an impact on payment and securities settlement systems and briefly

describes the major parties involved. It now also contains a brief description of the role of the respective accession country central bank in the field of oversight, reflecting the growing importance that central banks attach to the safety and efficiency of payment and securities settlement systems. The second section deals with the payment media used by non-banks and with recent developments in the area of retail payments, such as card payments and the use of e-money. The third section focuses on interbank exchange and settlement systems, including RTGS systems, e-money arrangements and card-based schemes. The aim is to reflect the impact of business and technological developments on payment systems. The fourth section describes the various securities trading, clearing and settlement systems in accession countries. It follows a security from when it is traded to its final settlement.

The first annex contains comparative tables, while the second provides a set of statistical data for each country. Statistical data are presented as time series in order to facilitate the analysis of recent developments. Their presentation is identical to that used in the EU Blue Book. The third annex describes the methodology used for the statistical data. Annex four contains a glossary defining the most relevant concepts used in the area of payment and securities settlement systems. Finally, the fifth annex provides a list of the members of the Co-ordination Group responsible for the preparatory work on the accession country Blue Book.

¹ The twelve accession countries are: Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. Turkey is also an official candidate for EU membership, but negotiations for its accession have not yet started. Thus, it is not covered in this publication.

General terms and acronyms

Countries

BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
EE	Estonia
HU	Hungary
LV	Latvia
LT	Lithuania
MT	Malta
PL	Poland
RO	Romania
SK	Slovakia
SI	Slovenia

Currencies

BGN	Bulgarian lev
CYP	Cyprus pound
CZK	Czech koruna
EEK	Estonian kroon
HUF	Hungarian forint
LVL	Latvian lats
LTL	Lithuanian litas
MTL	Maltese lira
PLN	Polish zloty
ROL	Romanian leu
SKK	Slovak koruna
SIT	Slovenian tolar
€ or EUR	euro
GBP	pound sterling
JPY	Japanese yen
USD	US dollar

Others

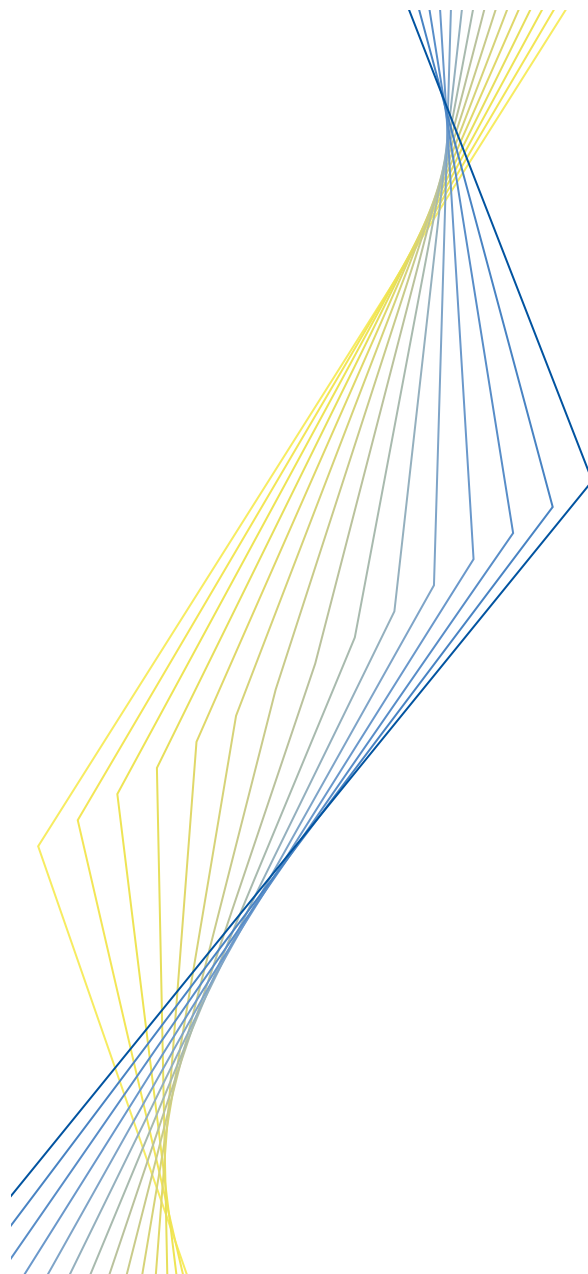
ACH	automated clearing house
ATM	automated teller machine
BIS	Bank for International Settlements
CAD	Capital Adequacy Directive
CBF	Clearstream Banking Frankfurt
CBL	Clearstream Banking Luxembourg
C.E.T.	Central European Time
CCBM	correspondent central banking model

CCP	central counterparty
CD	certificate of deposit
CEPS	common electronic purse specifications
CLFI	Consolidated Law on Financial Intermediation
CLS	continuous linked settlement
CP	commercial paper
CPSS	Committee on Payment and Settlement Systems
CRD	cash ratio deposit
CSD	central securities depository
DNS	designated-time net settlement
DVD	delivery versus delivery
DVP	delivery versus payment
EACH	European Association of Central Counterparty Clearing Houses
EBA	Euro Banking Association
EBP	electronic bill presentment
EBPP	electronic bill presentment and payment
ECB	European Central Bank
ECBS	European Committee for Banking Standards
ECN	electronic communications network
ECSDA	European Central Securities Depository Association
edc	European debit card
EDI	electronic data interchange
EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport
EDP	electronic data processing
EEA	European Economic Area
EFTPOS	electronic funds transfer at point of sale
ELMI	electronic money institution
EMI	European Monetary Institute
EMU	Economic and Monetary Union
EMV	standard for integrated circuit cards established by Europay, MasterCard and Visa
EPM	ECB payment mechanism
EPSS	European Payment Systems Services SA
ESCB	European System of Central Banks

EU	European Union	IST	Information Society Technologies programme
Eurex	European Exchange (common futures market of the German and Swiss stock exchanges)	MoU	Memorandum of Understanding
Euro 1	EU-wide payment system of the EBA	MT100, MT102, MT103	SWIFT message formats for transferring payments
Euro-giro	European network for postal giro systems	NBRLs	net bilateral receiver limits
EuroMTS	electronic bond trading platform for European benchmark bonds	NCB	national central bank
Euronext	stock exchange created by the merger between the Amsterdam, Brussels, Paris and Lisbon stock exchanges	NOREX	common Nordic securities market
FAFO	first available first out	NSLs	net sender limits
FESCO	Forum of European Securities Commissions	OTC	over the counter
FESE	Federation of European Securities Exchanges	PACE	Purse Application for Cross-border Use in euro
FIFO	first in first out	PIN	personal identification number
FIN	store and forward messaging service for financial institutions on the SWIFT network	PKI	public key infrastructure
FIN Copy	function of the SWIFT network whereby instructions may be copied and optionally authorised by a third party before being released to the beneficiary	POS	point of sale
FOP	free of payment	repo	repurchase agreement
FRA	forward rate agreement	RTGS	real-time gross settlement
GNP	gross national product	SWIFT	Society for Worldwide Interbank Financial Telecommunications
GUI	graphical user interface	SWIFT-Net FIN	store and forward messaging service for financial institutions on the new SWIFTNet platform
IASC	International Accounting Standards Committee	SET	secure electronic transaction
IBAN	International Bank Account Number	SFD	Settlement Finality Directive
ICSD	international central securities depository	SMEs	small and medium-sized enterprises
IFTS	Interbank Funds Transfer System	SMS	Short Message Standard
IGFs	Investment Guarantee Funds	SOS	Single Obligation Structure
IOSCO	International Organization of Securities Commissions	SSS	securities settlement system
IPO	initial public offering	STP	straight-through processing
ISD	Investment Services Directive	TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
ISFs	Investment Services Firms	TfT	Trade-for-Trade
ISIN	International Securities Identification Number	WAP	Wireless Application Protocol
ISMA	International Securities Markets Association		



EUROPEAN CENTRAL BANK



Bulgaria

August 2002

Bulgaria

Contents

List of abbreviations	14
Introduction	15
I Institutional aspects	15
1.1 The general institutional framework	15
1.2 The role of the Bulgarian National Bank	16
1.3 The role of other private and public sector bodies	19
2 Payment media used by non-banks	21
2.1 Cash payments	21
2.2 Non-cash payments	22
2.3 Recent developments	23
3 Interbank exchange and settlement systems	24
3.1 General overview	24
3.2 The real-time gross settlement system	24
3.3 The designated-time gross settlement system: BISERA	24
3.4 The retail payment system	28
3.5 Future developments	29
4 Securities settlement systems	30
4.1 Trading	30
4.2 Clearing	34
4.3 Settlement	34
4.4 The use of the securities infrastructure by the Bulgarian National Bank	39

List of abbreviations

ACB	Association of Commercial Banks
BISERA	Banking Integrated System for Electronic tRAnsfers, the designated-time gross settlement system
BORICA	Bank Organisation for Payments Initiated by Cards
BNSC	Bulgarian National Securities Commission
BSE-Sofia	Bulgarian Stock Exchange – Sofia
BUS	Banking Unified Standard
CDAD	Central Depository AD
CMP	Centre for Mass Privatisation
DIF	Deposit Insurance Fund
GSD	Government Securities Depository
LPOS	Law on the public offering of securities

Introduction

According to the Law on the Bulgarian National Bank (1997, last amended 2001), the Bulgarian National Bank is responsible for the organisation, maintenance and development of the payment systems in the country.

A number of significant steps have been made towards improving the Bulgarian payment system in recent years. The Banking Integrated System for Electronic tRAnsfers, BISERA (the national settlement system of Bulgaria), was introduced in 1992. The national card operator, namely the Bank Organisation for Payments Initiated by Cards (BORICA), was established in 1995 to service card payments on the territory of the Republic of Bulgaria. Two SSSs were established: the Government Securities Depository (GSD) in 1992 and the Central Depository AD (CDAD) in 1996. It is expected that the RTGS System will be launched in September 2002. It will provide final settlement of all payments in the country. The payments netted beforehand in other systems will be settled in the RGTS system at

designated times during the operating day. A project for the improvement of the BISERA system is under way and will be completed in the second half of 2002.

With the adoption of the new Law on the Bulgarian National Bank (1997), a currency board arrangement was introduced on 1 July 1997. In accordance with the rules of this system, the aggregate amount of the Bulgarian National Bank's monetary liabilities (including all banknotes and coins in circulation) may not exceed the equivalent in Bulgarian leva of the gross foreign exchange reserves. The Bulgarian lev is pegged to the euro (BGN 1.95583 equals €1).

Cash payments are still widely used in the country. However, the share of non-cash payments is constantly increasing. The credit transfer is the predominant non-cash payment instrument both in terms of value and volume. The volume of card payments has been growing considerably.

I Institutional aspects

I.1 The general institutional framework

There are no specific laws regulating the payment system in Bulgaria. Specific provisions governing the system can be found in several laws and regulations.

Under the Law on the Bulgarian National Bank (1997), the Bank is to assist in the establishment and running of efficient payment mechanisms. The Law also provides that the Bulgarian National Bank may organise and operate payment systems and clearing offices to facilitate non-cash payments. In accordance with this Law, the Bulgarian National Bank issued Regulation No. 3 on payments (see Section I.3.1) and Regulation No. 16 on payments initiated by bank cards (see Section 2.2.4).

The commercial banks' operations are defined and regulated by the Law on banks (1997). In accordance with this Law, a bank is a joint stock company which accepts money as deposits from the public and uses these funds to make loans and investments for its own account and at its own risk. The Law also provides that banks may handle non-cash payments and clear cheques from other persons. In addition, it provides for the establishment of new banks and the penalisation of banks. The same Law regulates the operation of foreign credit institutions. However, the latter are not obliged to comply with all the requirements of Regulation No. 8 on the capital adequacy of banks. Bulgarian banks apply the Uniform Rules established by the International Chamber of Commerce in Paris to cross-border credit transfers, and

internationally acknowledged practices to issues which are not covered by Bulgarian legislation.

The Law on bank deposit guarantees (1998) provides for the protection of bank customers. The Law protects the deposits of all customers except those of financial institutions, the Government, Government agencies, and municipalities. Deposits associated with money laundering are also excluded from the guarantee (see Section 1.4.2).

Bankruptcy procedures are in general laid down in the Law on commerce (last amended in 2000). However, some specific provisions are included in the Law on banks (last amended in 2001), in the chapter entitled "Bank Insolvency". According to the Law on banks, the Bulgarian National Bank is the only institution which may request a court to initiate bankruptcy proceedings. In the event of a bank becoming insolvent, the Bulgarian National Bank will revoke the bank's licence and request the court to initiate bankruptcy proceedings. If the Bank's request meets the legal requirements, the court is obliged to take a final decision within ten days. On the date of insolvency, all unsecured credits granted by the bank become payable. No zero-hour clause is applied to payments. In principle, the Bulgarian National Bank decides whether the insolvent bank is to be excluded from the settlement system and, if so, when. (In practice banks are immediately excluded from the system once their banking licence is revoked.)

The principal regulation governing the securities markets is the Law on the public offering of securities (LPOS), adopted by the Bulgarian Parliament on 15 December 1999 and published in the State Gazette on 30 December 1999. The main objective of the Law is to regulate the public offering of and trading in securities, the operation of regulated securities markets, the CDAD, investment intermediaries, investment companies, management companies, and the

conditions for carrying out such activities. The Law is aimed at ensuring the protection of investors and creating prerequisites for the development of a transparent and efficient capital market in the country. The Law on the public offering of securities defines concepts such as securities, the Bulgarian National Securities Commission (BNSC), regulated markets, transactions in securities, investment intermediaries, the IPO of shares, the CDAD, investment companies and management companies. The government securities market operates under Regulation No. 5 of the Ministry of Finance and the Bulgarian National Bank in accordance with the Terms and Conditions for Issuance, Acquisition and Redemption of Book-entry Government Securities.

1.2 The role of the Bulgarian National Bank

The Bulgarian National Bank, established in 1879, is the central bank of Bulgaria. Its main task is to contribute to the maintenance of the stability of the national currency through the implementation of monetary and credit policies, and to contribute to the establishment and functioning of efficient payment mechanisms. The central bank reports on its activities to the Bulgarian parliament, and, with regard to the formulation of the general outlines of its monetary and credit policy, the Bulgarian National Bank and the government inform each other of their intentions and actions. With the new Law on the Bulgarian National Bank, a currency board arrangement was implemented on 1 July 1997. In accordance with the rules of this system, the aggregate amount of monetary liabilities of the Bulgarian National Bank (including all banknotes and coins in circulation) may not exceed the equivalent in Bulgarian leva of the gross foreign exchange reserves (BGN 7,352.7 million (€3,759.4 million) as at March 2002). On demand, the Bulgarian National Bank is obliged to sell and purchase any amount of euro against leva within Bulgaria.

1.2.1 Payment systems oversight

Statutory responsibilities

In the field of payment systems, the Law on the Bulgarian National Bank provides that the Bulgarian National Bank may organise and operate payment systems and clearing offices to facilitate non-cash payments, as well as issue regulations regarding the establishment and operation of such systems and offices. To this end, the Bulgarian National Bank is directly involved in the operation of BISERA, the interbank settlement system of Bulgaria. The Bank is the major shareholder in Bankservice (the operator of BISERA) and the sole owner of BORICA, the national card payments operator.

In accordance with the Law on the Bulgarian National Bank, the central bank also performs the function of banker to the Government, providing cash management services for the state budget and the government securities market. The Government pays no fees for the services provided.

Furthermore, the Bulgarian National Bank has the exclusive right to issue banknotes and coins in the country.

Establishment of common rules

The Bulgarian National Bank has the right to issue payments regulations. Currently, these are Regulation No. 3 on payments, which determines the forms, procedures and terms for effecting payments in Bulgaria, and Regulation No. 16 on payments initiated by bank cards. In close co-operation with Bankservice and representatives of the commercial banks, the Bulgarian National Bank also defines what are known as the Banking Unified Standards (BUSs). These standards contain the rules for the handling of non-cash payments through BISERA.

Supervision and audit

One of the major tasks of the Bulgarian National Bank is to regulate and supervise banking activities in order to ensure the stability of the banking system and to protect the interests of depositors. The Bank grants banking licences, conducts on-site inspections and collects data from banks. Non-bank financial institutions, such as financial brokerage houses and bureaux de change, are also subject to licensing and supervision by the Bulgarian National Bank.

1.2.2 Activities in the field of securities clearing and settlement systems

Statutory responsibilities

In the field of securities markets, the Law on the Bulgarian National Bank entrusts the Bulgarian National Bank with the function of manager of the GSD. In this capacity, the Bank provides the primary dealers of government securities with a system aimed at keeping and settling these securities. The GSD is a computerised system for the registration, safekeeping, management and servicing of book-entry government securities. It is administered by the Fiscal Services Department of the Bulgarian National Bank. The Bulgarian National Bank also provides the market with daily information on the value and volume of transactions handled by the GSD. For further details, see Section 4.3.1.

Establishment of common rules

The Bulgarian National Bank and the Ministry of Finance have issued Regulation No. 5. This Regulation establishes the rules to be followed by the participants in the primary and secondary government securities markets. Regulation No. 19 of the Ministry of Finance and the Bulgarian National Bank contains the basic rules for the operation of the CDAD (see Section 4.3.2).

Supervision and audit

The Bulgarian National Bank also supervises the activities of commercial banks in the fields of trading and settlement of securities. The Bulgarian National Bank administers the GSD and monitors the activities of the CDAD. However, the Bank has no supervisory authority over the Bulgarian Stock Exchange. That function is performed by the BNSC (see Section 1.3.3).

1.2.3 The operational role of the Bulgarian National Bank

The implementation of monetary policy

Until June 1997 the Bulgarian National Bank implemented its monetary policy through open market operations (repo and reverse repo operations), outright sales and purchases of government securities, lombard loans, the discount window and the minimum reserve requirement. After the introduction of the currency board arrangement on 1 July 1997, the number of monetary policy instruments used by the Bulgarian National Bank was reduced. Now, only the minimum reserve requirement is applicable. At present, the non-interest-bearing reserve requirement amounts to 8% of the banks' deposit base (interbank deposits and credits are excluded). Banks may use the funds in their current accounts on any particular day without limitation, since the minimum reserve requirement has to be fulfilled on an average monthly basis. However, overdrafts on the current accounts are not allowed. The Bulgarian National Bank also has the function of lender of last resort (see below).

Provision of credit facilities

Under the currency board arrangement, the ability of the Bulgarian National Bank to refinance banks is strictly limited to exceptional circumstances only. No overdraft and securities lending facilities are provided.

In accordance with the Bulgarian National Bank's Regulation No. 6 on extending collateralised lev loans to banks, the Bank may only extend credits denominated in redenominated Bulgarian leva (BGN) with a maturity of up to three months to a solvent bank in the event of a liquidity risk that may affect the stability of the banking system. These credits have to be fully collateralised by government securities, gold, foreign currency or similar highly liquid assets. The interest rates applied to these credits are higher than the market rates. In normal circumstances, however, banks borrow funds on the interbank money market.

The provision of settlement accounts

All banks are obliged to maintain current accounts with the Bulgarian National Bank. These accounts are linked to both BISERA and the GSD. They are used for the transfer of funds associated with interbank payments, government securities transactions, the holding of minimum reserves, foreign exchange transactions, etc. The Bulgarian National Bank also offers current and deposit accounts to fiscal and other government authorities, and to other public sector bodies. At present all current accounts are non-interest-bearing.

Under the Law on the Bulgarian National Bank, the central bank may open accounts for investment intermediaries for the purpose of effecting transactions in securities. Each primary dealer holds a custody account with the GSD. The account is divided into sub-accounts to distinguish between the different issues of government securities. For more details concerning primary dealers, see Section 4.3.1.

There are no other specific responsibilities of the central bank with regard to SSSs.

Pricing policies

The Bulgarian National Bank does not charge banks for opening and maintaining current accounts, nor for the provision of payment

services. Regarding SSSs, see Sections 4.3.1.8 and 4.3.2.9.

1.2.4 Co-operation with other private and public sector bodies

The National Committee on Payment systems

The Committee was established in 1999 by a decision of the Managing Board of the Bulgarian National Bank, but is separate from the Bank. The members of the Committee are top managers of commercial banks and other bodies directly participating in the payment process – system operators, depositories, intermediaries, etc. The Committee's main functions are to formulate the development strategy of the national payment system, to co-ordinate the activities of the different bodies connected with the payment system, to propose amendments to the legal basis, to create unified standards for system operators and depositories and to guarantee the integration of the national payment system with international payment systems.

1.3 The role of other private and public sector bodies

1.3.1 The Association of Commercial Banks

The Association of Commercial Banks (ACB) is an independent representative organisation established in 1992 by the State Savings Bank and the commercial banks operating in Bulgaria. The ACB currently has 27 regular members and four associate members. The ACB assists its members in their banking activities and protects their rights. To this end it:

- co-ordinates the positions of banks in their activities;
- represents and protects the rights of banks in their relations with government authorities, public organisations, foreign

and international organisations and other legal entities and physical persons;

- promotes fair competition between banks;
- represents banks in the implementation of new or the amendment of existing banking legislation;
- provides training to improve the skills and expertise of bank employees; and
- contributes to improving banking technologies.

1.3.2 The Deposit Insurance Fund

The Deposit Insurance Fund (DIF) is a legal entity established under the Law on bank deposit guarantees. It covers deposits up to a certain specified amount in the event of a bank becoming insolvent. The Fund determines and collects an entry fee and annual premiums from the banks. The entry fee is equal to 1% of the registered capital of the bank (but is no less than BGN 100,000 or €51,129). The annual premium is fixed as 0.5% of the total daily average amount of the previous year's deposit base. The Fund's resources are invested in government securities, short-term deposits with commercial banks which are primary dealers of government securities, and deposits with the Bulgarian National Bank.

The DIF guarantees the full repayment of funds deposited with a bank, regardless of the number of accounts, up to a total of BGN 10,000 (€5,113).

Participation in the deposit insurance scheme is mandatory. Branches of foreign banks located in Bulgaria also participate in the scheme, provided that either the home country of the head office of such a bank has no deposit guarantee scheme or the scheme provides for a smaller guaranteed amount, or else is inapplicable to the bank's branches abroad. The guarantee does not apply to

deposits of financial institutions, the Government and its agencies, municipalities and persons connected with the respective bank (e.g. holders of more than 5% of the bank's share capital, members of the bank's management or supervisory board, members of the bank's internal audit bodies, etc.). Deposits associated with money laundering transactions or actions are also excluded from the guarantee.

1.3.3 The Bulgarian National Securities Commission

The BNSC is a government institution which ensures the protection of investors and encourages the development of the securities market. It regulates and controls the issue and trading of securities (excluding government securities), the regulated securities markets, i.e. the official market operated exclusively by the stock exchange and the unofficial market,¹ investment intermediaries, management companies and investment companies. The BNSC grants licences to and revokes licences from the above-mentioned institutions (see Section 4.2.3). The Commission also maintains registers of stock exchanges, investment intermediaries and issuers (including public companies) as well as of investment companies offering securities for public sale, in addition to supervising the CDAD's activity.

1.3.4 Centre for Mass Privatisation

The Centre for Mass Privatisation (CMP) is a government institution, established in order to oversee the process of privatisation through investment vouchers. The CMP issues vouchers and controls their transfer and the process of using them to make payments. It also organises centralised public auctions for shares in state-owned enterprises.

The first wave of mass privatisation started at the end of 1996. Many people preferred to participate indirectly through specialised

privatisation funds and became their shareholders. Others participated directly in the auctions. The second wave started at the beginning of 1999. Participants can pay with both investment and other types of voucher, as well as in cash. Privatisation funds were transformed into investment companies.

1.3.5 The Central Depository AD

The CDAD was established as a joint stock company in 1996. The CDAD's shareholders are the Ministry of Finance, the Bulgarian National Bank, commercial banks, the BSE-Sofia, Bankservice and stockbrokers. Under current legislation the role of the CDAD is to:

- maintain a reliable system for the book-entry registration of dematerialised shares;
- maintain registers of the securities traded;
- maintain shareholders' registers of the companies traded;
- immobilise share certificates which are subject to public trading; and
- maintain the register of pledged securities.

1.3.6 Bulgarian Stock Exchange – Sofia

The BSE-Sofia is the only stock exchange and regulated securities market operating in Bulgaria. Its shareholders are the Government, commercial banks and other financial intermediaries. For more details regarding the operation of the BSE-Sofia, see Section 4.1.

¹ At the end of 2001 the Bulgarian Stock Exchange – Sofia (BSE-SOFIA) was granted a licence to operate this market as well.

1.3.7 Financial intermediaries that provide payment services

Banks

Commercial banks in Bulgaria are universal banks, i.e. they carry out the whole range of banking activities. The legislation does not differentiate between commercial, savings, mortgage or co-operative banks. The State Savings Bank had the status of a savings bank until April 1998 but was transformed into a commercial bank as a result of amendments to the legislation. Any bank has the right to offer all types of banking service, including different types of payment service, deposits, credits, foreign exchange and securities transactions, etc. Each bank determines the fees and commissions for its customers according to its own policy, without any legal constraints. There are also no restrictions with regard to the number and location of branches of

a bank. Currently, the number of banks operating in Bulgaria is 36.

The postal system

The Bulgarian Post Office branches do not have the status of a credit institution, but they participate in the payment system in three different ways. First, under agreements with the Post Office branches, the Bulgarian Post Bank and the State Savings Bank provide payment services and deposit accounts via the Post Office branches. Second, the postal system is involved in the payment of pensions. Third, domestic cash payments are made within the postal system. Every ten days a netting of cash payments takes place between the Post Office branches, and the funds due are transferred through current accounts with the commercial banks or through BISERA.

2 Payment media used by non-banks

2.1 Cash payments

The monetary unit of the Republic of Bulgaria is the lev. After the redenomination effected on 5 July 1999 (when 1 new lev (BGN) replaced 1,000 old levs (BGL)), the traditional subdivision was reinstated: 1 new lev is divided into 100 stotinkas. The banknotes used to be produced abroad, but in 1998 the Bulgarian National Bank started operating its own printing works. The coins are minted by the Bulgarian Mint, a company wholly owned by the Bank. The Bulgarian National Bank distributes and collects banknotes and coins through its head office and its branches across the country.

At the end of 2001 the banknotes in circulation in Bulgaria had the following denominations: BGN 1, BGN 2, BGN 5, BGN 10, BGN 20 and BGN 50. The following stotinka coins were in circulation: 1 (BGN 0.01), 2 (BGN 0.02), 5 (BGN 0.05), 10 (BGN 0.10), 20 (BGN 0.20) and 50 (BGN 0.50). Commemorative coins are also minted. In terms of value, the BGN 50

banknotes account for 44% of total banknotes in circulation. In terms of volume, the BGN 10 banknotes have the largest share, i.e. 21.49%. In terms of value, banknotes account for 99.27% of money issued.

Cash payments are very widely used in Bulgaria. There are no reliable statistical data on the volume and value of cash payments. However, at the end of November 2001, banknotes and coins in circulation accounted for 67.87% of the M1 monetary aggregate and 9.87% of the GDP projected for 2001. Most salaries are still paid in cash despite the fact that the number of employers paying salaries to their employees through accounts connected with a debit card has increased in recent years. Traditionally, and because of the relative scarcity of POS terminals, almost all retail transactions have been – and continue to be – made in cash. For these reasons, debit cards are generally used to withdraw cash at ATMs rather than to make payments.

2.2 Non-cash payments

In order to make a non-cash payment, the payer must hold a current account or a demand deposit account with a bank. Whereas in some banks it is possible for the customer to initiate a non-cash payment from a current or demand deposit account, in other banks payments can only be made from current accounts. Any person may hold accounts in national or foreign currency without limitation. Most banks offer accounts in Bulgarian leva, US dollars, euro and Swiss francs.

2.2.1 Credit transfers

This is the most widely used form of payment between entities in the corporate and public sectors. It is also used for the payment of salaries, taxes, duties, subscription fees, etc. In 2000, credit transfers accounted for over 97% of the value and over 93% of the volume of all payments processed through BISERA. The average value of a credit transfer was BGN 2,816 (€1,439.56). According to Regulation No. 3, a credit transfer has to be effected within three working days, one for processing at the payer's bank, one for settlement and one for processing at the payee's bank. However, in practice a credit transfer usually takes only two working days.

Only a bank licensed to operate abroad is entitled to make cross-border credit transfers. For these services Bulgarian banks use correspondent accounts with foreign banks and the payments are executed through SWIFT. These transactions normally take up to three working days, but for smaller banks with a limited number of bank correspondents abroad it may take longer.

2.2.2 Cheques

Cheques have never been an extensively used payment instrument in Bulgaria. They account for a negligible percentage of all payments, the

main reason being the risk associated with them. They are used only between reliable counterparties.

2.2.3 Direct debits

This payment instrument is used by customers for payments to the providers of electricity, water, telephone and heating services. The payers give permission to such companies to debit their current accounts with the banks. This practice has become more widespread in recent years. Direct debits are also used in the field of securities settlement (see Section 4.3).

2.2.4 Payment cards

Debit cards

The use of this instrument is increasing from year to year. Most widely used are (debit) cards issued by domestic banks. By the end of 1997 eight banks were issuing bankcards. By the end of 2001 the number of issuers reached 24. All are members of the national card payment system BORICA. Cardholders' accounts are debited on a per-transaction basis (both for a cash withdrawal and for a purchase). Some banks offer an overdraft facility to selected customers.

Since 1996 several Bulgarian banks have become members of Visa International and MasterCard and Europay International. In addition to acquiring transactions from merchants, some banks have started to issue international debit cards: Visa Business, Visa Electron and Maestro.

Credit cards and travel, retail and entertainment cards

Credit cards are not very widely used in Bulgaria. Several Bulgarian banks issue credit cards under agreements with the international card organisations Visa International and Europay International. The international credit cards

currently issued by Bulgarian banks are: Visa Classic, Visa Business, Visa Gold and Eurocard/MasterCard (ordinary, business and gold). Several banks have an agreement with American Express for the distribution of Amex cards (classic, business and gold card). Diners Club credit cards are issued by the Diners Bulgaria Company. Travel, retailer and entertainment cards have recently started to be issued in the country.

Prepaid cards

Telecommunications companies and chains of petrol stations issue prepaid cards. The use of these cards has increased very rapidly. The existing public coin telephone network has to a large extent been replaced by a wide network of smart card telephones belonging to the Betkom and Bulfon companies. The leading petroleum companies, Petrol and Shell Bulgaria, offer prepaid cards.

The ATM and POS networks

At the end of 2001 there was one ATM network in Bulgaria (operated by BORICA) and two POS networks (operated by BORICA and the Bulgarian Post Bank). For the time being the network of ATM and POS terminals is not very extensive, but it is growing. In 1995 the number of ATM terminals was only 32; in 1997 this number reached 118 and by the second quarter of 1999 there were 180 installed ATMs. By the end of 2001 the number increased to 642 and is still growing. The number of electronic POS terminals, which was 100 in 1997, increased to over 510 in the second quarter of 1999 and reached 1,980 by the end of 2001. Most ATMs are located on the premises of banks, but some are located at petrol stations, supermarkets and other shops, metropolitan stations and airports, etc. POS terminals are installed in bank branches for cash withdrawals and in hotels, restaurants, shops, car rental companies, petrol stations, etc. for payment for services and goods.

2.2.5 Postal instruments

The postal network is the largest branch network in Bulgaria. Postal money transfers are used in small villages in which there are no bank branches, or in cases where the payer or the payee does not have a bank account. Postal instruments are normally used for the payment of pensions, subscriptions, taxes, or transfers to persons who do not hold current accounts with a bank. The total value of payments through postal orders is negligible by comparison with the payments made through BISERA.

2.3 Recent developments

There is a significant interest in Bulgaria in making payments via the internet. A system called ePay.bg was developed in 1999. It allows each cardholder to pay for services or goods via the internet after registering his card. The technology for making payments via the internet is based on a trusted third-party payment server connected to the host of the BORICA card system. This makes it possible to authorise each transaction via the internet in real time. Most cardholders use this system for transferring money from their card accounts to other accounts at the same or at another bank. By the end of 2001 there were 56 electronic shops and companies offering goods and services connected to ePay.bg, and 24,754 transactions with a value of BGN 1,110,873.38 (€567,980.54) were made through this system in 2001. Since there is only a limited number of credit card holders in Bulgaria, for the time being the volume of internet transactions by means of credit card is still low.

Furthermore, a number of banks are co-operating with Western Union for the execution of fast money transfers, mostly abroad.

3 Interbank exchange and settlement systems

3.1 General overview

Most of the non-cash payments in Bulgaria are settled through the national settlement system, BISERA, which is a gross settlement system that has been operating since 1992. Although BISERA operates with a T+1 value date, there is an option for some payments to be settled during the same working day directly by the Bulgarian National Bank, on the basis of payment orders submitted on paper at the Bank's desks, or via SWIFT. This express service is organised for all payments addressed to or initiated by the Bulgarian National Bank, direct bank-to-bank payments related to interbank money market operations, payments on the primary and secondary government securities market and some budget payments. (These payments are few in number but significant in terms of value.) It is expected that the current system will be replaced by an RTGS system by September 2002.

BISERA was designed, programmed and implemented by the Bankservice joint stock company on behalf of the Bulgarian National Bank. Bankservice is responsible for the development, maintenance and operation of the system. It also offers other telecommunications and banking automation services to banks. The Bulgarian National Bank is the major shareholder in the company (37% of the capital). The rest of the capital is distributed among commercial banks according to a quota principle, depending on the share of each bank in the volume and value of interbank transactions, on the number of branches belonging to the bank and on the size of each bank's own capital. Bankservice has a pyramid structure with a head office, five branches and 28 local offices, which are the access points to BISERA.

3.2 The real-time gross settlement system

There is no RTGS system currently operating in Bulgaria, although it is anticipated that such a system will be launched in September 2002.

3.3 The designated-time gross settlement system: BISERA

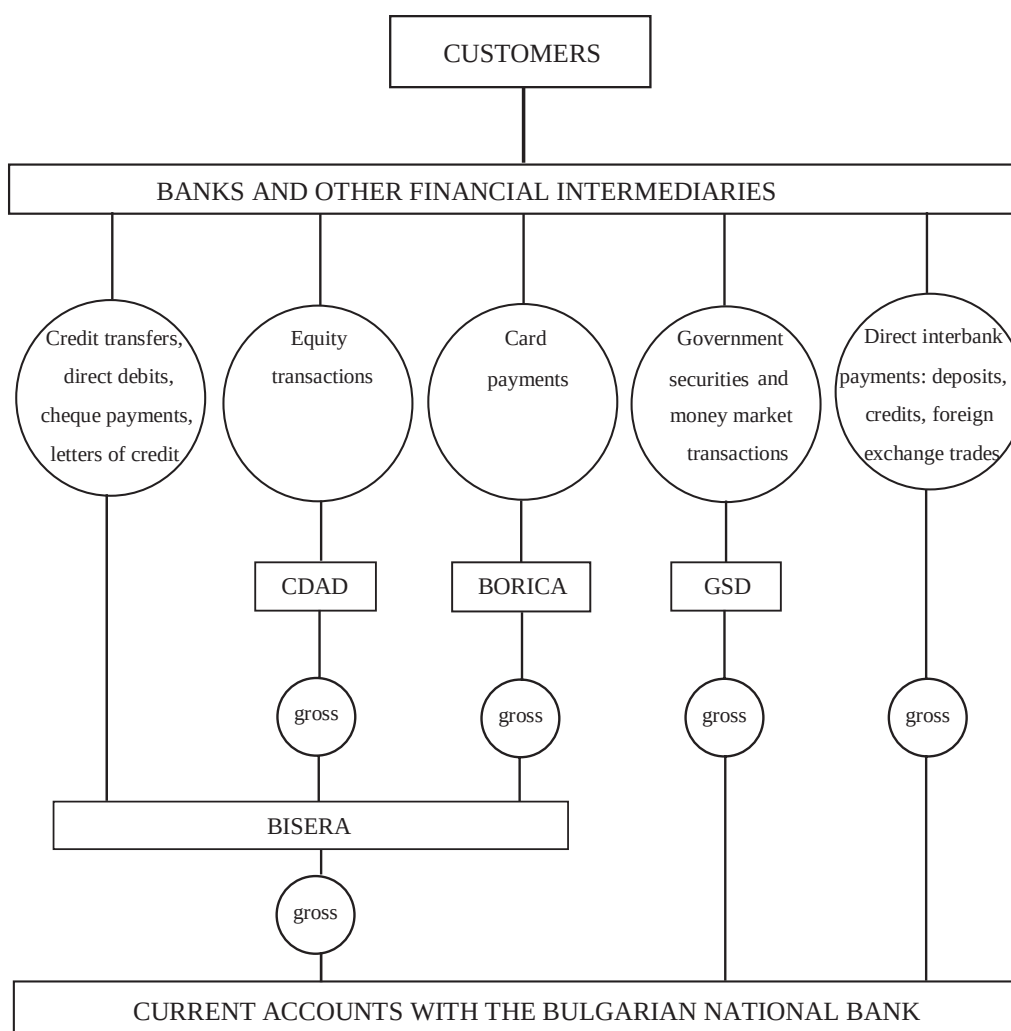
The Banking Integrated System for Electronic tRAnsfers (BISERA) is an electronic system with two basic functions: the clearing of electronic messages comprising banks' payment instructions, and the settlement of payments.

3.3.1 Operating rules

The Bulgarian National Bank issues BUSs which contain rules on the execution of payment transactions via BISERA. One of the most important standards is BUS 7092, on settlement in the Bulgarian National Bank. It regulates the organisation of the settlement system, including settlement procedures, accounting records, registration of the transfer instructions, information transfer, message formats and control procedures, etc. Work on amending the BUSs is under way. The BUSs will define the main characteristics of and provide the platform for the work of the future Bulgarian RTGS system. Other standards regulate payments using different payment instruments (credit transfers, direct debits, cards, cheques and letters of credit). BUS 12097 on interbank and intrabank payments on equity transactions with DVP is applicable in the field of securities trading payments. For more details see Section 3.3.2.

3.3.2 Participation in the system

According to current banking regulations, any licensed bank in Bulgaria is obliged to make all interbank payments through BISERA (or directly through its account with the Bulgarian National Bank in the case of certain specified types of payment; see Section 3.1). Banks whose licences have been revoked are immediately excluded from the system. The bank branches also have direct access to BISERA (provided that the banks do not have

Chart I**Current organisation of the Bulgarian interbank payment system**

an internal payment system). There are two non-bank financial institutions which also have direct access to BISERA: the CDAD and BORICA. They act as settlement agents, the CDAD for payments related to securities transactions, and BORICA for interbank payments related to card transactions. They are authorised by their members to initiate interbank payment transactions on behalf of the member banks. As of 19 February 2001 the SEBRA system for electronic budget payments, which services the payments of budget entities, is included in BISERA. The state Treasury is a participant in BISERA.

3.3.3 Types of transaction handled

BISERA processes all kinds of interbank payments regardless of their value. This includes payments between customers, bank-to-bank payments and payments between the Bulgarian National Bank and other banks. The system distinguishes between the following payment instruments: credit transfers, direct debits, cheques,² letters of credit, debit cards and office cash collections.

² Cheques are divided into two types – limited and accepted cheques (with previously blocked funds on the customer's account), and payment cheques (without previously blocked funds on the customer's account).

Office cash collections are used for the cancellation of an incorrect transfer. The bank which has made the error generates a request for an office cash collection. In the statistical tables they are shown under “Direct debits”.

3.3.4 Operation of the system

According to the generally accepted terminology, BISERA is a designated-time gross settlement system, with settlement on a T+1 basis. The time schedule for the execution of operations is shown in Table I below.

After settlement of a payment order, the system generates a payment message for the receiving bank and a confirmation message for the sending bank. It also generates messages for the Bulgarian National Bank, with summary information about the interbank payments (the gross sum of payments received by each bank from any other bank). The Bulgarian National Bank debits the current accounts of the sending banks and credits the current accounts of the receiving banks with the respective gross total. A payment is considered final once it has been debited from the account of the sending bank and credited by

the Bulgarian National Bank to the account of the receiving bank (i.e. at the time of booking at the Bulgarian National Bank at 8.30 a.m. on T+1). Each transfer is executed individually. Payment instructions sent by banks are irrevocable. In the event a payment cannot be settled due to insufficient funds on the account of the sending bank, the Bulgarian National Bank and the receiving bank are informed on T+1 and the message is re-sent every day until the payment is executed. In such a case, the defaulting bank will owe the receiving bank a penalty. For details of “waiting payments” see Section 3.3.6.

Overdrafts on current accounts and partial payments are not allowed.

3.3.5 Transaction processing environment

BISERA is a fully computerised system. Paper-based documents are neither accepted nor processed. The data are received from and transmitted to the bank branches via telecommunications links. Diskettes are used only when telecommunications problems occur, or for backup purposes. The information systems architecture of BISERA can be described as follows:

Table I		
Schedule of transfer operations		
Day	Local time	Procedure
Date T	8.30 a.m. to 5 p.m.	Accounting day of the commercial banks and the Bulgarian National Bank.
	8 a.m. to 10 p.m.	Commercial banks generate file transfers for bank-to-bank and customer payments and send them to BISERA.
	9 p.m.	After the end of the accounting day the central bank sends the balances of the commercial banks' accounts to BISERA.
	10 p.m.	Cut-off time.
	10 p.m. to 3 a.m.	Processing and settlement by BISERA with T+1 as the value date.
Date T+1	6 a.m. to 8.30 a.m.	The commercial banks and the Bulgarian National Bank receive the results of the settlement process.
	8.30 a.m.	Start of the accounting day in the commercial banks and the Bulgarian National Bank.

- a host system, on which the collection and checking of electronic messages with payment orders and the settlement of payments are performed;
- a remote backup system, working as hot backup with remote database backup technology;
- a telecommunications network, called BANKNET, operating 24 hours a day, seven days a week. It serves not only BISERA, but also the ATM devices connected to it, the debit card authorisation centre, BORICA, remote SWIFT workstations and local networks of bank branches connected to their head offices. BANKNET supports electronic mail as well as other value-added services; and
- access points – computer centres in the offices of Bankservice, or in commercial banks, equipped with local PC networks, connected to BANKNET. Files with payment messages from the bank branches are gathered in the access points and then checked and transmitted to the host system. After the conclusion of settlement, the access points receive the settlement results from the host system and send them to the bank branches. The communications link between the access points and the bank branches is provided through dial-up lines.

3.3.6 Settlement procedures

Incoming payments, including waiting payments from previous days, are queued according to their priority, which is automatically determined by the system, in accordance with the FIFO principle. Payments related to requests for office cash collection have the highest priority, followed by cash withdrawals at ATMs and all other payments. There are two queuing mechanisms in the system: one

for incoming payments in general and one for each of the individual settlement accounts.

Payments are processed individually, strictly in accordance with the sequence in the incoming queue. Prior to the execution of payments from the incoming queue, the computer system servicing the settlement at the Bulgarian National Bank checks whether:

- there are already other payments waiting to be settled in the account of the sending bank concerned; and
- sufficient funds are available in the current account to cover the execution of the first consecutive payment in the queue of payments waiting to be settled in that account.

If there is already a payment queue for the account to be debited or if funds are insufficient, the payment is not processed but rather placed in the payment queue for that account. When funds are received on the payment account, the queue of waiting payments is checked and they are processed in chronological order to the extent that the received amounts provide sufficient cover.

If sufficient funds are not available to settle the first payment in the queue, all queued payments remain unprocessed until such funds are received. To ensure that the processing of payments follows the FIFO principle, waiting payments are marked on the account's registers. Once the queue associated with the account has been emptied, the payment queues for each separate account are scanned again. This cycle is repeated until all payments have been processed, or until the scanning of all queues finishes without the execution of a new payment.

The legislation strictly defines the cases where the Bulgarian National Bank has the right to process the payments held in a queue, to reject a payment, to change the priority of payments, etc. For example, when, owing to a

bank's lack of liquidity, a payment cannot be executed within a period of ten working days of being entered into the settlement system, the payment is rejected by the settlement system and deleted from the waiting queue. In the event of the rejection of a payment by the settlement system, the settlement system informs the Bulgarian National Bank in order to allow the Bank to take specific supervisory action in conformity with the Law on banks.

3.3.7 Credit and liquidity risk

An interbank payment transaction is only carried out if the sending bank has sufficient funds on its current account with the Bulgarian National Bank. Credit risk for the Bulgarian National Bank is avoided because overdrafts on the current accounts of commercial banks are not allowed. There are no specific liquidity requirements to be met by system participants. However, banks are subject to supervision by the central bank, which may withdraw their licences in the event of a serious liquidity crisis.

3.3.8 Pricing

The system determines its pricing policy according to the full cost recovery principle. The fees for banks which are shareholders in Bankservice are lower than the fees for non-shareholders. The entry fee is BGN 130 (€66.67) for every branch of a shareholder and BGN 202 (€103.59) for every branch of a non-shareholder. There is also a minimum monthly fee of BGN 50 (€25.64) for every branch of a shareholder and BGN 74 (€37.95) for every branch of a non-shareholder. For payments between customers of different banks the transfer fee is BGN 0.25 (€0.13) for shareholders, and BGN 0.37 (€0.19) for non-shareholders.

3.3.9 Statistical data

For 2001 the average number of transactions per day was 90,095, and the average value settled per day BGN 243,428,030 (€124,462,775.40). The growth in relation to 2000 was 22.64% in terms of number of transactions and 15.81% in terms of value. The peak number of transactions settled in one day was 326,308.

3.4 The retail payment system

3.4.1 The national card payments system, BORICA

Card payments are governed by Regulation No. 16 on payments initiated by bank cards. However, this Regulation only regulates payments made with domestic cards. For international cards, banks follow the rules set by the respective international card organisations.

The national card payments system, BORICA, is operated by a company of the same name. The company is wholly owned by the Bulgarian National Bank. BORICA Ltd. is the national operator of the ATM and POS network in Bulgaria and acts as a processing company for the cards of Visa International's member banks and as a third-party service provider company for Europay International member banks within the country.

BORICA Ltd. administers ATM and POS transactions and is responsible for the supervision and maintenance of the terminals, performs online authorisation of card payments and personalisation of bank cards, and is authorised by its members to act as a settlement agent for payments performed with domestic cards. According to Regulation No. 16, the settlement of payments initiated with bank cards is to be effected through BISERA, the interbank payment system. Therefore, BORICA has direct access to BISERA. BORICA executes interbank payments generated by card transactions with a value date T+1.

The Bulgarian Post Bank operates its own electronic POS terminal network for Visa cards only. It links approximately 60 electronic POS terminals and is not connected to the network of BORICA Ltd.

3.5 Future developments

In November 2001 the Managing Board of the Bulgarian National Bank approved a document named "Terms of Reference for the RTGS System at the Bulgarian National Bank". The document was prepared by an ad hoc group and describes in detail the Bank's system, functional and user requirements for the future RTGS system, which is expected to be implemented by September 2002.

On the basis of the Terms of Reference document, on 5 February 2001 the Bulgarian National Bank announced an open international tender for the selection of a main RTGS system contractor to provide a complete and integrated solution for an RTGS system, including specifications, hardware, system and application software, integration tests, implementation, acceptance tests and user training, warranty period and post-warranty support and development.

The Bulgarian National Bank admitted only such bidders to the tender which had previous experience as developers of RTGS system applications, were operative in at least one central bank and also had experience as prime contractors of RTGS system implementation.

Some of the most experienced RTGS application software providers bid in the international tender. The tender procedure passed through several stages and, on 31 July 2001, the Bulgarian National Bank signed a "turnkey" agreement and a software maintenance agreement with Montran Corporation in the United States.

The RTGS system project comprises the following four stages:

- Stage 1 – Specification
- Stage 2 – Customisation
- Stage 3 – Implementation
- Stage 4 – Live operation

Further to the completion of the first stage, the Bulgarian National Bank has been provided with three documents (Stage 1 deliverables) which describe the design of the RTGS system to be implemented in the subsequent stages – the Project Service Specification, the Functional System Specification and the Project Plan.

According to the Project Plan, the latest date for the launch of the RTGS system is 16 September 2002.

The Bulgarian National Bank will be the owner of the RTGS system and will be responsible for the system's administration, regulation and management. The participants in the RTGS system will be as follows:

- the Bulgarian National Bank;
- settlement participants – licensed banking institutions (banks) within the meaning of the Law on banks who maintain current accounts with the Bulgarian National Bank;
- the Bulgarian National Bank's Fiscal Services Department – for payments among banks arising from transactions with government securities;
- system operators – institutions authorised by the Managing Board of the Bulgarian National Bank to perform services relating to intermediation in interbank transfers and the settlement of funds transfers, including:
 - Bankservice AD – the organisation servicing the interbank retail funds transfer system BISERA;
 - BORICA AD – the national operator of the bank cards payment system, BORICA; and

- the CDAD – for payments among banks arising from transactions with commercial securities.

The RTGS system will provide the final settlement of systemically important payments within the country. The following constitute systemically important payments:

- payments between settlement participants (interbank payments) and payments to and from the Bulgarian National Bank;
- payments on government securities transactions, using the DVP mechanism;
- net transfers of funds requiring designated-time settlement; and
- large-value customer payments exceeding an amount of BGN 100,000 (€51,129.19).

The RTGS system will ensure a more effective risk management by the Bulgarian National Bank. Participating banks will be able to monitor and effectively manage their liquidity and the payment process. The interactive monitoring will be realised via a proprietary network.

The project also aims at the future integration of the Bulgarian payment system into TARGET following Bulgaria's accession to the EU and EMU.

The system will provide the possibility for execution of customer payments.

The RTGS system will use the SWIFT network and the SWIFT FIN Y-Copy service for the interbank payment messages flow.

The design of the RTGS system complies with:

- The Core Principles for Systemically Important Payment Systems of the Bank for International Settlements, Basel;
- The Standards of the European Central Bank;
- The ANSI standards of the International Organization for Standardization (ISO) and the SWIFT standards for the exchange of payment messages and financial information, confidentiality of the exchanged information, authentication of the sender and the received information and non-repudiation of the sender of the information, and management of the cryptographic keys.

4 Securities settlement systems

4.1 Trading

4.1.1 Main features of the different securities markets

The Bulgarian securities markets can be divided into two segments, a market for debt instruments and an equity market. A common feature of these markets is that the traded securities are dematerialised and transferred by bookentry. Bulgarian legislation allows the existence of equities in paper form, but only dematerialised equities may be offered publicly. There are some debt instruments of large

Bulgarian companies (for example the National Electric Company) which are dematerialised, but are not offered publicly.

Trade in government securities, i.e. bills (with a maturity of up to one year), notes (with a maturity of one to five years) and bonds (with a maturity of over five years) represents a major part of the government securities and money market. The Ministry of Finance and the Bulgarian National Bank regulate both the primary and secondary markets for government securities, and the GSD settles the transactions. For further details of primary

market procedures see Section 4.3.1. The secondary market is an OTC one, with transactions confirmed by Reuters Mail on the basis of offers exchanged via Reuters or with transactions confirmed by the BSE-Sofia trading system. Pursuant to Article 101 (1) of the LPOS, trading in securities (except government securities) is allowed only on the regulated securities markets.

Following the latest changes in Bulgarian legal regulations (the adoption of the LPOS) securities markets in Bulgaria are divided into regulated and unregulated markets. In practice, these two types of security equate to the organised and non-organised markets. Securities markets are also primary and secondary depending on whether the securities are traded initially or secondarily.

At present only the BSE-Sofia has powers to organise (maintain) the regulated securities markets, i.e. the official and unofficial markets (defined in the LPOS).

The BSE-Sofia has the following markets and market segments:

- 1) Official market:
 - a) Official equities market:
 - Segment “A”
 - Segment “B”
 - Segment “C”
 - b) Official bonds market
 - “Government securities” segment
 - “Municipal bonds” segment
 - “Corporate bonds” segment
- 2) Unofficial market:
 - a) Unofficial equities market
 - b) Unofficial bonds market
 - c) Unofficial market for other securities
- 3) Primary market³
- 4) Privatisation market³
- 5) Tender-offering market³

The BSE-Sofia has established different minimum listing requirements for each market segment of the official market; this is similar to European practice. The only difference is the required minimum size of the listed companies. The requirements for admission of securities to the unofficial market are that the issue be registered in the BNSC's register of primary or secondary trading. Stock exchange and OTC transactions are made through investment intermediaries only. Stock exchange trades are done through an electronic system using direct access from brokers' terminals based on the BSE-Sofia floor or through remote brokers' terminals from the BSE-Sofia members' offices (for more details, see Section 4.3.2.4). Settlement in both the regulated and unregulated markets is executed by the CDAD through BISERA.

4.1.2 Basic quantitative aspects

The government securities and money market are the most important securities markets in terms of volume and value. However, it can be seen from Tables 2 and 3 that the volume of transactions in equities and corporate bonds increased significantly from 1998 to 2001.

4.1.3 Financial intermediaries operating on the different securities markets

Securities may only be traded by investment intermediaries authorised by the BNSC. In practice, these intermediaries are stockbrokers and banks, including branches and subsidiaries of foreign banks. To be licensed by the BNSC, an investment intermediary must meet certain requirements concerning, inter alia, the amount of its capital and the structure of its balance sheet, as specified under the LPOS. Given that global banks' licences cover all kinds of transaction with securities, these banks do not need additional authorisation by the BNSC, but

³ This is not a separate market but rather a special auction for special kinds of trade.

only to be registered as investment intermediaries.

Trade on the BSE-Sofia can only be executed through investment intermediaries which are members of the Stock Exchange. There are a number of specific admission criteria for membership of the BSE-Sofia, as specified in the Rules of Procedure of the BSE-Sofia, which have been adopted by its Board of Directors and approved by the BNSC.

Members of the CDAD must be investment intermediaries, investment companies, issuers of stocks, stock exchanges or foreign depository and clearing institutions. Each member has full access to the CDAD, enabling it to hold securities accounts and to move shares held by itself or on behalf of third parties.

Participants in the government securities and money market are all investment intermediaries, but only those which are authorised to be

Table 2

The BSE-Sofia's statistics for the turnover of equity trades and the market capitalisation of equities issues (USD)

Market	1998 Market capitalisation (USD)	Total turnover	1999 Market capitalisation (USD)	Total turnover
Official A		364,944	7,131,721.19	271,299
Official B	145,305,464.54	110	38,810,281.70	840,149
Official C		2,189,904	67,009,971.45	5,773,478
Free market	840,370,378.94	22,167,912	594,952,879.58	13,813,199

Market	2000 Market capitalisation (USD)	Total turnover	2001 Market capitalisation (USD)	Total turnover
Official A	26,341,839.76	582,366	7,951,759.87	28,860.36
Official B	37,835,806.74	480,050	19,141,054.02	6,657,759.76
Official C	70,809,663.90	7,360,399	60,006,074.79	3,090,468.90
Free market	477,429,093.14	32,833,738	390,136,744.89	59,983,920.31

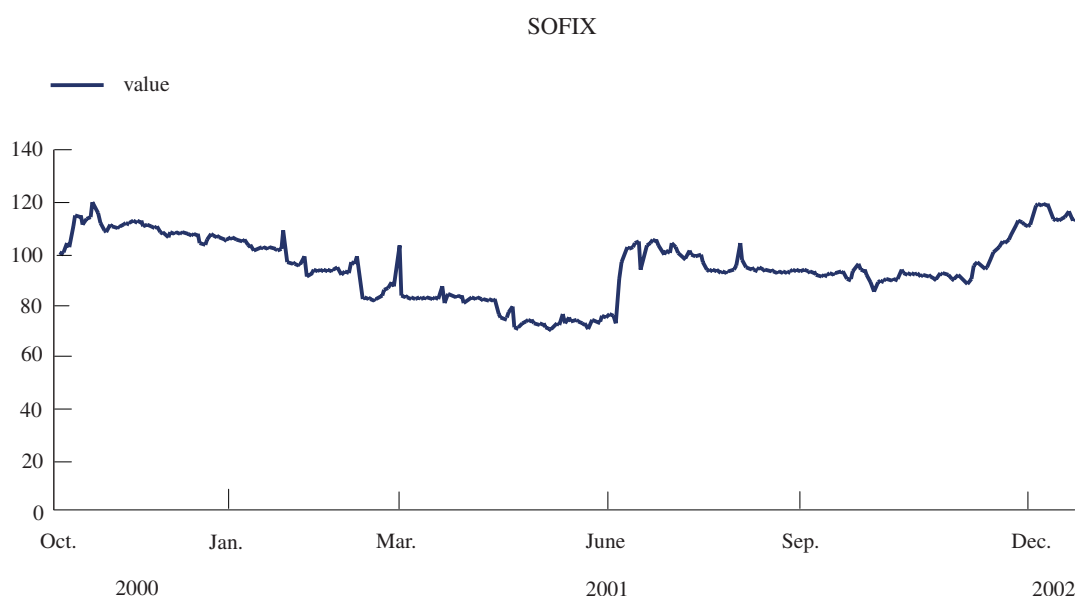
Table 3

The BSE-Sofia's statistics for bond trade turnover (USD)

Market	1998 Total turnover	1999 Total turnover	2000 Total turnover	2001 Total turnover
Official				
Corporate	0	1,884	26,152	386,096.49
Government	0	0	2,123	350,668.76
Free market	0	0	0	124,335.59

Chart 2

The BSE-Sofia's statistics for the SOFIX index:



primary dealers have access to the GSD. For further details of primary dealers see Section 4.3.1.2.

4.1.4 Recent developments

After the BSE-Sofia received its licence from the BNSC, the first trading session was held on 21 October 1997. At first trading was concentrated mainly on the free market (now the unofficial market), in which companies from the first wave of mass (voucher) privatisation placed their privatised stakes. The first company listed on the official market was Elcable in January 1998. In 1999 the number of companies listed on the official market reached 32. The same year the total number of companies traded amounted to 859, while in 2001 the total number of companies decreased to 430. The main reason was the fact that many of them, mainly the small and illiquid ones, were deleted from the public register of the BNSC.

From the dynamic development of the capital market in the period from 1996 to 1999 it

became evident that more elaborate legal regulations were necessary. In December 1999 the Bulgarian Parliament adopted the new LPOS, which came into effect in February 2000. The Law is aimed at providing protection of investors and creating prerequisites for the development of a transparent and efficient capital market in the country. The new Law guarantees improved protection of investors, creates the conditions for the stability of the stock market, and assures equal access and treatment for all participants, and the transparency and settlement of transactions.

The last few years can be characterised as a period of stabilisation of the infrastructure of the capital market. The structure and the institutions of the Bulgarian capital market are now fully in compliance with global standards and requirements in this area.

In compliance with the new legal requirements and in response to changed market conditions, the BSE-Sofia has adopted its new rules and regulations. In October 2000 the RTS Plaza trading system, based on the Nasdaq quotation

system, was launched on the BSE-Sofia with the assistance of US and Russian experts. It is an order and/or dealer-driven trading system with multiple market-makers. On 21 October 2000 the BSE-Sofia launched its official index – SOFIX. SOFIX is a market capitalisation-weighted price index with a base value of 100 points. The SOFIX portfolio consists of the top ten domestic stocks (currently reduced to nine).

Although the structure of the capital market has been successfully established, the market's problems – a lack of attractive securities and low liquidity – remains. In order to overcome these negative tendencies, the BSE-Sofia has launched new trading instruments – government bonds, corporate bonds and Bulgarian depository receipts.

By way of a BNSC Resolution of 6 December 2001 the BSE-Sofia was granted a licence to organise the unofficial securities market. By way of the same resolution, the BNSC approved the amendments to the rules and regulations of the BSE-Sofia. In compliance with § 6a of the "Transitional and Final Provisions" of the rules and regulations, the amendments entered into force on 2 January 2002.

BSE is planning to develop two new segments, namely IPOs and privatisation.

4.2 Clearing

There is no independent clearing house. With regard to the settlement of securities, please see Section 4.3.

4.3 Settlement

4.3.1 Securities settlement through the Government Securities Depository

4.3.1.1 Operating rules

Under the Law on the Bulgarian National Bank, the central bank is the official depository of the state. Pursuant to the contract between the Bulgarian National Bank and the Ministry of Finance, the Bulgarian National Bank organises trade in government securities and maintains registers of such securities. Regulation No. 5 of the Ministry of Finance and the Bulgarian National Bank establishes the rules and procedures for all kinds of transaction with government securities.

4.3.1.2 Participation in the system

The Ministry of Finance and the Bulgarian National Bank approve the list of primary dealers authorised to participate in the system. Primary dealers may be banks or other investment intermediaries. All other legal and physical persons may only participate in the primary and the secondary markets through primary dealers.

4.3.1.3 Types of transaction handled

The GSD handles all kinds of government securities transactions, primary and secondary outright operations, repurchase agreements, etc.

4.3.1.4 Operation of the system

The settlement of transactions is handled on a gross basis. This is a batch processing system which applies the DVP principle.

On the primary market, securities are acquired through auctions organised by the Bulgarian National Bank. Primary dealers may participate with irrevocable competitive or non-competitive bids through Reuters Mail. On the issue date (the second working day

after the auction) the Bulgarian National Bank debits ex officio the current accounts of the primary dealers by the amount of government securities acquired by them and credits the account of the Ministry of Finance. At the same moment the system automatically enters the securities acquired by each bidder in the registers. Only primary dealers are listed in the registers.

On the secondary market the registration of transactions is effected on the basis of irrevocable written applications sent by Reuters Mail from both the acquirer and the transferor. The Bulgarian National Bank debits, ex officio, the acquirer's account and credits the transferor's account with the stated amount, and the system automatically enters in the registers the flow of securities at the value date indicated in the application.

At maturity the central bank credits the current accounts of the primary dealers with the funds provided by the Ministry of Finance and cancels the matured issue in the registers.

The Bulgarian National Bank maintains registers both for primary dealers and commercial banks – non-primary dealers pursuant to § 6 of the “Additional Provisions” of Regulation No. 5 of the Ministry of Finance and the Bulgarian National Bank.

4.3.1.5 Settlement procedures

The settlement of government securities transactions is executed through an accounting system called SOFI. Every transfer instruction is entered in the system and the transaction is only made if securities and funds are available. Otherwise the transaction is not executed.

On the primary market transactions are settled on the day of issue. For bills, notes and bonds the day of issue is the second working day after the auction (T+2). For notes and bonds this is the fourth working day after the auction (T+4). In the event that maturity falls on the day of a new issue, the system settles

the maturity first and then the new issue. This enables primary dealers to pay for the newly issued securities with the repayment for the previous issue.

On the secondary market the procedures are different. The transactions are settled on the day of the trade (T+0) or on the forward settlement date, if this is specified in the applications. The settlement is executed four times a day. The forward and reverse repo transactions are settled at 9 a.m. The outright transactions, negotiated between 9 a.m. and 11 a.m., are settled at 11 a.m. The transfer instructions for both securities and funds are settled on a gross basis with final transfer of both securities and funds occurring at the end of the processing cycle (11 a.m.). This means that the DVP scheme is DVP model I on a batch basis, as defined by the GI0. The same procedures are repeated within the next cycles between 11 a.m. and 1 p.m. and between 1 p.m. and 3 p.m. The four processing cycles enable the participants to trade the same securities more than once per day. For these transactions the FIFO principle is applicable. The instructions are placed in a queue according to the time of receipt of the written applications. If a transaction cannot be executed because of a lack of securities or funds in the account of a certain primary dealer, it is removed from the queue and the two parties are informed of the reason for the refusal. If the same dealer has sufficient securities or funds for the next transaction in the queue, it is executed.

4.3.1.6 DVP arrangements

Every primary dealer has its own current account as well as a government securities account with the Bulgarian National Bank. This means that the Bulgarian National Bank manages both securities and cash accounts, which makes the settlement risk-free. After receiving the information about a transaction, the GSD checks the availability of securities, blocks them, checks the availability of necessary funds and finally makes the transfers.

4.3.1.7 Credit and liquidity risk

The DVP principle is the main measure for avoiding risk in the system. Another measure is the penalty applied to defaulting parties. If a participant fails to provide the necessary funds or securities more than once, it may lose its status as a primary dealer.

4.3.1.8 Pricing

The pricing policy is common to every participant in the system. There is no full recovery of the transaction costs.

The entry fee for membership is currently BGN 1,000 (€511), paid after each new approval of the primary dealers list. The register-keeping fee for each member is BGN 500 (€256) per month. For approved primary auction bids the participant pays a commitment fee of 0.04% of the nominal value. Depending on the amount, the transfer charges vary between BGN 1 (€0.51) and BGN 10 (€5.11). On the date of maturity there is a charge of 0.02% of the nominal value of the securities.

4.3.1.9 Main projects and policies being implemented

The GSD is planning to create direct computer links with system participants in order to establish a fully computerised system for the settlement of primary and secondary market transactions.

4.3.2 Securities settlement through the Central Depository AD

4.3.2.1 Operating rules

The LPOS determines the role of the CDAD. The organisation and operation of the CDAD are determined by Regulation No. 19 of the Ministry of Finance and the Bulgarian National Bank. The CDAD is obliged to present information regularly and on request to the

Ministry of Finance and the Bulgarian National Bank. Both institutions are authorised to carry out on-site inspections of the CDAD. Under the Law on registered pledges, all necessary facts connected with pledges must be recorded in the CDAD.

The CDAD organises its operations in four major directions. First, it has created a national register of the joint stock companies privatised in the mass privatisation process and the former privatisation funds (now investment companies and holdings). In this regard, accounts were opened automatically (over 3,500,000) for all the shareholders which had acquired shares in the process. Second, it has created an SSS for trades between the members of the CDAD. Third, it has created a system for organising payments for securities traded on a DVP basis, which is connected to BISERA. Fourth, it has created a system, which maintains a common stockbrokers' back office. (The securities account of each member of the CDAD which is an investment intermediary is divided into sub-accounts for each individual customer-stockholder.)

4.3.2.2 Participation in the system

The participants in the system are the BSE-Sofia and investment intermediaries, both being members of the CDAD. Only they can operate directly with the register in order to serve their customers. All publicly offered securities can only be traded through the BSE-Sofia, except transactions between individuals (natural persons) and a number of other special kinds of trade (including tender-offering, repo trades, grants, inheritances). Those transactions which are not traded at the BSE-Sofia must be registered in the BSE-Sofia trading system as reported trades as they could otherwise not be settled in the CDAD).

4.3.2.3 Types of transaction handled

In practice, the CDAD handles all types of book-entry equity transaction. Stock lending is available in emergencies. The CDAD also

provides its members with the possibility of offering custodial services to their customers.

4.3.2.4 Operation of the system

The system settles the instructions for the transfer of securities and cash on a gross basis, in a batch processing mode, applying the DVP principle. This is in conformity with the already accepted gross standard for payments in Bulgaria, and is the only way to reduce the risk inherent in the payment process, since a fixed risk management system in Bulgaria does not exist. It is possible to process a delivery free of payment transaction on the OTC market when indicated by the seller, i.e. only securities delivery without involvement of the payment system.

During the first wave of the mass privatisation process in 1997 the CMP provided the CDAD with all data on the transactions. The transfer of ownership was made through registration in the CDAD's registers. There were no payments, because equities were exchanged for vouchers. In the second wave the process became more complicated because payments could be made in cash or with different kinds of voucher.

In the event of cash privatisation, the required information is provided by the Agency for Privatisation or by the relevant ministry. If this privatisation is carried out on the stock exchange, the information is provided by the brokers and the BSE-Sofia.

As regards the settlement of trades between investment intermediaries, the CDAD has implemented the standard settlement period recommended by the Group of Thirty (G30) and the World Bank, namely T+0 to T+3. When a transaction is made, securities ownership is transferred and payment is finally completed within a three-day period.

The processing cycle follows the sequence outlined below, which is the same for stock exchange and OTC trades.

On the trade date, T+0, the investment intermediary sends information to the CDAD on the transaction and the securities or cash accounts to be debited or credited. For the stock exchange trades in particular, the information provided by the participants is checked against the information received from the BSE-Sofia.

On T+1, any errors and mistakes are identified. The CDAD sends payment information to BISERA. In the event of an error or a mistake, the transaction is kept in a queue for up to three days, after which it should be cancelled if a correction is not made.

After 11 a.m. on T+2, the relevant securities accounts are checked for securities availability in the case of every transaction. The necessary amount of shares is blocked, and after 6 p.m. the CDAD sends confirmation to the national settlement system, BISERA, which processes the payments overnight.

At 8.15 a.m. on T+3, the results of the settlement process are received. If the payment is executed (i.e. the requisite funds are transferred to the seller's account), the securities accounts are unblocked and the securities are transferred to the account of the buyer (and to its customer's sub-account). Simultaneously, the registers of enterprises whose shares are the subject of the trade are automatically updated.

The CDAD has direct access to BISERA to deal as a settlement agent. The CDAD initiates a direct debit transaction on behalf of the seller on the bank account of the investment intermediary buying securities in order to ensure that the payment is made.

4.3.2.5 Transaction processing environment

The system is fully computerised. Data are transferred electronically between the CDAD on the one hand and the participants, BISERA and the BSE-Sofia, on the other. However, according to the existing regulations for

payments, the only valid payment documents are paper-based (signed and stamped), which means that all electronically exchanged information must also be provided on hard copy. According to the new draft regulations, electronic documents will replace the paper-based ones.

4.3.2.6 Settlement procedures

The system forms a queue of all transactions to be handled on a given day. The execution priorities for processing transfer orders are as follows:

- stock exchange trades before OTC transactions; and
- trades on behalf of investment intermediaries' customers before trades on behalf of investment intermediaries themselves.

The place of each stock exchange transaction in the queue depends on the time of its conclusion on the BSE-Sofia. The place of each OTC transaction depends on the time it is reported to the CDAD. There is also a queue for transactions which cannot be settled due to insufficient securities or cash. Each day the waiting trades from the previous days are processed before the new transactions of the same type and in accordance with the above-mentioned priorities.

4.3.2.7 DVP arrangements

Every member of the CDAD must hold an account with a commercial bank which can be directly debited by the CDAD under an agreement between the CDAD and its member. The buyer cannot stop this payment. On T+2 the bank blocks the funds after receiving confirmation from the CDAD, and the CDAD blocks the securities. If both funds and securities are available, they are transferred during the night after T+2. If funds (or securities) are not available, the securities or funds will remain blocked until T+9.

4.3.2.8 Credit and liquidity risk

The BSE-Sofia manages a Guarantee Fund (Fund) in order to guarantee payments for transactions executed on the Exchange. BSE-Sofia members created the Fund in instalments. Each member must deposit an initial instalment amounting to BGN 200 (€102). By the 10th day of each calendar month each member must currently deposit in the Fund an amount equal to 0.1% of the average value of all transactions executed by it during the previous calendar month. The cross (one-side) and block transactions are excluded from these calculations. The average value of executed transactions is the value of all transactions for the last calendar month divided by the number of trading sessions during that period. Within three working days of the end of each calendar month the Exchange informs each member, in writing or by electronic message, of the amount of its current instalment in the Fund. When the amount of the Fund is equal to or more than 1% of the value of the realised turnover of the Exchange for the previous year, the members shall stop paying their current instalments. If the amount of the Fund reaches levels less than 1% of the value of the realised turnover of the Exchange for the previous year, the members shall resume payment of their current instalments. Members' instalments to the Guarantee Fund are only payable in cash (BGN).

The Fund's resources are kept and managed in a separate account in a commercial bank determined by the Board of the BSE-Sofia. The Board appoints a person to manage the Fund. The main principle for maintaining and managing the Fund is to recognise and avoid risk. The Guarantee Fund's resources may be invested only in bank deposits and government securities. These resources are to be used to cover liabilities among members arising from transactions executed on the Exchange after the expiration of the terms for settlement of transactions. If a liability incurred in a transaction exceeds the total amount of the Fund, all members must make additional equal

instalments to cover the liability. Partial settlement of a liability arising from a transaction shall not be allowed.

The Fund's resources shall be used only in the event that the delay in payment of a transaction executed on the Exchange exceeds ten days, and following a decision of the Board. In the event that liabilities for more than one transaction arise, they shall be repaid according to the order of their execution. The repayment of a member's liabilities by the Fund shall constitute a good cause for the definitive termination of membership of the Exchange. The Fund does not guarantee block transactions and must not be used to cover liabilities arising from such transactions. If the amount remaining in the Fund after the repayment of a liability is under 1% of the value of the realised turnover on the Exchange for the previous year, the Exchange shall notify its members that payment of instalments is to be resumed.

4.3.2.9 Pricing policies

The CDAD applies full cost pricing to the services offered. Currently the affiliation fee is BGN 1,000 (€511) for banks and BGN 500 (€256) for non-banks. The membership fee is BGN 500 (€256) per year. The transfer charge is BGN 0.35 (€0.18). The register fees depend on the type of joint stock company and the number of its shareholders.

4.3.2.10 Main projects and policies being implemented

The CDAD plans to offer the joint stock companies different kinds of service, such as the organisation of shareholders' meetings, distribution of dividends, etc.

4.4 The use of the securities infrastructure by the Bulgarian National Bank

Since the introduction of the currency board arrangement in July 1997 the Bulgarian National Bank has conducted no monetary policy operations based on outright sales and purchases of securities or on repo operations.

Bulgaria