

**Payment systems in
Italy**

Table of contents

List of abbreviations	217
Introduction	219
1. Institutional aspects	220
1.1 The general legal and regulatory framework	220
1.1.1 The legal framework of regulated financial markets	222
1.1.2 The process of privatising the securities clearing and settlement systems	222
1.2 The role of the Bank of Italy	222
1.2.1 Payment systems oversight	222
1.2.2 Market surveillance	225
1.2.3 The operational role of the Bank of Italy	225
1.3 The role of other private and public sector bodies	226
1.3.1 The Italian Bankers' Association	226
1.3.2 The Interbank Convention on Automation	226
1.3.3 The Authority for Information Technology in the Public Administration	226
1.3.4 The Interbank Company for Automation	226
1.3.5 Monte Titoli	227
1.3.6 The Cassa di Compensazione e Garanzia	227
1.3.7 The Companies and Stock Exchange Commission	227
1.3.8 The market management companies	227
2. Payment media used by non-banks	228
2.1 Cash payments	228
Other liabilities issued by the Bank of Italy	228
2.2 Non-cash payments	228
2.2.1 Credit transfers	229
2.2.2 Bank cheques and banker's drafts	229
2.2.3 Collection orders (direct debits and bank receipts)	230
2.2.4 Payment cards	230
Debit cards	230
Credit cards	231
E-money and card payments over the internet	231
ATM and POS networks	232
2.3 Recent developments	232
3. Interbank clearing and settlement systems	232
3.1 General overview	232
3.2 Real-time gross settlement system	233
3.2.1 Operating rules	233
3.2.2 Participation in the system	234

3.2.3	Types of transactions handled	234
3.2.4	Operation of the transfer system	235
3.2.5	Transaction processing environment and settlement procedures	235
3.2.6	Credit and liquidity risks	235
3.2.7	Pricing	235
3.2.8	New BI-REL.....	236
3.2.9	The screen-based market for interbank deposits.....	236
3.3	Retail payment system	237
3.3.1	The local clearing subsystem.....	237
3.3.2	The retail subsystem	237
4.	Securities settlement systems	238
4.1	Trading.....	238
4.1.1	The wholesale screen-based market for government securities	238
4.1.2	The Italian Stock Exchange	238
4.2	Clearing	239
4.2.1	Securities net settlement procedure.....	239
4.2.2	The guarantee systems for financial instrument transactions.....	240
	Institutional aspects.....	240
	Central counterparty services - operational aspects.....	240
4.3	Settlement.....	241
4.3.1	The Express procedure	241
	Institutional aspects.....	241
	Operational aspects	241
4.3.2	The Express II project	242
4.3.3	The guarantee systems.....	242
4.4	The use of the securities infrastructure by the central bank.....	242

List of abbreviations

ABI	Italian Bankers' Association - <i>Associazione Bancaria Italiana</i>
AIPA	Authority for Information Technology in the Public Administration - <i>Autorità per l'Informatica nella Pubblica Amministrazione</i>
BI-COMP	Bank of Italy clearing system - <i>Bank of Italy Compensazione</i>
BI-REL	Bank of Italy real-time gross settlement system - <i>Bank of Italy Regolamento Lordo</i>
BIR	Large-value credit transfers - <i>Bonifici di Importo Rilevante</i>
BOE	Cross-border credit transfers - <i>Bonifici Esteri</i>
CAI	Interbank database on cheques and payment cards - <i>Centrale d'Allarme Interbancaria</i>
CCG	Clearing house - <i>Cassa di Compensazione e Garanzia</i>
CIPA	Interbank Convention on Automation - <i>Convenzione Interbancaria per i Problemi dell'Automazione</i>
CLFI	Consolidated Law on Financial Intermediation
CO.GE.BAN	Convention for the Management of the Bancomat Trademark - <i>Convenzione per la Gestione del Marchio Bancomat</i>
Consob	Companies and Stock Exchange Commission - <i>Commissione Nazionale per le Società e la Borsa</i>
e-MID	Screen-based interbank deposit market - <i>Mercato Interbancario dei Depositi</i>
ELMI	Electronic money institution
EMV	Europay MasterCard Visa
EPOP	Electronic payment order procedure - <i>Mandato informatico</i>
Express	Securities real-time gross settlement procedure - <i>Procedura per il Regolamento Lordo in Tempo Reale dei Titoli</i>
Express II	New securities net settlement procedure (project) - <i>Progetto di realizzazione di una nuova procedura per il regolamento dei titoli su base netta</i>
FATF	Financial Action Task Force
FIB 30	Futures contract on the MIB 30 index - <i>Contratto futures sull'indice MIB 30</i>
GEC	Direct interbank external euro payments and the euro leg of foreign exchange transactions - <i>Giri in euro di conto estero</i>
IDEM	Market for equity derivatives
LDT	Securities net settlement procedure - <i>Liquidazione dei Titoli</i>
MIB 30	Top 30 blue-chip index - <i>Indice azionario dei 30 principali titoli della borsa valori di Milano</i>
MIF	Italian futures market - <i>Mercato Italiano dei Futures</i>
MOT	Retail government and corporate bond market - <i>Mercato Obbligazionario Telematico</i>
MPR	Market for traditional options on equities
MTA	Stock market - <i>Mercato Telematico Azionario</i>
MTS	Screen-based market for government securities - <i>Mercato Telematico dei Titoli di Stato</i>
PCT	Electronic market for repurchase agreements - <i>Mercato Elettronico dei Pronti Contro Termine</i>
RIBA	Electronic bank receipts - <i>Ricevuta Bancaria</i>

Italy

RNI	National interbank network - <i>Rete Nazionale Interbancaria</i>
RRG	Daily matching correction system - <i>Riscontro e Rettifica Giornaliera</i>
SEPA	Single Euro Payment Area
SIA	Interbank Company for Automation - <i>Società Interbancaria per l'Automazione</i>

Introduction

The Italian payment system has changed significantly in recent years in response to European integration, developments in financial markets and the initiatives of the authorities.

Substantial changes in both the legislative framework and the design of the payment system aimed to: (i) bring the Italian legal framework into line with the Maastricht Treaty and European regulations; (ii) strengthen the reliability and efficiency of the Italian payment system; (iii) enhance the efficiency of financial markets; and (iv) promote the use of new payment instruments.

In line with such objectives, Article 146 of the 1993 Banking Law entrusted the Bank of Italy with explicit responsibilities directed at promoting the regular operation of the payment system and fostering its efficiency; the same law envisaged enabling the Bank of Italy to issue specific provisions in the field of payment systems. As regards securities, the Consolidated Law on Financial Intermediation (CLFI) established the principle that the management and organisation of regulated markets are entrepreneurial activities and entrusted the Bank of Italy with surveillance functions on regulated markets relevant to the conduct of monetary policy. In accordance with the CLFI, the settlement of securities transactions may be carried out by a private company, except for the final settlement of the securities cash leg, which, according to the subsequent regulations issued by the Bank of Italy and Consob enacting the CLFI, must be executed in central bank money. Against this background, the Bank of Italy no longer acts as central depository for government securities and Monte Titoli is authorised to operate securities settlement systems. The transposition of the Settlement Finality Directive into Italian law contributed to safeguarding the stability of the payment system in the event of a participant's failure. Recent legislation governing digital signature has laid the foundation for a wider use of open networks in payment activities.

The Bank of Italy's action in the area of retail payment systems is in line with the Eurosystem's oversight policy, which is currently directed at improving the efficiency of cross-border payments, defining security requirements for electronic money schemes and following the development of e-payments and e-commerce. In this framework, the Bank of Italy is involved in verifying the efficiency of banking payment circuits and instruments as well as monitoring postal payment instruments and the progress in integrating bank and postal circuits. With a view to enhancing the reliability of cheques and payment cards, the Bank of Italy implemented the Centrale d'Allarme Interbancaria (CAI), an interbank database on cheques and payment cards, in June 2002. The CAI contains information on natural and legal persons subject to cheque-writing bans, on unauthorised, unpaid, lost and stolen cheques, and on irregular (ie revoked, lost and stolen) payment cards. The Italian banking industry is acting to create the technical and operating conditions required for increasing the efficiency of cross-border credit transfers. In order to improve the reliability and efficiency of payment cards, it is also planning to move from the magnetic stripe to microchip.

As far as interbank payment systems are concerned, in the mid-1990s the Bank of Italy carried out a far-reaching reform aimed at strengthening the stability and increasing the efficiency of the overall payment infrastructure. Such a reform remarkably changed the previous clearing and settlement framework by setting up a new real-time gross settlement system (BI-REL) flanking the net settlement system (BI-COMP). Payments are channelled into the two systems according to their nature: large-value transactions are settled on a gross basis through BI-REL, while retail payments are settled on a net basis through BI-COMP. The direct management of both systems allows the Bank of Italy to closely monitor the risks inherent in their functioning and ensure open and non-discriminatory access to these systems. Even though the BI-REL system has proved to be successful in achieving its set objectives, in recent years technological changes and the new needs of markets and participants have spurred the Bank of Italy to launch another major project (New BI-REL). This new project is directed at improving the efficiency, reliability and security of the BI-REL system with the ultimate goal of strengthening the competitiveness of the Italian marketplace and increasing its openness to foreign intermediaries, including players from present and future euro area countries.

Substantial improvements in the efficiency and stability of securities settlement have been achieved with the launch of a new securities gross settlement procedure (Express), which provides for DVP real-time settlement of both securities and cash legs on a gross-gross basis.

1. Institutional aspects

1.1 The general legal and regulatory framework

The main providers of payment services are the banking system, the Italian Post Office and the Bank of Italy. In accordance with the 1993 Banking Law, banking activity consists in deposit collection on a public basis and the granting of credit. It is restricted to credit institutions, which are also authorised to carry out other activities subject to mutual recognition throughout the European Union (under Directive 2000/12/EC of 20 March 2000), notably the issue and management of payment instruments¹. As a result of merger activities, the number of banks has fallen significantly (from 1,064 in 1990 to 830 in 2001). At the end of 2001, there were 29,270 branches. Foreign banks numbered 60, with 109 branches.

The Post Office plays an important role in the field of retail payments. Over the last few years, postal bank payment services have been growing rapidly so as to compete with the banking system (money orders, credit transfers, giro transfers and, recently, payment cards). In 2001 post offices numbered almost 14,000.

Law 71/1994 has gradually changed the legal status of the Post Office, which, since February 1998, has been a private company owned by the Ministry of the Treasury. The main objectives of the privatisation process have been to improve payment services, to achieve a higher degree of automation, to determine a pricing policy directed at covering production costs and to establish uniform methods for the disclosure of terms and conditions of contract.

As part of the integration of bank and postal circuits, in 1999 the Italian Post Office completed the process of involvement in the interbank procedures for the exchange and settlement of bank and postal cheques. In July 2002 a new agreement made effective the mutual acceptance of cheques. Furthermore, the Bank of Italy fostered the involvement of the Post Office in the low-value credit transfer procedure (in April 2000).

Presidential Decree 144 of 14 March 2001, enacted in May 2001, regulates the banking and financial activities carried out by the Post Office. Accordingly, the Post Office is subject to the same supervisory regime as banking and financial intermediaries. Particular importance is attached to payment services, the integration and interoperability of banking and postal circuits, and the role played by the Bank of Italy as oversight authority.²

Payment services provided by non-banking intermediaries are limited to instruments such as payment cards and money transfers.

The regulatory framework of the Italian payment system is based on the Italian Civil Code, the 1993 Banking Law (Legislative Decree 385 of 1 September 1993) and other specific laws, among which the Codified Law concerning note-issuing banks (see Codified Law 204/1910 and the Bank of Italy's Statutes with reference to bank transactions negotiated or executed by the Bank of Italy).

The Bank of Italy's interest in the proper functioning of the payment system and, in particular, of interbank circuits also stems from its role in the implementation of monetary policy and as supervisor of the banking system. The Royal Decree of 6 May 1926 gives the Bank of Italy exclusive responsibility for managing the clearing system for interbank payments.

The circulation of individual paper-based payment instruments (eg cheques) and the discharge of financial obligations (eg novation and bilateral netting) are governed by the provisions of the Civil Code and other specific laws (see Royal Decree 1345 of 21 September 1933, Legislative Decree 1736 of 21 December 1933 and Legislative Decree 507 of 30 December 1999).

¹ According to Directive 2000/28/EC of 18 March 2000, electronic money institutions, which issue means of payment in the form of electronic money, are credit institutions.

² Article 10 states: "Under Article 146 of the 1993 Banking Law, the Bank of Italy shall adopt all the necessary measures to ensure the integration of the Post Office in payment systems and the interoperability of postal and banking payment circuits."

Legislative Decree 210 of 12 April 2001 transposed into Italian law the provisions of Directive 1998/26/EC on “settlement finality”. With regard to designated payment and securities settlement systems, the decree abolishes the “zero hour rule”, introduces a special regime for guarantees given to the system and issues provisions to protect the participants which settle securities trades on behalf of other intermediaries. If insolvency proceedings are initiated, the Bank of Italy is responsible for collecting all the necessary information and distributing it to all the competent authorities. With regard to cross-border credit transfers, Directive 1997/5/EC was transposed into Italian law by way of Legislative Decree 253 of 28 July 2000.

The 1993 Banking Law, which came into force on 1 January 1994, entrusted the Bank of Italy with explicit responsibilities and powers aimed at promoting the efficiency and reliability of the payment system (Article 146 on payment systems oversight). This function is performed in accordance with the Guidelines issued by the ECB.

With regard to the transparency of banking services, the 1993 Banking Law gave the Bank of Italy the power to control the way in which commercial banks deliver the information they are required to provide to customers.

Competition is safeguarded by the antitrust law, and the responsibility for preventing restrictive practices in the banking system is entrusted to the Bank of Italy (see Law 287 of 10 October 1990).

Law 197/1991 enabled the Bank of Italy to supervise the activities of non-banks which operate in the payment system, including intermediaries which carry out funds transfers via payment cards, in order to counteract money laundering. The same law limited the use of cash to payments of up to around EUR 10,000.

In 1994, following the implementation of a European Investment Service Directive, the Italian parliament instructed the government to enact a CLFI. At that juncture the government took the opportunity of changing the regulation on issuers of securities on regulated markets with the purpose of improving the protection of investors and the interests of minority stakeholders.

The CLFI, which came into effect in February 1998, is therefore divided into three main parts: a regulation on issuers of securities on regulated markets; a regulation on financial intermediaries; and a regulation on financial markets and the CSD.

The CLFI confirms the private nature, first established by Legislative Decree 415/96, of the management of financial markets, SSSs and the CSD. Privatisation has been achieved by separating the management functions, assigned to private companies, from the supervisory functions, assigned to the public authorities.

In this context, the financial markets have been privatised and financial services, from trading to settlement, are no longer strictly considered as public services. In order to enhance competition among financial services, financial markets are now managed by private companies, while settlement services are being privatised. The privatisation of financial markets and CSDs is specified in the CLFI (see Articles 61, 80 and 204), while the privatisation of settlement systems, particularly SSSs and clearing houses, is the result of the establishment of general regulations pursuant to the CLFI (see Articles 69 and 70).

The legal framework of CSDs has been completed by means of a number of rules on financial instrument dematerialisation established at the start of economic and monetary union. Dematerialisation is compulsory for all government bonds, for all private listed securities and for financial instruments as set out by the Companies and Stock Exchange Commission (Consob) and the Bank of Italy according to their degree of circulation.

Law 39 of 1 March 2002 transposed into Italian legislation European Directive 2000/46/EC on the taking-up, pursuit and prudential supervision of the business of electronic money institutions. The law empowers the Bank of Italy to define prudential supervision requirements regarding the financial stability of ELMIs and oversight requirements for e-money instruments and circuits.³ The process of

³ Article 55 amends Article 144, paragraph 4 of the 1993 Banking Law, which now states that, pursuant to Article 146 of the 1993 Banking Law, the Bank of Italy issues regulations aimed at enhancing the development of electronic money, ensuring the reliability of circuits and fostering their smooth functioning.

defining the requirements is currently under way; failure to observe the requirements will be subject to administrative sanctions.

1.1.1 The legal framework of regulated financial markets

In Italy the competent authority for regulated markets is Consob; however, the CLFI provides a derogation for those markets that are considered relevant for monetary policy.

In particular, the Ministry of the Treasury, having consulted the Bank of Italy and Consob, shall regulate and authorise wholesale markets for government securities. Currently, MTS SpA is the only Italian market management company authorised to manage wholesale markets for government bonds (see Section 4.1.1).⁴

1.1.2 The process of privatising the securities clearing and settlement systems

The Italian settlement system has long been characterised by fragmentation. In particular, the CSD's activities (notably custodial activities) have always been separated from the management of SSSs. Moreover, the government bond central depository system has been managed by the Bank of Italy and since 1974 the private securities depository system has been operated by Monte Titoli, a private company controlled by the Bank of Italy. The SSS has always been operated by the Bank of Italy. The implementation of the CLFI provided an opportunity to reorganise and privatise the securities clearing and settlement systems; in issuing the relevant regulations, the Bank of Italy and Consob maintained the provision requiring the securities cash leg in euros to be settled in central bank money. Pursuant to a provision of the CLFI, the Bank of Italy's share in Monte Titoli was sold in December 2000. Monte Titoli is developing a project for a new netting system to be implemented in the course of 2003, which should replace the securities net settlement procedure (LDT) (see Section 4.2.1).

Three different legislative provisions define the legal principles for the entire settlement system, which consists of an SSS, a CSD and clearing houses for derivative instruments.

SSSs are now governed by a general regulation issued by the Bank of Italy, in agreement with Consob (see the legal provision of 8 September 2000 on the clearing and settlement of transactions in non-derivative financial instruments under Article 69 of the CLFI). This regulation lays down the general framework and the conditions under which SSS activities can be managed by a private company.

The CSD's activities are governed by a regulation issued by Consob and the Bank of Italy (see Consob Regulation 11768/98) which defines the members, instruments and the company's instrument-related activities.

The activities of derivatives clearing houses are now governed by a general regulation issued by the Bank of Italy, in agreement with Consob (see the legal provision of 8 September 2000 on the clearing and guarantee of transactions in derivative financial instruments under Article 70 of the CLFI). The regulation states that the company must have a minimum level of capital and must adopt measures of risk containment such as the collection of margins. A more complete and specific regulation on central counterparty clearing of cash and derivative financial instruments will be issued by the Bank of Italy in agreement with Consob. This forthcoming regulation will lay down the general framework for guaranteeing transactions in financial instruments and replace the legal provision of 8 September 2000 on derivatives.

1.2 The role of the Bank of Italy

1.2.1 Payment systems oversight

The Bank of Italy has the power to exercise a controlling and guiding influence over financial activities in the field of payment services. The public interest in the payment system stems from the need to

⁴ Italian government bonds are also traded on Euro-MTS - the wholesale market for European benchmark government bonds managed by EuroMTS Ltd.

ensure its stability as well as to minimise coordination failures which may lead to inefficiencies. Consequently, the role of the Bank of Italy in the payment system is to ensure the smooth functioning of the system in terms of its efficiency and financial reliability.

As mentioned above, the oversight function is officially assigned to the Bank of Italy by virtue of Article 146 of the Banking Law, which states that the “Bank of Italy shall promote the regular operation of payment systems. For this purpose, it may issue regulations to ensure the efficiency and reliability of clearing and payment systems”.

According to the institutional arrangements for the Eurosystem’s oversight functions, the Bank of Italy is the principal overseer of domestic payment systems in those areas not specifically covered by the common oversight policy, namely retail payment systems, within the framework of the objectives and core principles defined at the Eurosystem level.

The oversight activities of the Bank of Italy can be performed autonomously and/or in cooperation with other authorities or private bodies playing an institutional role within the payment system.

The Bank of Italy divulges its policy stance concerning oversight through a full disclosure of its plans and methods of intervention to operators. Accordingly, in November 1999 it published the “White Paper on Payment System Oversight”. This document sums up the economic rationale, the scope of application, the main areas of interest and the instruments currently employed by the Bank of Italy in its capacity as an oversight authority.

A project has been initiated to regulate this function; this project envisages the establishment of rules by the overseer pursuant to Article 146 of the 1993 Banking Law. In particular, this activity should define:

- (i) the objectives with regard to the efficiency and reliability of payment systems, technical infrastructures and instruments;
- (ii) the areas of interest, by specifying the system activities and requirements as well as the rules governing the operation of infrastructures (specific provisions refer to relevant infrastructures);
- (iii) the oversight powers and responsibilities, among which those concerning ex ante and ex post information and control over the expected behaviours.

The oversight function in practice

In order to enhance security and confidence in the use of cheques, Legislative Decree 507 of 30 December 1999 introduced a new set of sanctions regarding cheques and provided for the establishment of an interbank database on cheques and payment cards (CAI), which started operation at the Bank of Italy in June 2002.⁵ In particular, the database contains information on natural and legal persons who have drawn unpaid or unauthorised cheques; these persons will be prohibited, on a system-wide basis, from issuing new bank or postal cheques for a period of six months.⁶ Furthermore, the database contains information on lost and stolen cheques and payment cards as well as on persons whose authorisation to use payment cards has been revoked.

With a view to ensuring the security of payment instruments, it is also crucial to prevent criminal activities. In this respect, the overseer, in cooperation with banking and financial supervisors and other competent authorities (in particular, the Italian Foreign Exchange Office, ie the Italian Financial Intelligence Unit), took part in the work of the European Commission on amending Directive 1991/308/EC on the prevention of the use of the financial system for the purpose of money laundering, and participates in the activities of the Financial Action Task Force (FATF) at the OECD to counter money laundering and the financing of terrorism. At the domestic level, in its dual capacity as payment

⁵ The database sections containing information on payment cards will be implemented at the end of 2002.

⁶ In the past, legislation did not provide for system-wide prohibition, but only for the right of the drawer’s bank to revoke the drawer’s right to issue cheques in the event of a protest or an equivalent statement for cheques drawn against insufficient funds. This procedure, which is still valid, consists of a legal statement lodged by a notary or other public officer certifying the non-payment of cheques. It permits the holder of the cheque to take action against the endorsers and their guarantors in order to recover the funds.

system overseer and banking and financial supervisor, the Bank of Italy published a "Decalogue" with instructions for operators to prevent money laundering to be applied also to innovative payment instruments, such as e-money.

In accordance with Law 287/90, the Bank of Italy performs the role of antitrust authority for the banking sector (see Article 20). In this connection, the overseer analyses the payment systems market open to customers and provides the necessary support for any enquiries concerning antitrust issues with regard to payment instruments.

In cooperation with its supervision departments, the overseer examines customers' complaints about instruments and payment systems with the aim of assessing whether the complaints actually indicate inefficiencies in the payment system (regardless of the outcome of specific disputes).

In early 2001, the Bank of Italy informed the market of its policy concerns over e-money.⁷ Operators were asked to communicate in advance the characteristics of their various projects to the Bank of Italy following the requirements set out in the 1998 ECB report on e-money. In particular, the overseer is interested in information concerning the integrity of the circuit, the efficiency of coordination mechanisms and technical security.

The transposition of the Directive on electronic money institutions empowers the Bank of Italy as oversight authority to issue provisions to guarantee the reliability of e-money schemes and the regular operation of circuits. The new Italian legal framework for e-money schemes takes into account the following factors: (i) the growing number of software-based e-money schemes for retail payments carried out via the internet, which to a great extent involve non-financial institutions; (ii) the widespread diffusion of technology and standards for smartcards, both payment and telephone cards, which are raising new concerns over the security, efficiency and transparency of payment instruments in open networks; and (iii) the ongoing work of the Eurosystem to strengthen the security requirements of each scheme and regulate the interoperability standards in order to improve compliance with requirements 3 and 4 of the ECB report on e-money concerning technical security and protection against criminal abuse.

Legislative Decree 253 of 28 July 2000 - transposing Directive 1997/5/EC on cross-border credit transfers - is a fundamental point of reference with regard to information and customer protection (particularly concerning arrangements for resolving disputes), together with the ECB documents on *Improving cross-border retail payment services*. Criteria and principles derived from the above-mentioned documents will be transposed into new rules in order to improve the efficiency of the retail payment system.

In 1997, Italy became the first country in Europe to consider digital signature as legally binding as handwritten signature (see Presidential Decree 513 of 10 November). The Bank of Italy committed itself to fostering the full interoperability of certificates, which is essential to prevent any loss or damage on the part of customers - in terms of costs and services - due to a lack of coordination among operators. Such interoperability, which is not automatically guaranteed by law, gives rise to the need for a definition of a technical profile for the banking community.

The technical rules governing electronic identity cards were established by Prime Ministerial Decree 437 of October 1999. Pursuant to Legislative Decree 10 of January 2002, transposing Directive 1999/93/EC on electronic signature, the Bank of Italy, in particular in its oversight capacity, gives an opinion as to when an electronic identity card is supposed to be used for payment purposes.

In the course of 2000 the monitoring of retail payment instruments was launched; particular attention was paid to cheques and credit transfers with the aim of protecting consumers. In March 2001 a new survey (involving commercial banks) was carried out by the overseer on execution time and the pricing of cheques, with specific regard to execution times for domestic credit transfers of less than around EUR 50,000 (see Sections 2.2.1 and 2.2.2).

Since "quasi-clearing and settlement systems" have recently emerged, the overseer has assessed one of these systems, which manages the retail payments of cooperative banks, with regard to:

⁷ In line with the Eurosystem's oversight policy stance, the oversight activity on e-money is based on the 1998 ECB report and takes into consideration Recommendation 97/489/EC on the transparency of electronic payment instruments. These guiding principles will be considered when the law on ELMIs is enacted by secondary legislation for oversight purposes.

(i) conditions for transactions; (ii) risk management procedures; (iii) the obligations/liabilities of the parties involved; and (iv) the means of settling disputes.

In December 2001 the Bank of Italy performed a self-assessment of the transparency practices relating to payment system oversight on the basis of the IMF Code of Good Practices on Transparency of Monetary and Financial Policies (MFP) (July 2000). The main goal of the assessment was to verify that the oversight policies and practices are presented to the public in an understandable and accessible form and on a timely basis. Since the Italian oversight function is performed within the framework of the European oversight policies and guidelines, the exercise contributed to the Eurosystem's assessment of compliance with internationally recognised standards and codes.

1.2.2 Market surveillance

The Bank of Italy has a supervisory role in those markets which are relevant for monetary policy: the wholesale screen-based market for government securities (MTS) and the screen-based interbank deposit market (e-MID).

With regard to the MTS, the objectives of the surveillance carried out by the Bank of Italy are the overall efficiency of the market and orderly conditions of trading. Since the market is managed by a market management company (MTS SpA), the Bank of Italy supervises this company as well. In accordance with the CLFI (see Article 66), the market management company is authorised by the Ministry of the Treasury in consultation with the Bank of Italy and Consob. The Ministry of the Treasury, in consultation with the Bank of Italy and Consob, approves the rules of the market. The surveillance of market activity is based on the continuous monitoring of trading and a flow of information (data feed procedures) stored in a database updated in real time. The Bank of Italy can request the market management company to provide any kind of data, information and documentation deemed necessary, and may carry out on-site inspections. The Bank of Italy may also request intermediaries to provide additional information on trading activity.

With regard to e-MID, this surveillance activity is based on the acquisition of trading data stored in a database updated in real time. Trading rules are established by the market management company e-MID SpA; the Bank of Italy may request information from the market management company and trading records (see Article 79 of the CLFI). Direct access to the data feed procedures allows the Bank of Italy to monitor prices, volumes, bid-ask spreads and dealers' market positions; further information may be obtained upon request. The Bank of Italy may submit a proposal for the adoption of administrative sanctions against e-MID organisers and participants to the Ministry of the Treasury (see Articles 190 and 195 of the CLFI).

As far as securities settlement procedures are concerned, the Bank of Italy has both regulatory and supervisory responsibilities with regard to the overall infrastructure, ie CSDs, SSSs and clearing houses. The Bank of Italy supervises the settlement management companies as well. The final objective of this framework of tasks, to be exercised in cooperation with Consob, is the containment of the systemic risk inherent in inefficient settlement systems and the prevention of system crises.

1.2.3 The operational role of the Bank of Italy

In Italy the central bank has traditionally played an important role in the direct provision of payment and settlement services with a view to improving the efficiency and stability of the payment system.

The operational role of the Bank of Italy in the payment and securities settlement systems currently entails the issuing of banknotes, the management of both BI-REL and BI-COMP (respectively the large-value payment system and the retail payment system in operation in Italy (see Section 3)), the management of the securities net settlement procedure (LDT), and the management of government payments as a fiscal agent.

Since market privatisation, and given the operational framework envisaged by the CLFI, the securities clearing and settlement services and the activities of the centralised securities custodian have been undergoing profound changes. First, the Bank of Italy no longer acts as custodian or administrator of government securities; those activities are now carried out by Monte Titoli (see Section 1.3.5). Second, by the end of 2003 the same company, which already operates the Express procedure for the real-time settlement of securities on a gross-gross basis, will also be managing the securities clearing and settlement system on a net basis. The securities cash leg in euros will continue to be settled in the

BI-REL system; this proves the pivotal role played by the systems operated by the Bank of Italy within the overall Italian payment infrastructure.

On completion of this process of change, the Bank of Italy will no longer act as manager of the securities clearing and settlement procedure. It will, however, remain responsible for both BI-REL and BI-COMP. In addition to the daily management of these two systems, the Bank is charged with monitoring their functioning and ensuring their efficiency, reliability and stability. In doing so, it observes the standards laid down by the BIS and the ECB and sets out its policy in conformity with these standards and international best practices. Following the approval of the Core Principles for Systemically Important Payment Systems by the Governors of the G10 central banks, the Bank of Italy carried out an IMF ROSC exercise which showed that BI-REL was compliant with the Core Principles. The Bank also conducted an analysis to assess the risks associated with BI-COMP; the findings were that this system should not be regarded as systemically important and that it is in any case compliant with most of the Core Principles.

In recent years great importance has been attached to improving the efficiency of the two systems by introducing new technology for routing payments and by further increasing their accessibility to foreign intermediaries (see Section 3.2.8). The introduction of the euro and the resulting boost to the integration of European financial markets led the Bank of Italy to reassess the range of financial services it traditionally offered to its foreign correspondents, primarily non-euro area financial institutions. Among these services, the Bank of Italy provides a gateway for correspondents to access TARGET and is about to develop a number of services related to cash management, the investment of reserves, securities custody and portfolio management.

1.3 The role of other private and public sector bodies

1.3.1 The Italian Bankers' Association

The Italian Bankers' Association (ABI) is a representative body for the whole banking system and is responsible for coordinating interbank agreements and establishing uniform operational and accounting methods in interbank relations; in conjunction with the Bank of Italy, it promotes the widest possible involvement in interbank initiatives and the dissemination of information.

1.3.2 The Interbank Convention on Automation

The Interbank Convention on Automation (CIPA) is an interbank association whose primary concern is to plan initiatives in the field of interbank automation with particular reference to telecommunication systems and interbank applications. It also coordinates the implementation of joint projects, particularly with regard to the development of the payment system. CIPA comprises the Bank of Italy, which has the chair and provides the secretariat, the ABI, 79 banks and 16 bodies and companies working in the field of interbank automation.

1.3.3 The Authority for Information Technology in the Public Administration

The Authority for Information Technology in the Public Administration (AIPA) is an independent administrative authority which was established with the aim of increasing, in accordance with efficiency and security standards, the level of information technology within the public administration. The Bank of Italy and AIPA have worked together to analyse and solve problems connected to (a) the use and broadest diffusion of digital signature among payment systems users and (b) interoperability between banking and financial systems, other economic sectors and the public administration. The tasks and duties currently performed by AIPA have recently been assigned to newly established agencies within the Ministry for Innovation and Technology.

1.3.4 The Interbank Company for Automation

The Interbank Company for Automation (SIA), established in 1977 by CIPA, has the objective of providing, inter alia, operational support for the banking system's automation projects. It manages the national interbank network (RNI) and is responsible for the development and operation of an integrated system of services and procedures which constitute the technological platform supporting the payment system and the financial market. Recently, a project to integrate the RNI in SWIFT was

launched given the convergence of network systems towards internet protocols. At the beginning of 2000 the Bank of Italy completed the disposal of its stake in the SIA, which in 1999 had merged with CED-Borsa (a software company which manages stock exchange trading systems), thereby integrating the management of IT systems in market and settlement systems.

1.3.5 Monte Titoli

Monte Titoli is a company which provides central custody and administration of transferable securities (shares and bonds). Since 1986 the CSD's activities in private securities have been regulated by a specific law (see Law 289/86) making Monte Titoli the only company authorised to administer private securities.

In 1998, following the implementation of the CLFI, positive innovations emerged affecting the set of rules governing the CSD; in particular, the CSD is no longer considered to have a monopoly, because the CLFI reinforces the privatisation and liberalisation principle under which competition is enhanced (see Article 80).

In August 2000 Monte Titoli was authorised to manage government bonds, which until then had been managed by the Bank of Italy; the actual transfer of government securities from the Bank of Italy to Monte Titoli took place at the end of 2000. Therefore, there is now one single CSD that manages both private and government securities.

Dematerialisation has increased the importance of the CSD because ownership of the securities has to be proven by way of a book entry.

In October 2000 Monte Titoli was authorised to operate the Express real-time system, which, from the outset, has operated together with the LDT procedure (see Section 4.2.1). In October 2001, Monte Titoli presented to the Bank of Italy and Consob a project for a new netting system (Express II), which will replace the LDT. The project has been approved by the authorities and the new system should become operational in the second half of 2003.

1.3.6 The Cassa di Compensazione e Garanzia

The Cassa di Compensazione e Garanzia (CCG) acts as a clearing house and is responsible for the management of guarantee funds (see Sections 4.2.2 and 4.3.3).

1.3.7 The Companies and Stock Exchange Commission

The Companies and Stock Exchange Commission (Consob) plays a regulatory and supervisory role in regulated markets other than wholesale markets for government bonds. The aim of its supervisory responsibilities is the transparency of markets, orderly trading, and the protection of investors.

In accordance with the CLFI, Consob may give authorisation to market management companies, having verified the fulfilment of certain requirements (see Article 63), and it plays a supervisory role in regulated markets and market management companies (see Articles 73 and 74). In the event of serious irregularities in the management of markets or in the administration of management companies, and whenever necessary for the protection of investors, Consob adopts extraordinary measures to protect the market and management company from crises (see Article 75).

1.3.8 The market management companies

Market management companies have a number of regulatory and supervisory responsibilities. In accordance with the CLFI (see Article 64), market management companies shall: (i) provide the structures and services necessary for the proper functioning of the market; (ii) manage the market from an operational point of view; (iii) be in charge of admitting intermediaries and financial instruments to trading and excluding or suspending them from trading; and (iv) ensure compliance with any rules provided by insider trading laws (registration of operations and distribution of relevant information subject to public disclosure).

2. Payment media used by non-banks

2.1 Cash payments

Until 31 December 2001, the legal tender in circulation consisted of banknotes in seven denominations issued by the Bank of Italy (ITL 1,000, 2,000, 5,000, 10,000, 50,000, 100,000 and 500,000) and coins (around 2% of total legal tender) in eight denominations issued by the Ministry of the Treasury.

Until 28 February 2002 lira banknotes and coins circulated together with euro notes and coins; the latter have been the only legal tender in circulation as of 1 March 2002. At the end of 2000 the ratio of the stock of currency in circulation to GDP was 6.0% (5.9% in 1994).

Several factors foster the use of cash in Italy. The "grey economy" is still large and contributes to increasing the willingness to use cash for payments. Furthermore, certain areas of the country are characterised by a low degree of financial sophistication. On the supply side, the banking sector has built a widespread and cheap ATM network, which increases the number of cash withdrawals from current accounts. However, in recent years initiatives such as PagoBancomat (debit cards used at POS terminals) and the diffusion of credit cards have represented a break with past trends.

Other liabilities issued by the Bank of Italy

The Bank of Italy issues cashier's cheques for amounts of between EUR 500 and EUR 500,000 against cash payments for the corresponding amount. This instrument is also used for certain non-recurring payments carried out by the central bank on behalf of public entities (tax refunds and severance pay to central government employees).

Following reforms in the area of government payments, the use of such liabilities issued by the central bank is declining. In 2000 the Bank of Italy issued around 5.1 million cashier's cheques (against around 5.8 million in 1994) for a total value of ITL 24,886 billion (EUR 12,853 million).

In 1999 an electronic payment order procedure (EPOP) was launched so as to reduce the use of paper-based documents and to perform government payments via credit transfers.⁸ The progressive integration of the Ministry of the Treasury's payments into the interbank payment system is being pursued through the widespread use of interbank procedures.

2.2 Non-cash payments

In 2000, 44 transactions per capita⁹ were performed using instruments other than cash (36 in 1994). At the end of the same year, current accounts numbered 33.5 million, in comparison with 25 million in 1994 and 22 million in 1990. Moreover, the number of bank branches per 10,000 inhabitants amounted to 4.9 (while that of postal ones around 2.4).

According to the most recent survey, approximately 73% of Italian households have a bank current account and 11% a postal current account; the use of accounts differs enormously between northern and southern Italy. In northern Italy, the ratios are 89% and 9%, respectively, for bank current accounts and postal current accounts; by contrast, in southern Italy the corresponding figures are 44% and 17%.¹⁰ Bank instruments account for approximately 85% of the value and 64% of the volume of non-cash payments. Cheques and banker's drafts are the most commonly used bank instruments in Italy, but their importance is declining while that of direct debits, credit transfers and some types of cards for transactional purposes is growing. Payment cards account for only 21.3% of the volume of

⁸ EPOP is one of the most important innovations in government accounting. It represents the practical implementation of the automation of spending procedures set out in Presidential Decree 367 of 20 April 1994. In value terms, most of the orders settled in cash are for less than EUR 516; on the whole, the large majority of payment orders are for less than EUR 25,823.

⁹ Including RIBA, transactions per capita amount to 48 (see footnote 13).

¹⁰ Banca d'Italia, *Italian Household Budgets in 2000, Supplement to the Statistical Bulletin*, Rome, 18 January 2002.

non-cash payments;¹¹ however, in recent years the number and use of payment cards have been increasing (see Section 2.2.4).

2.2.1 Credit transfers

In 2000, there were 320 million bank credit transfers for a total value of ITL 8,732 trillion (EUR 4,510 billion). This instrument is widely used throughout the economy, even for retail transactions (eg direct crediting of wages, salaries and pensions).

The Bank of Italy has promoted a thorough overhaul of the circuit which provides for three specialised procedures handling retail, large-value and cross-border credit transfers. All three procedures allow for the settlement of transactions in central bank money and the execution of payments within predefined time limits.

The retail credit transfer procedure - launched in November 1994 for transactions of less than ITL 500 million (EUR 258,000) - settles transactions through the retail subsystem of BI-COMP (see Section 3.3.2). The ABI's regulations provide for maximum payment execution times, ranging from same day execution for urgent credit transfers initiated before 11 am (quite expensive and representing only a marginal share) to up to four days for ordinary credit transfers.

The large-value credit transfer procedure, handling transactions of over EUR 258,000, settles through the BI-REL system on the centralised accounts at the Bank of Italy (see Section 3.2).

Since 1999 the cross-border credit transfer procedure, which was designed mainly for large-value payments, has allowed for the transfer of customers' funds through the TARGET system for payments within EU countries. However, a large number of cross-border transactions are still executed and settled through banks' correspondent accounts.

Analyses conducted by the Bank of Italy on data collected among banks (at head office as well as at local branch level) pointed out that further improvements to low-value domestic credit transfers could be made with respect to the following critical points:

- the quality of service offered to customers in terms of average execution time from originator (debtor) to receiver (creditor) - about four days - is not in line with the terms and conditions prevailing in interbank procedures;
- the existing disclosure rules and practices for domestic credit transfers are not sufficient to ensure comprehensive information for the customer. By contrast, the Directive on cross-border credit transfers (transposed into Italian law in July 2000) requires banks to give detailed ex ante and ex post information on cost- and time-related conditions applied to both payer and payee;
- the alternative dispute resolution mechanisms in place for cross-border credit transfers within the European Union, which ensure equal representation for all interests involved, could be extended to domestic credit transfers.

2.2.2 Bank cheques and banker's drafts

In 2000, 560 million bank cheques (including banker's drafts¹²), totalling ITL 2,196 trillion (EUR 1,134 billion), were drawn on bank customers' current accounts.

In recent years, interbank procedures for handling cheques have been revised. At present there is:

- a procedure for large-value cheques (over EUR 2,582) and large-value banker's drafts (over EUR 10,329); and

¹¹ Payments performed using bank and non-bank cards.

¹² The banker's draft is drawn by a bank and is similar to the traveller's cheque. It is issued solely by specially authorised banks for amounts deposited in cash at the time of issue or debited to the applicant's account. In 2000, banker's drafts represented 16% of all cheques, totalling ITL 544 trillion (EUR 281 billion), as against 26% and ITL 521 trillion (EUR 269 billion) in 1994.

- a procedure for low-value cheques (up to EUR 2,582) and banker's drafts (up to EUR 10,329).

Low-value cheques and banker's drafts (around 80% of all cheques processed) are handled through a truncation procedure, implemented in 1990, which replaces physical delivery with electronic interbank messages. Data on low-value truncated cheques are conveyed through the RNI at night (day T) and the cheques are settled through the clearing system the following day (T+1). Unpaid cheques must be notified within the following three days (T+4). In July 1999 the Post Office also adopted this procedure for postal cheques.

Despite these improvements, the time it takes for banks to credit funds to their customers remains significantly longer than should be needed following the reorganisation of the interbank circuit. The large number of days required for funds to be available on customers' current accounts remains a critical concern with regard to cheque payment services in Italy. Hence, cheques are still perceived as a risky means of payment involving higher levels of administrative costs and more implicit pricing than other non-cash payment instruments.

A survey was conducted in March 2001 on the cost of cheques and the time taken to credit them; the survey covered the entire Italian banking system. The average number of days required for funds to be available on customers' current accounts was approximately seven working days, or 10 days including the finality of the transaction. The charge implicit in the value date averaged four days, with differences between banks ranging from two to six days. This service could be improved upon both by reconsidering the conditions being applied and by introducing clear charging mechanisms.

2.2.3 Collection orders (direct debits and bank receipts)

Italian banks execute collection orders, mainly on behalf of enterprises and public utilities. These orders are originated by creditors and may be executed by debtors through different methods of payment; direct debits are carried out by means of preauthorised debits of payers' current accounts; collections of bank receipts are executed through other methods of payment (see below).

Direct debits totalled 326 million in 2000 (79 million in 1994) and are mainly used by firms to collect recurrent low-value payments (eg utility bills). Bank receipts are used by firms to collect trade and other credits. Bank receipts perform an economic function similar to bills of exchange, but do not have the same legal protection (eg they cannot be disputed); nevertheless, owing to a lower stamp duty and the implementation in the 1980s of the electronic bank receipt procedure (RIBA), bank receipts have gradually replaced bills of exchange. Although not included in the country and comparative tables, in 2000 approximately 243 million commercial bills and paper-based and paperless bank receipts were collected through the banking system; the share of RIBA increased from 38% in 1989 to 70% in 1994 and to 93% in 2000.¹³

Furthermore, over the last four years, a corporate banking procedure has been made available in response to firms' need to rationalise and reduce the cost of their banking transactions, a need which has been made more acute given that firms hold accounts at different banks. This new procedure enables businesses to transmit their payment and collection orders to banks online via a single institution which acts as an agent; in March 2001, 641 banks were involved, as against 270 at the end of 1995.

2.2.4 Payment cards

Debit cards

At the end of 2000 there were 21 million debit cards in circulation which could be used to execute both payments and cash withdrawals through a nationwide network of POS terminals and ATMs.

ATM transactions are processed through the retail subsystem and settled through BI-COMP.

¹³ Until 1999, country statistics included RIBA in "Other items".

The use of debit cards for withdrawals at ATMs is widespread and growing rapidly. In 2000, 528 million withdrawals (25 per card) were executed compared with approximately 100 million in 1990. The share of ATM transactions grew from 50% of overall cash withdrawals in the banking system in 1990 to 73% in 2000.

The use of debit cards at POS terminals is expanding rapidly. In 2000 over 317 million such transactions were effected compared with 5 million in 1990, thus representing an average annual growth of 47% over the last decade. The number of transactions per card rose from 3.9 in 1990 to 15.7 in 2000. PagoBancomat is the major nationwide debit card network (around 90% of domestic debit cards in circulation). At the end of 2000 the PagoBancomat trademark was shared by some 675 banks acting in close liaison; they can compete in offering payment services to their own customers, cardholders and retailers. The main features of this system are as follows: (i) the provision of a common infrastructure; and (ii) a single trademark and a common set of rules and standards established by the ABI and the Convention for the Management of the Bancomat Trademark (CO.GE.BAN), which are responsible for organising and operating network facilities.

Credit cards

Credit cards are not widely used in Italy in comparison with other European countries; however, in recent years growing competition among suppliers of payment services and changing consumer habits have led to an increase in both the number of credit cards and their usage. At the end of 2000, 17 million credit cards issued either by banks or by non-bank companies (travel and entertainment cards) were in circulation, as against 4.5 million in 1990. Nevertheless, in 2000 only 55% of credit cards in circulation were used at least once over the year. In the same year, the number of credit card operations totalled 272 million, or 16 operations per card in circulation.

A more widespread use of credit cards is still being hampered by ATM cash withdrawals and gaps in services in various parts of Italy. In 2000 the value of ATM cash withdrawals as a share of GDP per capita represented around 7.7% compared with 2.2% for credit card expenditures. Moreover, the percentage of credit card transactions performed in southern Italy is almost half that of northern Italy; the same discrepancy was noted in 1990.

In the area of credit cards there are two main initiatives. Since 1968, a single bank has been able to issue a card linked to the Visa circuit. Since 1985, it has been possible for cards to be issued on a cooperative basis by Servizi Interbancari, a company owned by approximately 140 shareholders, most of which are banks. Around 800 banks are currently taking part in the latter scheme, which represents the major nationwide credit card network (in both the issuer's and the acquirer's market) and is linked to both Visa and MasterCard. In recent years, a number of individual banks have launched proprietary cards directly linked to international circuits. Travel and entertainment cards are issued by American Express and Diners Club.

E-money and card payments over the internet

A number of new initiatives are currently emerging aimed at developing payment services and instruments for use on open networks. Since July 2002, eight schemes have been operating and further schemes have been submitted to the Bank of Italy for evaluation; these new products call for an overall assessment of the security, transparency and anti-money laundering aspects of electronic money transfers.

With reference to the security of payments via an open network, a survey of the leading issuers of credit cards revealed that, in the first two months of 2001, 15% of credit cards in circulation were used at least once for internet, mail or phone purchases of low-value goods. Moreover, research carried out on the "charge-back"¹⁴ facility revealed that the majority of charge-backs are related to remote credit card transactions (the internet, MO/TO), mainly for "unauthorised" transactions.¹⁵

¹⁴ The "charge-back" facility is the technical term used by international card schemes to describe the refund process involved in respect of a transaction carried out using a card following the violation of a rule.

¹⁵ Charge-backs are declining due to improvements in the administrative and technical procedures (eg better e-merchant selection, use of pseudo card numbers and card verification value).

According to a study carried out by the Bank of Italy, in February 2000 fewer than 130 banks were offering their customers payment services through the internet. In relation to the overall supply of banking services via the network, which consisted mainly in securities trading on behalf of customers, payment system operations accounted for around 13% in value and 21% in volume.

ATM and POS networks

In recent years both the ATM and POS networks have grown rapidly. ATMs numbered 31,720 at the end of 2000; the number of ATMs per branch rose from 0.55 in 1990 to 1.13 in 2000. Currently over 90% of ATMs are interconnected within the nationwide network (Bancomat). All banks located in Italy which comply with Bancomat's rules are eligible for membership.

POS terminals totalled 571,000 at end-2000, compared with 22,000 at end-1990. However, their use is still limited (1,002 operations per terminal per year) in comparison with other industrialised countries and domestic ATM cash withdrawals (around 16,500 operations per ATM terminal per year at end-1999). Most POS terminals are linked to the PagoBancomat network.

2.3 Recent developments

The Bank of Italy, together with the banking and financial community, is engaged in further initiatives to improve the efficiency of payment instruments and to rationalise the payment system by correcting distortions. The objective is to facilitate the transition towards the most efficient instruments for each type and size of transaction.

The Italian banking community committed itself to speeding up the process towards a definition of the conditions for creating a Single Euro Payment Area (SEPA). Preliminary initiatives have concerned the infrastructure arrangements (eg STEP2), the governance structure and the diffusion of standards and rules for straight through processing,¹⁶ including enhancing interfaces with customers.

With regard to other means of payment, two new projects are being developed. With a view to improving security in credit card transactions and offering new services to customers, the ABI has established a specific department with the task of creating a microchip card in which the functions of credit and debit cards are embedded; the migration to EMV microchip cards is currently being tested in the test phase and will be completed by the end of 2005. In the area of interoperability in general, the Bank of Italy has acted to promote the integration of electronic identity cards with bank and postal microchip cards.

In the field of central government payments, the Bank of Italy, in cooperation with AIPA and other public bodies, is trying to take advantage of the opportunities offered by the progress being made in online information technology. The integration of the public administration network with the RNI permits the use of electronic payment orders for all payments made by central departments of the public administration and their local units.

3. Interbank clearing and settlement systems

3.1 General overview

The current structure of the Italian payment system is the outcome of two far-reaching reforms implemented in the 1980s and 1990s. An additional round of reform is currently under way.

The first reform, dating back to the end of the 1980s, had two main aims: (i) promoting settlement in central bank money by reducing recourse to correspondent accounts; and (ii) boosting the efficiency of payment instruments. These goals were achieved by implementing automated interbank procedures - specialised according to the type of transaction (credit transfers, cheque truncation, etc) - which

¹⁶ In the first half of 2001, Italian banks completed the assignment of international bank account numbers (IBAN) to customers.

envisage common standards and a maximum time limit for the execution of payments. In addition, greater use of the clearing and settlement system operated by the Bank of Italy was promoted.

The second reform, introduced in the mid-1990s, was directed, above all, at minimising systemic risks in an environment characterised by a substantial rise in the volume of transactions, which were mainly settled on a net basis. This objective was pursued through the implementation of the two specialised systems: BI-REL for large-value payments and BI-COMP for retail transactions. Both systems are managed directly by the Bank of Italy. The distinction between retail and large-value payments is not based on the value but on the operating procedures with which the transactions are handled; payments using the same operating procedure are all settled in the same circuit. Following the start of monetary union, BI-REL became the domestic component of TARGET.

In the light of these reforms, interbank payments settled in central bank money increased significantly from six times GDP in 1988 to 40 times GDP in 1998. Following the start of EMU, the reduction in foreign exchange transactions has led to a fall in interbank payments compared with the previous year. In 2001, interbank payments were 33 times GDP. In the same year, transactions settled on a gross basis accounted for 88% of total payments.

The Italian clearing and settlement system is currently characterised by high levels of reliability and efficiency ensured by widespread automation. A crucial role in payment processing has been played by the RNI, which provides the technical infrastructure for the exchange of accounting information relating to payments carried out by banks amongst themselves and between themselves and the Bank of Italy. Open, flexible and non-discriminatory access to the systems fosters a high level of competition among intermediaries. Particular attention has been paid to promoting the participation of foreign intermediaries in the Italian payment system. To this end, access to BI-REL on a remote basis through the use of the SWIFT standard was implemented in November 2000.

The increase in competition between financial centres in the euro area and advances in technology have spurred the Bank of Italy to undertake an important project (New BI-REL) to further improve the efficiency of the BI-REL system, thus strengthening the competitiveness of the Italian marketplace and meeting users' needs. To this end, new facilities will be introduced which will allow participants to have services tailored to their needs. Further opening of the system to foreign participants will be achieved through the migration of domestic and cross-border transactions to the SWIFT network and the adoption of internet technology. The new system will be implemented gradually, and its launch is scheduled for June 2003 (see Section 3.2.8).

As regards retail payments, planned changes are directed at improving the efficiency of payment instruments in terms of both charges and speed of execution. In this respect, the possibility of settling payments on a same day basis is under analysis.

3.2 Real-time gross settlement system

BI-REL was conceived in close liaison with the banking community and came into full operation in 1998. With the setting-up of BI-REL - which increases the use of central bank money for the settlement of interbank payments - the goal of enhancing the stability of the payment system as a whole has been achieved. Similarly, the possibility of settling payments in real time has contributed to heightening the efficiency of the payment services provided by banks to their customers. The twofold objective of ensuring the orderly and smooth functioning of BI-REL and limiting the liquidity costs for intermediaries has been attained by providing the following facilities: (i) intraday liquidity to intermediaries in the form of fully collateralised daylight overdrafts; and (ii) a queuing mechanism for temporarily uncovered payments.

3.2.1 Operating rules

In BI-REL, all payments are settled continuously and individually through the centralised accounts held by intermediaries at the Bank of Italy. The system guarantees the final and irrevocable settlement of payments.

Each centralised account is composed of reserve and overdraft sub-accounts. Since January 1999 the accounts have been denominated in euros. Payments are settled by making use of the liquidity available in both these accounts and by using an automatic mechanism without any need for intra-account transfers. More specifically, the debiting of payments takes place in the following order: first

the reserve account on the basis of the liquidity available (both voluntary reserves and minimum reserves), then the overdraft account. The crediting of payments is carried out in the reverse order.

According to the harmonisation principles laid down for TARGET, intraday liquidity - which is unlimited but fully collateralised - is provided by the Bank of Italy free of charge; remote participants are not eligible for intraday liquidity, nor do they have access to the marginal lending facilities. With a view to improving the efficiency of banks by using intraday liquidity, banks can transfer securities in real time from their centralised securities accounts to the Bank of Italy's securities account at Monte Titoli.

Another important facility which contributes to increasing the system's overall efficiency is the queuing mechanism for payments temporarily without cover. It has been designed to enhance the flexibility of the system by relieving banks of the need to re-enter payments into the system. Payments entered into the system are channelled according to an order of priority automatically determined by BI-REL: high priority is given to clearing balances, transactions with the Bank of Italy and other NCBs or the ECB, and operations by the Bank of Italy (such as monetary policy operations, the cash leg of securities transactions and multilateral balances generated by BI-COMP); medium priority is given to transactions on e-MID; and ordinary priority is given to other interbank payments. Within the order of priorities, payments are executed on a first in, first out (FIFO) basis. At the end of the day, the first available, first out (FAFO) mechanism is activated automatically a few minutes before the cancellation of queued payments, in order to minimise the number of payments deleted (see Section 3.2.4).

BI-REL allows intermediaries to have information on queued payments. The information given to a participant on its debit positions in the queue is detailed (in chronological order, stating the amount and the counterparty, etc) so as to allow for the correct scheduling of transfers. With regard to incoming payments, the recipient bank is currently allowed to see only the total amount and the number of payments.

The BI-REL system uses the RNI. As from November 2000 it has also been possible to access BI-REL via SWIFT, which links the system participants directly to the Bank of Italy. With a view to ensuring the exchange of payments among intermediaries who use different systems (for instance, the originator uses SWIFT and the recipient uses the RNI or vice versa), BI-REL provides a SWIFT-RNI protocol conversion service free of charge. With the start of the upgraded system (New BI-REL), the new SWIFTNet network based on the TCP/IP transmission protocol will be used (see Section 3.2.8).

3.2.2 Participation in the system

Participation in BI-REL is open to banks, investment firms, organisations providing clearing and settlement services and public sector bodies. In order to be able to participate in the system, the participant must hold a settlement account at the Bank of Italy and comply with the access criteria set out in the TARGET guideline. At the end of 2001, 681 intermediaries were participating in BI-REL, of which 671 were credit institutions and 10 non-banking institutions. Foreign institutions established in a country belonging to the European Economic Area may have remote access to BI-REL via SWIFT. They are simply required to open a settlement account with the Bank of Italy and to provide the latter with legal opinions.

Participation in BI-REL is characterised by a high level of flexibility: each participant is able to extend the possibility of using its settlement accounts to other participants through an agency agreement (co-management), but it shall retain full responsibility in respect of being the owner of the accounts. It is also possible to exchange payments directly through the interbank procedures and confer upon another intermediary the right to settle such payments (so-called indirect participation).

3.2.3 Types of transactions handled

According to the specialisation principle, the following transactions are settled in BI-REL: (i) large-value domestic payments; and (ii) cross-border payments within TARGET, regardless of their value. In particular, the payments settled include: (i) transactions carried out directly by participants through SWIFT or the RNI; (ii) the multilateral balances generated by BI-COMP for domestic retail payments; (iii) the multilateral balances from the clearing and settlement services of transactions in financial instruments (see Section 4.2.1); (iv) the cash leg of securities transactions, including monetary policy operations settled on a real-time gross basis by using the DVP system (Express procedure - see Section 4.3.1); (v) transactions concluded on e-MID (see Section 3.2.9); (vi) direct interbank external euro payments and the euro leg of foreign exchange transactions (GEC); (vii) large-value domestic credit transfers (BIR); (viii) external payment orders for cross-border credit transfers (BOE); and

(ix) cross-border transactions via TARGET, including the multilateral balances denominated in euros stemming from the Continuous Linked Settlement system (CLS).

3.2.4 Operation of the transfer system

The working hours of the BI-REL system are fixed at the European level and are the same as those of TARGET (from 7 am to 6 pm CET). BI-REL's operational day is divided by five cutoff times, of which the first two are domestic while the others are laid down in the TARGET guideline:

- (1) Cutoff (12 noon) for settlement of the multilateral balances generated by BI-COMP for retail payments.
- (2) Cutoff (12.30 pm) for settlement of the cash leg of securities transactions originated by the LDT procedure.
- (3) Cutoff (5 pm) for entering payments on behalf of customers (domestic and cross-border). The FAFO mechanism used to optimise the settlement of queued cross-border customer payments starts operating. After this process, uncovered customer cross-border payments are cancelled.
- (4) Cutoff (6 pm) for executing interbank transactions (domestic and cross-border) and start of the FAFO mechanism to optimise queued payments (domestic customer payments as well as domestic and cross-border interbank transactions). Uncovered payments are cancelled and will not be automatically re-entered the following day.
- (5) Cutoff (6.30 pm) for resorting to the standing facilities. If intraday liquidity is not paid, it is automatically transformed into marginal lending.

3.2.5 Transaction processing environment and settlement procedures

The flow of information in BI-REL follows a "V" pattern: the message linked to each payment is transmitted by the sending bank to the central bank and from the latter to the receiving bank, but only after cash availability has been verified and the sending bank's account has been debited. The same procedure automatically provides every operator with information on individual payments settled.

In BI-REL, each debt transaction is posted to the settlement account if funds (including intraday liquidity) are available; temporarily uncovered payments are channelled into the queues. Queued payments are not revocable except in the event of error; the cancellation of an interbank transaction is carried out by the Bank of Italy, the system manager, on the basis of a request from both counterparties. Obviously payments are not revocable once the debtor's account has been debited.

3.2.6 Credit and liquidity risks

Given that payments in BI-REL are settled one by one in central bank money and considering the very short settlement time (payments temporarily without cover wait, on average, less than 30 seconds), the credit risk is minimised. With regard to the BI-COMP and LDT clearing systems, given that the securities and cash accounts of the receiving institutions are credited only after checking the availability of funds in the accounts of the debit institutions, no fundamental risk occurs.

With a view to discouraging delays in the settlement of the netting systems, banks which are unable to settle their multilateral balances on time are penalised. In particular, banks are charged with: (i) penalties of EUR 500 for late settlement of the BI-COMP multilateral balances; and (ii) an *ad valorem* penalty for late settlement of the multilateral balance in the LDT procedure. In this respect, penalties applied may not exceed EUR 25,000. In the event of the insolvency of a participant in BI-COMP, new multilateral balances are determined by excluding the insolvent participant (unwinding). In the event of a participant's default in LDT, an unwinding procedure is applied, with the exception of listed equity transactions, the balances of which are covered by the guarantee fund managed by the CCG (see Section 4.3.3).

3.2.7 Pricing

In accordance with the principle established at the Eurosystem level, BI-REL's pricing policy aims to cover the cost of services offered. The fees charged consist of an annual fee of EUR 1,500 and a

transaction fee of EUR 0.50 for electronic domestic payments (EUR 12 for paper instructions). For cross-border payments, fees are those established at the European level for TARGET. Transaction fees are charged to the sending bank.

3.2.8 New BI-REL

New BI-REL, whose strategic and operational guidelines were formulated together with the Italian banking community, is aimed at implementing a system characterised by enhanced service levels, higher flexibility in handling payments, increased standardisation and fully automated payment procedures (straight through processing, STP). The new system will go live by the second half of 2003.

In particular, New BI-REL will provide the following facilities:

- (1) The liquidity reserve for settlement of the multilateral clearing balance stemming from the overnight cycle of the securities settlement system (Express II - see Section 4.3.2) and that for urgent payments.
- (2) New interactive services whereby participants, in addition to the usual enquiries regarding status of payments and accounts, can: determine the urgency of a payment at the time of entry; modify the priority of a queued payment or cancel it from the queue; modify the amount of liquidity reserve in real time; and make enquiries about incoming domestic payments in other participants' queues. The interactive services of New BI-REL represent a major change in payment system arrangements. The system goes beyond the mere information function to allow for direct interaction with the settlement system, without the mediation of the Bank of Italy. As the time factor is of ever increasing importance, participants will have a means of flexibly managing payment flows and rapidly resolving any payment emergencies.
- (3) Optimisation of payments with a view to simultaneous bilateral settlement of individual payments in participants' queues, after verification of settlement account balances. This function is applied automatically throughout the operating day in order to reduce intraday liquidity needs and cut transaction settlement times.

As for technology, New BI-REL will be completely open to the SWIFT infrastructure. The use of SWIFT international standards for the messages carrying payment instructions guarantees a high degree of automation. For domestic interbank transactions the system will use SWIFT's FIN Copy service, with the Y-Copy transmission mode ensuring confidentiality of the commercial information in the messages. The new SWIFTNet network will also be adopted, based on the TCP/IP transmission protocol used for the internet. This will provide participants with the interactive functions in real time, via two further SWIFT services: Browse, essentially for data enquiry, and InterAct, for operational actions such as modifying queued payment priorities or the size of one's liquidity reserve.

3.2.9 The screen-based market for interbank deposits

An important role in the distribution of liquidity is played by e-MID, which is the main Italian uncollateralised money market. e-MID is organised and managed by e-MID SpA, a private company currently owned by 40 banks and financial institutions. The average daily traded volume was EUR 15.4 billion in 2001 and around EUR 17.3 billion in the first six months of 2002. The market has been continuously growing as an international market and it has now become one of the leading European money markets; in the first half of 2002 the market share of non-resident banks amounted to around a 17% share of the entire market.

At the end of 2001, the market had 192 members, both Italian and foreign. Financial intermediaries eligible to participate in e-MID are: Italian banks, foreign branches of Italian banks, EU banks, branches of EU banks established in the European Union, non-EU banks and branches of non-EU banks established in the European Union.

Trades between participants holding an account at the Bank of Italy are settled automatically via BI-REL; in other cases deals are settled semi-automatically via TARGET. For this reason, in order to be admitted to trading, a financial intermediary must participate in the Italian real-time gross settlement system, or in another RTGS system. When banks - carrying out transactions on e-MID - participate in the BI-REL system, payment orders are automatically sent to such a system; the debiting and crediting of settlement accounts, therefore, take place in real time (automatic settlement model). When one of

the two banks involved, or both, participate in other RTGS systems (cross-border payments), the e-MID system sends payment notices to the bank which is obliged to pay and the latter has to forward the payment to its RTGS system (semi-automatic settlement model).

Four different types of contracts can currently be traded on e-MID: overnight, tomorrow next, spot next and time deposits. Four fifths of funds are negotiated overnight and the interest rate on this maturity is strictly correlated to the EONIA. Participants may display bid and offer quotes. When an application is received for a bid quote (request of funds), the contract is automatically executed, while an application for an ask quote may be rejected by the bank offering funds. In addition, e-MID SpA has developed e-MIDER, the electronic market for EONIA swaps, and provides its members access to the MTS repo platform.

The electronic trading platform which supports the market offers important advantages in terms of transparency and efficiency: at any time each participant can view all the current buy and sell proposals. Thanks to its high liquidity, bid-ask spreads are very narrow, especially on the most liquid maturities.

3.3 Retail payment system

Following the reform of the Italian payment system implemented in 1998, retail payments are now handled by the BI-COMP system, which is composed of two subsystems: the local clearing subsystem for paper-based transactions, and the retail subsystem for paperless transactions. On average, BI-COMP handles around 4 million payments a day (amounting to around EUR 8 billion).

With a view to reducing the settlement risks in BI-COMP, as from the end of 1998 all cash balances in the LDT procedure (see Section 4.2.1) were moved from BI-COMP to BI-REL, where they are directly settled in central bank money.

With regard to participation in the BI-COMP system, access is restricted to banks, the Postal Administration, the Bank of Italy and the Ministry of the Treasury. Participation in BI-COMP may be direct or indirect.

3.3.1 The local clearing subsystem

The local clearing subsystem is managed by the Bank of Italy. It handles paper-based operations requiring the physical exchange of items (ie non-truncated bank cheques, banker's drafts, bills and postal instruments). The accounting information on paper-based transactions is posted by means of the RNI or a floppy disk, thereby making it possible to automatically determine the multilateral balance of each participant.

With a view to rationalising the exchange procedures and meeting the needs of the banking system, since 1998 the exchange of paper-based transactions has been concentrated within two clearing houses (located in Rome and Milan) instead of being handled at each branch of the central bank as was previously the case.

3.3.2 The retail subsystem

The retail subsystem - managed by the SIA on behalf of the Bank of Italy - handles low-value paperless payments. It includes a set of procedures, geared to the type of payment, which operate on the RNI. The procedures cover: Bancomat operations, truncated cheques, electronic collection orders (RIBAs), direct debits, and retail credit transfers (eg of below EUR 258,228). The procedures are managed by service providers, or *centri applicativi*, which are bank-owned software companies that carry out a number of activities on the banks' behalf in connection with the exchange of accounting information on interbank payments. There are four service providers operating in a competitive environment. Each bank is free to choose the service provider through which to channel payments.

The accounting information is exchanged in standardised electronic format without the physical exchange of items. With regard to the settlement of these payments, each service provider calculates the net bilateral balances for each procedure and sends this information to the retail subsystem. The retail subsystem, in turn, calculates an aggregated bilateral balance which is posted to BI-COMP. Then, a multilateral balance for each participant is determined in the BI-COMP system by summing up

the balances of both the retail subsystem and the local clearing subsystem. The multilateral balance is eventually settled in BI-REL.

4. Securities settlement systems

4.1 Trading

4.1.1 *The wholesale screen-based market for government securities*

The MTS market is organised and currently managed by MTS SpA, a company founded in 1998 when the market was privatised; the company's capital is held by major national and international financial institutions.

Eligible participants in the MTS are banks and financial institutions which are committed to providing liquidity to the market on a continuous basis. There are two types of participants: primary dealers and dealers.

Primary dealers can make proposals and act on other participants' proposals quoted on the MTS. They are committed to making two-way quotes on a selected group of government bonds; they must also meet the minimum capital and trading requirements. Dealers can only act on proposals quoted on the MTS. The minimum capital and trading requirements which they are obliged to meet are less stringent.

Proposals are anonymous. Participants become aware of the identity of trade counterparties only after the execution of the trade. For this reason, a dealer willing to buy (or to sell) a bond cannot choose his counterparty, but is forced to trade at the best price available; this means that counterparty risk is managed not on a bilateral basis but according to market membership criteria.

MTS-Italy provides an electronic trading platform which offers major benefits to members and issues from the Ministry of the Treasury in terms of straight through processing capabilities, reduced transaction costs, market transparency, efficiency and liquidity.

Four different Italian government bonds are traded on the MTS: Cct (floating rate certificates), Btp (fixed rate bonds), Bot (Treasury bonds) and Ctz (zero coupon securities). In addition, selected eurobonds can be traded. The minimum trade size is currently EUR 2.5 million (EUR 5 million for benchmark bonds).

MTS-Italy also has an electronic market for repurchase agreements (PCT), allowing participants to manage their liquidity positions and their securities portfolios more effectively.

Two types of contracts can be concluded on the PCT: (i) special repos, where a specific security is named; and (ii) general collateral repos, where the security is identified only at the end of the trading day.

There is no distinction of roles among participants and there are no quoting obligations.

The type of repurchase agreements negotiated are buy-sellback agreements, which signifies the transfer of all ownership rights to the buyer. All securities traded on the MTS may be the object of repurchase agreements on the PCT. Proposals are not anonymous; trades can be made at any price quoted on the market, even if not the best available.

Finally, MTS-Italy has a grey market where it is possible to trade Italian government bonds for which the Ministry of the Treasury has announced the auction but which have not yet been issued. Securities are negotiable on the MTS grey market until the day on which the auction takes place. The following day, the securities begin to be traded on the cash market.

As from December 2002, MTS members will be offered a new central counterparty service.

4.1.2 *The Italian Stock Exchange*

The Italian Stock Exchange is a regulated market for trading investments and has been managed by Borsa Italiana SpA since 2 January 1998. Borsa Italiana SpA is a private company whose

shareholders include banks, investment funds, issuers and other market players. The stock market company provides for the organisation and smooth functioning of the market; it also ensures that companies and intermediaries comply with entry requirements and that operators comply with market rules. It carries out market surveillance and organises company announcements.

The Italian Stock Exchange runs various markets: the stock market (MTA); the Mercato Ristretto (restricted market), where ordinary, preference and saving shares, convertible bonds, issue rights, warrants, covered warrants and closed-end funds are traded; the new market for shares of high-growth companies; the market for equity derivatives (IDEM) for futures and options on relevant indices and stocks; the Italian futures market (MIF), for futures contracts on government securities, interest rates and options; the retail government and corporate bond market (MOT); and the market for traditional options on equities (MPR).

Since July 1994, shares, warrants, options and convertible bonds quoted on the Italian Stock Exchange have been traded in an electronic trading system. This system consists of a computer network which matches up supply and demand for financial instruments.

In the course of 2000, the main developments in the Italian Stock Exchange were the introduction of EuroMOT, a new regulated market organised and managed by Borsa Italiana and specifically designed for eurobonds, foreign bonds and asset-backed securities. In May 2000 Borsa Italiana introduced "Trading After Hours", a regulated market aimed at satisfying the demand for trading after the market's normal closing times. In June 2000 the Italian Stock Exchange launched a new derivatives contract, the mini-FIB, the first IDEM product aimed primarily at private retail investors. It is a derivatives contract on the MIB 30 index (the top 30 blue-chip index) one fifth the size of the existing MIB 30 futures contract (FIB 30).

4.2 Clearing

4.2.1 *Securities net settlement procedure*

The technical infrastructure for securities clearing and settlement is provided by a nationwide net settlement system, the LDT procedure, which is managed and owned by the Bank of Italy. The main regulations governing the LDT are contained in measures which were adopted by the Governor of the Bank of Italy in April 1997 and September 2000 in agreement with Consob; the operational features are set out in an agreement to which participants must subscribe.

According to the measure adopted by the Governor of the Bank of Italy in September 2000, access to the LDT procedure is restricted to banks, investment firms authorised to provide investment services in Italy, Italian stockbrokers, CSDs and institutions which operate SSSs or netting and guarantee systems as well as some public entities. Foreign participants may have access to the LDT on a remote basis. In particular, a foreign institution which acts as CSD or as operator of either an SSS or a netting and guarantee system may participate in the Italian securities settlement system, on a remote basis, provided it fulfils the following requirements: (i) it is subject to supervisory measures equivalent to those in force in Italy; and (ii) there is an agreement between the supervisory authorities in Italy and those in the foreign institution's country concerning the exchange of information and the adoption of reciprocal conditions.

Participants may clear and settle securities transactions both for their own account and on behalf of other authorised intermediaries. LDT participants may either settle their cash positions directly on their BI-REL accounts or appoint a bank participating in BI-REL to settle for them.

In December 2001, there were 278 intermediaries participating in the LDT procedure, including two major banks and five leading investment firms with remote access to the procedure.

The LDT procedure and the structure of the accounts of the CSD permit complete segregation between intermediaries' proprietary positions and those of their customers. They also allow settlement banks to manage the securities positions of each of their institutional customers separately, thus avoiding the risk of commingling.

The LDT procedure clears and settles the following types of transactions carried out on the official markets and over the counter:

- outright transactions and repos in Italian government securities carried out on the MTS;

- stock exchange transactions in equities, corporate bonds and Italian government securities; and
- outright and repo transactions in listed and unlisted securities carried out over the counter.

Bilateral net positions, once they are matched and corrected by the daily matching correction system (RRG), are automatically sent to the LDT procedure, which determines for each participant a multilateral balance for all types of securities handled and a single cash balance. At 8 am on the settlement day, the securities and cash positions are notified to participants. Until 12.30 pm participants can manage uncovered securities balances by means of transfers between accounts at the CSD. By the same deadline, it is also possible to reduce the multilateral securities balance by concluding assignments. The assignment procedure allows intermediaries with a securities shortfall to postpone delivery thanks to agreements with intermediaries which have creditor balances. Participants with a securities debtor balance which invoke the assignment procedure are required to pay a penalty for each type of security not delivered; the penalty consists of: (i) EUR 200 to defray expenses; and (ii) a surety deposit equal to 20% of the value of the undelivered securities. The surety deposit is fully redeemable upon delivery of the security within three trading days; otherwise a share of the deposit is subtracted therefrom.

At 12.30 pm securities balances are settled through book entries at Monte Titoli (see Section 1.3.5) and cash balances are automatically debited from participants' accounts with the Bank of Italy. The settlement mechanism provides a high level of protection against risks by complying with the DVP principle. In fact, the cash and securities credit balances are not processed until all debit balances have been posted.

Transactions concluded on regulated markets are settled on a rolling basis (T+3 for outright transactions and T+2 for repos, while those concluded on the OTC market are settled as agreed between the parties). In 1999 the possibility of settling with the same day value (T+0) was introduced for repo transactions in government securities (so-called overnight repos). Such a facility allows those intermediaries which have to deliver a specific government security to cover their position before the LDT procedure begins.

In the second half of 2003, the LDT procedure will be replaced by a new securities clearing settlement system operating on a net basis (Express II) and managed by Monte Titoli (see Section 4.3.2).

4.2.2 The guarantee systems for financial instrument transactions

Institutional aspects

The general regulation issued by the Bank of Italy, in agreement with Consob (see the legal provision of 5 November 2002 on the clearing and guarantee of transactions in financial instruments - derivatives and non-derivatives - under Articles 68, 69 (paragraph 2) and 70 of the CLFI), defines a general framework for guarantee systems for financial instrument transactions; this includes both the provision of central counterparty services and the management of guarantee funds.

The Bank of Italy and Consob approve the operational rules laid down by the companies managing these systems only after having verified that:

- the companies fulfil certain requirements (minimum level of capital, accounting and organisational segregation rules); and
- operational rules laid down by the companies comply with the regulations issued by the authorities and are likely to ensure the efficiency, soundness and stability of the system.

There is no specific authorisation for clearing houses and there is no approval of the appointment of clearing house managers. Central counterparty services can be provided for both securities and derivatives transactions.

Central counterparty services - operational aspects

Currently (November 2002), the CCG is the clearing house for one derivatives exchange, the IDEM, launched in 1994. It is planned that in a few months from now it will also act as CCP both on the wholesale market for government securities (MTS) and on the equity market.

The CCG's risk management procedure is mainly based on margins. There are also capital adequacy requirements for members. As far as margin requirements are concerned, the CCG uses the Theoretical Intermarket Margin System (TIMS) developed by the Options Clearing Corporation (OCC). The CCG monitors clearing members' positions on a real-time basis to assess exposure. Intraday margins may be requested; as part of the constant monitoring of clearing members' positions, additional intraday margins may be requested by the CCG where it considers the risk exposure of a clearing member to be too high.

4.3 Settlement

4.3.1 The Express procedure

As an alternative to the LDT procedure, transactions concluded on the OTC market may be settled using the Express procedure managed by Monte Titoli. Moreover, Express is used for the settlement of monetary policy operations. This procedure provides for real-time settlement on a gross-gross basis (DVP Model 1). The system settles transactions in equities, corporate bonds and government securities.

Institutional aspects

Security settlement systems are now governed by a general regulation issued by the Bank of Italy in agreement with Consob (see the legal provision of 8 September 2000 on the clearing and settlement of transactions in non-derivative instruments under Article 69 of the CLFI).

The new regulation identifies the categories of direct participants and the general management criteria for the settlement of securities. Specific risk management measures must be adopted, such as intraday finality, a queuing mechanism, a reduction in the time elapsing between the collection of data regarding transactions and settlement, minimum requirements in terms of risk containment and the finality of transactions settled. Moreover, operating hours must be consistent with those of BI-REL.

Operational aspects

According to the general regulation on securities settlement systems mentioned above, Express participants are banks, investment firms, the Bank of Italy, CSDs, SSSs, clearing houses and other minor entities.

As part of the Express procedure, securities are settled in participants' accounts at Monte Titoli, whereas cash is settled in the participants' accounts in BI-REL. The system benefits from the intraday credit mechanism used by BI-REL. The Express procedure offers a DVP intraday finality facility and, in order to be able to provide a straight through processing service, it is connected to the RRG-REL, a matching system developed by SIA.

The settlement procedure of the securities leg consists of the following steps:

- Express receives matched transactions from the RRG-REL and gives a reference number to each of them;
- for every transaction, Express checks the securities account balance of the seller, reserves the securities and sends information to BI-REL for the cash settlement; and
- if the securities are not available on the seller's account, Express starts the queue management process. Queued transactions are periodically processed in the following order of priority: monetary policy operations; priority input by the intermediary; matching time (FIFO); and stockbuilding on the seller's securities account (FAFO).

The settlement stages of the cash leg are as follows:

- BI-REL checks the cash account balance of the buyer, settles the cash leg and sends information to Express, which settles the securities leg using the reserved securities;
- if funds are not available in the cash account, payments are queued.

As far as indirect cash settlement is concerned, participants in Monte Titoli are allowed to settle their cash positions by means of a settling bank; Express offers cap management mechanisms to settling banks in order to keep their funds exposure under control.

4.3.2 The Express II project

In the second half of 2003 the LDT is expected to be replaced by a new net settlement system managed by Monte Titoli, named Express II.

Express II will be a multicurrency clearing and settlement system supported by automatic cash and securities lending facilities. It will consist of two components: the first will settle transactions on a net basis in the initial phase of the settlement day; and the second, coinciding with the current Express gross settlement system, will handle transactions not settled during the net cycle as well as those that intermediaries will directly submit to gross settlement. The objectives of the creation of Express II are: moving up transaction settlement to the early morning; concentrating operations during night-time; facilitating the handling of settlement fails, in part by means of a daytime netting cycle; and permitting efficient utilisation of intraday credit granted by the central bank.

4.3.3 The guarantee systems

There are currently two guarantee funds aimed at securing, respectively, the performance of securities transactions in listed equities and their settlement (see Articles 68 and 69 of the CLGI). The former, the transactions performance fund, is currently regulated by the Italian Stock Exchange, but the regulatory framework will be replaced by a new one, in accordance with the general regulations issued by the Bank of Italy and Consob on 5 November 2002; the latter, aimed at ensuring timely settlement in listed equities, is regulated by the Bank of Italy in agreement with Consob.

Both trading and settlement guarantee fund are managed by the CCG, which, in this case, is not a central counterparty and is not responsible in respect of its own assets for the default of a clearing member. The CCG's assets are segregated from those of the funds.

As far as the settlement guarantee fund is concerned, each member is requested to pay margins to the fund in relation to its activity in terms of the turnover of securities settled during the last two months.

Should a participant in the LDT default, the CCG would replace it in the settlement of listed equities. In doing so, according to the general rules issued by the Bank of Italy and Consob, the CCG would first use the margins posted by the defaulting participant, and then the survivors' margins, making it possible to close the settlement procedure. The losses arising from the CCG's intervention are shared among participants, in proportion to their turnover activity.

4.4 The use of the securities infrastructure by the central bank

As regards monetary policy operations, the settlement of open market transactions is completely automated through the DVP procedure, Express (see Section 4.3.1).

Once the cash and securities positions for each bank are calculated by the Bank of Italy, the relevant information is transmitted to Monte Titoli. In the event that the settlement day of a refinancing operation coincides with the reimbursement day of previous open market operations, credit and debit positions are netted by the Bank of Italy so as to calculate each intermediary's netted securities and cash positions.

Where domestic securities are used for such transactions, the automatic entering of the cash and securities positions into the Express procedure ensures the real-time settlement of both legs. In particular, the cash leg is settled through the accounts held at the central bank (in the BI-REL system); the securities leg is settled by way of book entries on the accounts held by the Bank of Italy and other counterparties at Monte Titoli. In the case of foreign securities, the Express procedure is used if the security concerned is managed by Monte Titoli through cross-border links. Otherwise, the Correspondent Central Banking Model (CCBM) is used.

As far as the use of securities as collateral for intraday liquidity is concerned, an automatic procedure allows intermediaries to transfer securities in real time during the course of the operational day from their accounts to the Bank of Italy's securities accounts at Monte Titoli. The amount of intraday liquidity available in BI-REL for each intermediary automatically varies according to the collateral at its disposal. The same procedure is used for the marginal lending facility. Such a procedure allows for a high level of flexibility in the management of collateral, enabling the amount held by intermediaries to be optimised in accordance with the real liquidity needs.

The management of collateral for each intermediary is carried out by the Bank of Italy and consists in: (i) evaluating securities; (ii) applying the initial margin; and (iii) verifying collateral adequacy on a daily basis.

