





EUROPEAN CENTRAL BANK



# ASSESSMENT OF EURO LARGE-VALUE PAYMENT SYSTEMS AGAINST THE CORE PRINCIPLES

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# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>4</b>
<b>INTRODUCTION</b>	<b>6</b>
<b>1 PROCEDURES AND METHODOLOGY</b>	<b>7</b>
<b>2 OVERALL ASSESSMENT</b>	<b>8</b>
2.1 Overview	8
2.1.1 Compliance of TARGET components	8
2.1.2 Compliance of non-TARGET euro large-value payment systems	9
2.2 Detailed assessment and main findings (by Core Principle)	9
2.2.1 Core Principle I	9
2.2.2 Core Principle II	10
2.2.3 Core Principle III	11
2.2.4 Core Principle IV	11
2.2.5 Core Principle V	12
2.2.6 Core Principle VI	12
2.2.7 Core Principle VII	12
2.2.8 Core Principle VIII	13
2.2.9 Core Principle IX	14
2.2.10 Core Principle X	16
<b>3 CONCLUSION</b>	<b>17</b>
<b>ANNEX: LIST OF SYSTEMS ASSESSED</b>	<b>18</b>

## EXECUTIVE SUMMARY

On 25 January 2001, the Governing Council of the European Central Bank (ECB) adopted the “Core Principles for Systemically Important Payment Systems”<sup>1</sup> (hereafter referred to as “the Core Principles”) as the minimum standards for the Eurosystem’s common oversight policy on systemically important payment systems (SIPs). The Governing Council also decided that the Eurosystem would assess all SIPs in the euro area against these Core Principles and that it would make the results of its assessment available to the public. Consequently, all central banks of the European System of Central Banks (ESCB) conducted an assessment of their local systems, including the local real-time gross settlement (RTGS) systems connected to the TARGET system. Assessments were based on the systems’ status as at mid-2003. The assessment exercise was coordinated by the Payment and Settlement Systems Committee (PSSC) of the ESCB to ensure consistency of the analysis and outcome across central banks. This report summarises the assessments conducted by the national central banks (NCBs)/ECB on nineteen euro large-value payment systems (LVPSs). The EURO 1 system operated by the Clearing Company of the Euro Banking Association (EBA) was outside the scope of the assessment exercise, because the ECB, in cooperation with the International Monetary Fund (IMF), had already assessed EURO 1 in 2001. The EURO 1 system was found to fully observe all ten Core Principles.

Altogether, nineteen euro LVPSs have been assessed against the Core Principles. The outcome of the assessment is positive overall. All TARGET components and non-TARGET euro LVPSs have achieved a high degree of and, in some cases, full compliance. Out of the sixteen TARGET components, one system fully observes all nine relevant Core Principles,<sup>2</sup> six systems fully observe eight, eight systems fully observe seven and one system fully observes six. The systems that do not fully observe a particular Core Principle most often observe it broadly or, in one case, partly.<sup>3</sup> Issues relate to business continuity arrangements (Core

Principle VII on security and operational reliability) and economic efficiency (Core Principle VIII on practicality and efficiency). The governance of the individual TARGET components has been assessed as being fully in line with the requirements of Core Principle X.

The compliance gaps identified have been brought to the attention of the operators of the systems concerned, with the acknowledgement that some of them, and especially those related to Core Principles VII and VIII, should be addressed with the implementation of TARGET 2, which is expected to become operational at the beginning of 2007.

It must be underlined that the review process has led to the conclusion that some TARGET components (DE, FI, IT<sup>4</sup>) “broadly observe” Core Principle VIII, whereas in the context of IMF Financial Sector Assessment Program missions in 2001 and 2003 it was concluded and disclosed by the IMF and also the NCBs that these TARGET components “fully observe” this Core Principle. This difference is in particular due to the recent changes in the cost methodology to be used within the ESCB to

1 Report of the Committee on Payment and Settlement Systems (CPSS) entitled “Core Principles for Systemically Important Payment Systems”, Bank for International Settlements, January 2001.

2 Core Principle V on multilateral netting is not applicable to RTGS systems. Consequently, TARGET components have been assessed against the nine relevant Core Principles.

3 In line with the IMF’s “Guidance Note for Assessing the Observance of Core Principles for Systemically Important Payment Systems” issued in August 2001, a Core Principle is considered *broadly observed* whenever only minor shortcomings, which do not raise major concerns, are found and when corrective actions to achieve full observance with the Core Principles are scheduled and realistically achievable within a prescribed period of time. A Core Principle is considered *partly observed* whenever the shortcomings are sufficient to raise doubts about the ability to achieve observance within a reasonable time frame.

4 In this report, the following country codes are used in alphabetical order to refer to the respective countries/central banks/RTGS systems: AT (Austria/OeNB/ARTIS), BE (Belgium/BNB/ELLIPS), DE (Germany/DBB/RTGSplus), DK (Denmark/Danmarks Nationalbank/KRONOS), ECB (EPM), ES (Spain/BdE/SLBE), FI (Finland/BoF/BoF-RTGS), FR (France/BdF/TBF), GR (Greece/BoG/HERMES), IE (Ireland/CBFSAI/IRIS), IT (Italy/BdI/BI-REL), LU (Luxembourg/BcL/LIPS-gross), NL (Netherlands/DNB/TOP), PT (Portugal/BdP/SPGT), SE (Sweden/Sveriges Riksbank/RIX) and UK (United Kingdom/BoE/euroCHAPS).

assess cost recovery levels of TARGET components for national and cross-border payments. This methodology, which was approved by the Governing Council in November 2003, allows for the computation for all TARGET components of more accurate and more comparable estimates of cost recovery levels. It might still need to be refined in the future.

The assessments of the non-TARGET euro LVPSs have shown that the degree of compliance with the Core Principles is, in general, at least equal to that of the TARGET components.

## INTRODUCTION

On 25 January 2001, the Governing Council of the ECB adopted the “Core Principles for Systemically Important Payment Systems”<sup>5</sup> as the minimum standards used by the Eurosystem for its common oversight policy on payment systems. The Core Principles report contains ten Core Principles with which SIPSs should comply, to the extent that the individual Core Principles are applicable to the respective system. In addition, the report sets out four central bank responsibilities concerning the compliance with the Core Principles.<sup>6</sup> Accordingly, the Governing Council decided that the Eurosystem would assess all SIPSs in the euro area against these Core Principles and that it would make the results of its assessment available to the public. The EURO 1 system operated by the Clearing Company of the EBA was outside the scope of the assessment exercise, because the ECB, in cooperation with the IMF, had already assessed EURO 1 in 2001. The EURO 1 system was found to fully observe all ten Core Principles.

In this context, it should be recalled that before the adoption of the Core Principles by the Governing Council, a first collective assessment exercise at the ESCB level was carried out in the second half of 1998. At that time, the compliance with the Lamfalussy standards<sup>7</sup> was assessed for all large-value net settlement systems which were to begin operating in euro at the start of Stage Three of Economic and Monetary Union (EMU) on 1 January 1999.<sup>8</sup>

From a methodological point of view, the assessments of the nineteen euro LVPSs against the Core Principles were based on assessment reports prepared by the central banks responsible for their oversight. The assessments were based on the systems’ status as at mid-2003 and were conducted on the basis of a common methodology in order to ensure a high degree of consistency and comparability.

The results of the assessment exercise are summarised in this report. The report aims to fulfil two main objectives. First, it identifies the

degree of compliance of individual TARGET components and non-TARGET euro LVPSs with the Core Principles. Second, in the light of the responsibilities A, B, C and D of central banks in applying the Core Principles,<sup>9</sup> the report aims to fulfil the Eurosystem’s responsibility to ensure that any euro LVPS complies and continues to comply with the Core Principles.

The report is structured as follows. Section 1 explains the procedures and the methodology followed for the preparation of the assessments by the NCBs/ECB. Section 2 provides both an overview of the overall results of the assessments carried out by the NCBs and the ECB and a detailed description, i.e. Core Principle by Core Principle, of the main findings of the NCBs/the ECB regarding the respective system’s compliance with the Core Principles. Conclusions are provided in Section 3. The Annex to this report lists the euro LVPSs that have been assessed.

5 See footnote 1.

6 Responsibilities of the central bank in applying the Core Principles:

- A. The central bank should define clearly its payment system objectives and should disclose publicly its role and major policies with respect to systemically important payment systems.
- B. The central bank should ensure that systems it operates comply with the Core Principles.
- C. The central bank should oversee compliance with the Core Principles by systems it does not operate and it should have the ability to carry out this oversight.
- D. The central bank, in promoting payment system safety and efficiency through the Core Principles, should cooperate with other central banks and with any other relevant domestic or foreign authorities.

7 See “Report of the committee on interbank netting schemes of the central banks of the Group of Ten countries”, BIS, November 1990.

8 This was a requirement stemming from the report entitled “Minimum common features for domestic payment systems” of September 1993, which recommended, on the one hand, that an RTGS system should be established in all European Community countries in order to reduce systemic risks and to facilitate delivery-versus-payment arrangements and stated, on the other hand, that large-value net settlement systems may continue to operate in parallel with RTGS systems if they meet the Lamfalussy standards in full and settle at the central bank on the same day as the exchange of the payment instruments. Progress in the field was evaluated each year by the Working Group on Payment Systems in its reports on “Developments in EU Payment Systems”.

9 See footnote 6.

## I PROCEDURES AND METHODOLOGY

Since the adoption in January 2001 of the “Core Principles for Systemically Important Payment Systems”<sup>10</sup> by the Governing Council of the ECB as the minimum standards used by the Eurosystem for its common oversight policy on payment systems, assessments have to be and actually have been carried out against the Core Principles. The Eurosystem understands that the explanations in the Core Principles report are of a very general nature and are intended to be used by a broad range of countries and to apply to systems that may widely differ. In order to achieve a high degree of consistency and comparability when carrying out the assessment exercise, the Eurosystem defined a common methodology, based on a number of questions (so-called terms of reference). The terms of reference are largely drawn from the IMF’s “Guidance Note for Assessing the Observance of Core Principles for Systemically Important Payment Systems” issued in August 2001. However, the terms of reference differ from the Guidance Note in such a way as to better suit an assessment of euro LVPSs and to specify clearly the topics and aspects that were to be covered in the assessments.

On the basis of this common methodology, each NCB and the ECB performed assessments against the ten Core Principles<sup>11</sup> of: (i) the respective local TARGET component; and (ii) any non-TARGET euro LVPS operated in its country. Assessments reflected the assessed systems’ status as at mid-2003. The results of the assessments were summarised in reports prepared by the respective NCBs and the ECB. These reports were subject to an NCB/ECB peer review coordinated by the PSSC. The responsibility for the results of the assessments made and the conclusions drawn lies with the respective NCB/the ECB.

<sup>10</sup> See footnote 1.

<sup>11</sup> See footnote 2.

## 2 OVERALL ASSESSMENT

Altogether, nineteen euro LVPSs operated and/or managed by the NCBs, the ECB or private sector bodies have been assessed against the Core Principles.

The outcome of the assessments carried out by the ESCB is positive overall. All TARGET components and non-TARGET euro LVPSs have achieved a high degree of, and in some cases, even full compliance with all relevant Core Principles. Taking into account that Core Principle V (on multilateral netting)<sup>12</sup> is not applicable to RTGS systems, out of the sixteen TARGET components one fully observes all nine relevant Core Principles. Six TARGET components fully observe eight of the nine relevant Core Principles, while eight fully observe seven and one fully observes six. Where systems do not fully observe a particular Core Principle, they most often observe it broadly or, in one case, partly.<sup>13</sup> The

assessments also show that the degree of compliance with the Core Principles of the non-TARGET euro LVPSs is, in general, at least equal to that of the TARGET components.

### 2.1 OVERVIEW

The following tables display, by Core Principle, the number of systems assessed and their degree of compliance with the Core Principles. A distinction is made between TARGET components and non-TARGET euro LVPSs.

<sup>12</sup> Core Principle V only applies to systems in which multilateral netting takes place. It reads: "A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation."

<sup>13</sup> See footnote 3.

#### 2.1.1 COMPLIANCE OF TARGET COMPONENTS

Table

Core Principle	Fully observed	Broadly observed	Partly observed	Not observed	Not applicable
I	16	-	-	-	-
II	15	1 (FR)	-	-	-
III	15	1 (SE)	-	-	-
IV	16	-	-	-	-
V	-	-	-	-	16
VI	16	-	-	-	-
VII	8 (DE, DK, ES, FI, IT, LU, SE, UK)	8 (AT, BE, ECB, FR, GR, IE, NL, PT)	-	-	-
VIII	1 (ES)	14	1 (ECB)	-	-
IX	16	-	-	-	-
X	16	-	-	-	-

2.1.2 COMPLIANCE OF NON-TARGET EURO LARGE-VALUE PAYMENT SYSTEMS<sup>14</sup>

Table					
Core Principle	Fully observed	Broadly observed	Partly observed	Not observed	Not applicable
I	3	-	-	-	-
II	2	1 (PNS)	-	-	-
III	3	-	-	-	-
IV	3	-	-	-	-
V	2	-	-	-	1 (POPS) <sup>15</sup>
VI	3	-	-	-	-
VII	3	-	-	-	-
VIII	3	-	-	-	-
IX	3	-	-	-	-
X	3	-	-	-	-

15) POPS is based on bilateral netting.

2.2 DETAILED ASSESSMENT AND MAIN FINDINGS  
(BY CORE PRINCIPLE)

The following sub-sections summarise the outcome of the assessments and the main findings by the NCBs and the ECB. Where appropriate, a distinction is made between TARGET components and non-TARGET euro LVPSs and their respective number and degree of compliance with the Core Principles.

## 2.2.1 CORE PRINCIPLE I

*The system should have a well-founded legal basis under all relevant jurisdictions.*

When assessing the compliance with Core Principle I, NCBs and the ECB paid particular attention to the adequacy and completeness of the legal basis, the enforceability of rights and obligations arising from participation in the system, the clarity of irrevocability and finality, the enforceability of collateral, the availability of legal opinions and the designation of the system under the Settlement Finality Directive<sup>16</sup>.

All TARGET components and non-TARGET euro LVPSs are assessed as observing Core

Principle I. All reports confirm the enforceability of the legal framework that applies to the system (the rules and contracts, including the legal arrangements that cover clearly the enforceability of collateral in case of insolvency). The legal arrangements (including the system rules) clearly refer to the timing of irrevocability and of final settlement, especially if there is insolvency. All systems have been designated under the Settlement Finality Directive. Legal opinions for new participants are sought in order to ensure that participation in the systems does not lead to unnecessary risks for the other participants. No court proceedings have taken place with respect to the systems assessed.

Regarding developments which might have an impact on the systems' compliance with Core Principle I, it is noted that the EU Collateral Directive will have a positive impact on the

<sup>14</sup> The following systems were assessed: POPS (*Pankkien online pikasiirrot ja sekkit* – Finnish large-value netting system for express transfers and cheques); SPI (*Servicio Español de Pagos Interbancarios* – Spanish Interbank Payment Service); and PNS (Paris Net Settlement). The assessment of the EBA's EURO 1 system was outside the scope of the assessment exercise.

<sup>15</sup> POPS is based on bilateral netting.

<sup>16</sup> Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems (OJ L 166/45 of 11 June 1998).

legal soundness of the systems, as it is intended, for example, to reduce legal formalities associated with the taking and enforcement of collateral and to address any problematic application of insolvency laws across the European Union in relation to collateral and close-out netting associated with collateral.

## 2.2.2 CORE PRINCIPLE II

*The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it.*

Under this Core Principle, the main aspects that have been investigated are related to the clarity and availability of the system's rules and procedures, and whether or not they adequately cover the participants' rights and obligations, the system operator's discretionary powers and the handling of abnormal situations.

As far as the TARGET components are concerned, the assessment reports conclude that fifteen systems fully observe Core Principle II and one system (FR) broadly observes the principle, because of the need to organise, streamline and update the relevant documentation.

For the non-TARGET euro LVPSs, two are assessed as observing the principle and one (PNS) as only broadly observing it, because the rules and regulations are neither sufficient nor up to date.

For TARGET components, the design and operating times of the systems are clearly documented and, in most instances, information is provided to enable the participants to better understand the risks they incur by participating in the system.

In all systems, the system rules are available to the participants, but many systems go further

and make, or aim to make, them available to the general public as well.

The legal basis and the roles and responsibilities of the participants are explained in the rules and regulations of all systems. The assessments of two systems (DK, IE) that fully observed the principle in this respect concluded, however, that the rules could nevertheless be improved.

The rights and obligations of the participants, the operator and the settlement institution are covered by the documentation for all systems. Discretion concerning the operation of the system or changes in the rules and procedures of the system was possible in most systems, mainly in abnormal situations. The assessments concluded that discretion in decision-making was sufficiently explained in the rules and procedures of all systems.

Participants are monitored (or can be monitored) in all systems for their understanding of the risks they incur. For most systems, there are also regular meetings with participants and/or the offer or requirement for them to undergo training in order to be able to participate in the system and/or the organisation of training for existing participants on a continuous basis.

As regards changes or reforms, four TARGET components (BE, FR, NL, UK) and one non-TARGET euro LVPS (PNS) had either already implemented or were planning to implement changes in the rules and regulations of the system, the majority of which were related to addressing issues identified in the self assessments.

### 2.2.3 CORE PRINCIPLE III

*The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.*

The observance of this Core Principle was verified with a particular focus on the existence and management of credit exposures between participants, incentives to manage this risk (e.g. by using throughput guidelines), the irrevocability and finality of payments, and the management of liquidity risk (e.g. via queuing facilities, gridlock resolution mechanisms and monitoring facilities for participants).

All systems are assessed as observing Core Principle III, except for one TARGET component (SE), which only broadly observes this Core Principle.

Credit exposures between participants can arise in two non-TARGET euro LVPSs (SPI, POPS), but are mitigated through collateralisation and bilateral limits respectively. Settlement in PNS takes place continuously in central bank money and therefore no credit risks arise. The assessment, however, concluded that the rules regarding insolvency situations and technical breakdowns should be clarified.

All TARGET components have a queuing facility, normally based on priorities and the first-in first-out (FIFO) principle. Five of them (BE, DE, ES, IT, UK), as well as one non-TARGET euro LVPS (SPI), also have additional non-FIFO settlement possibilities, bypass-FIFO facilities, or other features for liquidity optimisation. Throughput guidelines were in effect in four systems: three TARGET components (AT, IT, PT) and one non-TARGET euro LVPS (PNS).

The available liquidity in relation to the liquidity need was considered ample in all TARGET components, resulting in very few payments being queued as a consequence of lack of liquidity. All but three systems, one TARGET component (SE) and two non-TARGET euro LVPSs (POPS, SPI), had a gridlock resolution mechanism that was invoked either automatically in the case of a gridlock, at predefined intervals or manually (in two systems). In most systems, the facility was used very seldomly (if ever) due to the high availability of liquidity. As regards the non-TARGET euro LVPSs, the limits set were considered sufficient to enable a smooth settlement of the payments.

All systems, except one TARGET component (GR), had online and real-time facilities for the participants to monitor and acquire information on settled payments, settlement balances and queues. No systems have experienced problems that generated any serious credit risk issues or liquidity pressures.

Changes to improve the management of credit and/or liquidity risks are being considered in four TARGET components (DK, FR, LU, UK).

### 2.2.4 CORE PRINCIPLE IV

*The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.*

When assessing the compliance with this principle, NCBs and the ECB paid particular attention to the clear definition of the different stages of the life of a payment (i.e. its submission, validation, irrevocability and finality) and the information that is provided to participants on the status of a payment. In addition, the assessment also covered explanations on cut-off times and rejections of payments.

All systems are assessed as observing Core Principle IV, providing prompt final settlement on the day of value. All 16 TARGET components and two non-TARGET euro LVPSs (PNS, POPS) provide continuous settlement during the day, while one non-TARGET euro LVPS (SPI) provides final settlement only at the end of the business day.

#### 2.2.5 CORE PRINCIPLE V

*A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation.*

The focus of the assessment under this Core Principle was on the appropriate amount and organisation of additional liquid resources (e.g. collateral pool) available to the system and on the existing loss-sharing agreements among participants that deal with possible liquidity shortfalls in case of failure of the largest participant.

This Core Principle was considered as not being applicable to any of the TARGET components as those systems provide real-time unconditional and irrevocable settlement in central bank money and not to one non-TARGET euro LVPS (POPS), because it is based on bilateral netting.<sup>17</sup>

With regard to the two non-TARGET euro LVPSs to which the Core Principle is applicable, the assessment reports conclude that the respective systems fully observe Core Principle V. One system (PNS) is constructed as a hybrid system, implying that the system design reduces the likelihood of knock-on effects in case of failure of a participant to a level similar to that in RTGS systems. For the other system (SPI), collateral and liquid assets are available to complete settlement in case of failure. The size and constitution of assets and

the rules for the calculation and use of such assets as collateral, as well as the loss-sharing agreement in place, have been established to meet the needs of this scenario.

#### 2.2.6 CORE PRINCIPLE VI

*Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.*

The assessment of Core Principle VI concentrated on the provider of the settlement asset, possible credit and liquidity risks inherent to the respective asset and the analysis of the settlement mechanism.

All systems assessed fully observe Core Principle VI as they all settle in the books of the central bank. As settlement occurs in central bank money in all cases, there is no credit risk or liquidity risk incurred by the participants with respect to the settlement agent and with respect to the settlement asset.

#### 2.2.7 CORE PRINCIPLE VII

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

The assessment of this Core Principle was mainly related to the existence of a security policy, a risk analysis methodology and regular audits, the application of change management procedures, the availability of sufficient well-trained staff and the establishment of business continuity arrangements (including contingency and crisis management procedures).

<sup>17</sup> See footnote 2.

Eight TARGET components are assessed as fully observing Core Principle VII and eight (AT, BE, ECB, FR, GR, IE, NL, PT) as broadly observing it. For seven of those systems not fully observing this Core Principle, the NCBs concerned reported that a hot standby site is located less than one kilometre away from the primary site. The remaining system (FR) was reported to not fully observe the principle because of the need to simplify the system and the backup procedures.

The three non-TARGET euro LVPSs fully observe the principle.

All the assessment reports indicate that a security policy is in place. Concerning the TARGET components, four of them (ECB, GR, IT, LU) rely exclusively on the commonly agreed TARGET risk management methodology, while another four (BE, DE, ES, UK) explicitly indicate that they also apply a national methodology. The TARGET risk management methodology makes use of an international standard (ISO 17799) to define its security requirements. Moreover, the NCBs which have a security policy also nationally in place indicate that this methodology is in line with widely recognised standards. The same applies to the ECB's security policy.

In accordance with the TARGET risk management methodology, each TARGET component is subject to periodical risk analyses. It must be underlined that, during the assessment, the TARGET risk analysis methodology was changed. This new methodology, like the previous one, checks if systems meet reasonable standards in terms of confidentiality, integrity, authentication, non-repudiation, availability and auditability. Concerning the non-TARGET euro LVPSs, two of them (PNS, SPI) indicate that their system is subject to periodical risk analysis. For the third system (POPS), the risk management aspects are covered at the level of the participants.

Change management procedures are implemented in all systems.

Business continuity issues were looked at from two perspectives: the infrastructure in place to ensure business continuity in case of a disaster; and the contingency and crisis management arrangements in place to ensure a proper utilisation of this infrastructure.

On the infrastructure side, all assessments reported that a secondary site is available, with data mirroring implemented between both sites (hot standby). For three of the systems (BE, IE, NL), a third site is available, but resuming normal operations would take more than the required four hours. The assessment reports also indicate that testing of the infrastructure takes place periodically. However, in this regard, three overseers (GR, NL, SE) indicate that those testing procedures need to be improved, as new scenarios will need to be managed as a follow-up to the 11 September 2001 terrorist attacks.

Concerning contingency and crisis management arrangements, all local overseers report that disaster recovery procedures are properly described and documented.

### 2.2.8 CORE PRINCIPLE VIII

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

When performing the assessments, particular attention was paid to the business objectives, to the balance between the system's capacity and the demand for it, as well as to the existence of a pricing policy and a cost methodology and to the level of cost efficiency.

One TARGET component (ES) fully observes Core Principle VIII, while fourteen of them broadly observe it and one (ECB) only partly observes it. All three non-TARGET euro LVPSs are assessed as observing this Core Principle.

The objectives of the TARGET components are to foster the smooth operation of monetary policy, reduce systemic risk and settle ancillary systems. The business case for the non-TARGET euro LVPSs rests on the need to provide netting and settlement of transfer instructions and/or cheques, i.e. these systems fill a gap.

All systems can cope with the level of demand and are able to handle unexpected rises in the number of transactions. One TARGET component (ECB) has significant excess capacity. The technical design of the systems has not prevented the implementation of any useful service. None of the systems have received any major complaints. As a consequence, indications suggest that the systems do meet the needs of the users.

One TARGET component (FI) reported a user/pricing issue. It concerned the wish of the EBA banks in Finland to implement a direct debit mechanism for the settlement payments to EBA. The central bank involved (FI) was willing to provide this service as long as the commercial banks agreed to pay the costs. However, the banks were not willing to bear these costs and thus this feature was not implemented. None of the non-TARGET euro LVPSs reported any pricing problems.

All systems have a formal pricing policy in place. In all cases, this policy is one of full cost recovery. One TARGET component (PT) also uses its pricing policy to even out the flow of payment traffic. Participants are involved in the determination of the domestic pricing policy for four of the TARGET components (BE, FR, LU, SE). For another two TARGET components (DE, NL), participants have a say in the formulation of prices but not in the actual pricing policy. Participants are involved in the formulation of the pricing policy for two non-TARGET euro LVPSs (PNS, SPI).

All systems apply a cost methodology. As far as the TARGET components are concerned, the NCBs use the TARGET cost methodology.

Costs which are taken into account include development costs, operating costs and overheads. Cost recovery rates range from 2% to 100%, with one NCB (ES) exceeding full cost recovery. It must be underlined that the review process, which was based on the recently conducted cost fact-finding exercise using an enhanced cost methodology, has led to the conclusion that some TARGET components (DE, IT, FI) “broadly observe” Core Principle VIII, whereas in the context of IMF Financial Sector Assessment Program missions in 2001 and 2003 it was concluded and disclosed by the IMF and also the NCBs that these TARGET components “fully observe” this Core Principle. This difference is in particular due to the recent changes in the cost methodology to be used within the ESCB to assess cost recovery levels of TARGET components for national and cross-border payments. Indeed, as a result of cost methodology investigations related to the TARGET2 project and a better understanding of current cost methodology differences between central banks, the Governing Council of the ECB approved in November 2003 a common cost methodology for the cost fact-finding comparisons. This methodology, which might still need to be refined in the future, allows for the computation for all TARGET components of more accurate and more comparable estimates of cost recovery levels. It was only possible to take this information into account in the current review process.

One non-TARGET euro LVPS (SPI) recovers its costs, whilst the technical structure of another one (PNS) makes it difficult to calculate costs.

#### 2.2.9 CORE PRINCIPLE IX

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

The assessment focused on the access criteria, their fairness and public availability, on the

justification for any limitations restricting access to the system, on the fee schedule and its impact on access to the system, on exit criteria and on the continued compliance of participants with the access criteria.

The assessment reports conclude that all systems fully observe Core Principle IX.

The access criteria for the TARGET components are based on Article 3 (a) of the TARGET Guideline and are laid down in the terms and conditions of the respective system, in membership agreements or similar documents. The documentation on access criteria is handed over to the participants and is available to the public at large, usually via the website of the system operator or in printed form on demand. While one system (BE) restricts access to supervised credit institutions as defined in Article 3 (a) 1, all other TARGET components also grant access to participants other than credit institutions, within the range permitted by Article 3 (a) 1. One central bank (ECB) restricts access to other central banks, European and international organisations and cross-border clearing and settlement organisations, which is justified by the specific role of its system. Participants are generally required to open a central bank account, so that access criteria for NCB accounts, which are usually laid down in the terms and conditions of the current accounts at the NCBs, also apply.

The access criteria for the non-TARGET euro LVPSs are laid down in membership agreements and in the system documentation which is publicly available. In two systems (SPI, POPS), access is limited to credit institutions, while the third one (PNS) gives access to the full range of institutions specified in Article 3 (a) 1 of the TARGET Guideline. Participants are required to either open an account with an EU national central bank or to participate in the national RTGS system so that the relevant access criteria for NCB accounts or the national RTGS system also apply.

Two TARGET components (BE, SE) and two non-TARGET euro LVPSs (PNS, SPI), require potential participants to fulfil additional criteria such as a certain percentage of payment turnover or a minimum level of own funds.

Irrespective of the type of system, participant fees are usually a combination of:

- a one-time access fee;
- a monthly or annual fee; and
- a transaction fee.

This fee structure is intended to recover costs and is seen as not preventing fair and open access to the systems. Some TARGET components also scale their domestic transaction fees according to the volume generated by the participant (DE, PT) or the size of the participant (FR). These scaling measures are intended to make access easier for smaller banks while giving high-volume banks an incentive to use the system. Two systems, one TARGET component (IE) and one non-TARGET euro LVPS (SPI), indicated that they do not have a fee schedule but instead distribute the total annual costs among all participants.

Seven TARGET components (AT, BE, DE, FR, IE, IT, UK) and two non-TARGET euro LVPSs (PNS, SPI) report that there is the possibility of indirect participation. Where such participation exists, access to the system is governed by bilateral agreements between the indirect and the direct participants. The content of those bilateral agreements is mostly unknown to the system operator, although there are instances where the rules and regulations of the operator define some minimum requirements to which these bilateral agreements must adhere.

There is a continuous or periodical monitoring of the continued compliance of participants with the access criteria for all systems except two TARGET components (NL, SE). One NCB (BE) noted that there are no clear rules for the determination of the exact moment from which a participant stops being compliant with all membership criteria.

Exit criteria and procedures are laid down in the terms and conditions of the system and publicly accessible. They cover the grounds for suspension and exclusion of a participant and the voluntary exit of a participant. Procedures for exclusion and suspension of a participant are described in detail in the rules.

formally established, whereas for the other systems this is done more on an ad hoc basis. For most systems, no specific business plans have been drawn up.

## 2.2.10 CORE PRINCIPLE X

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

The issues that were assessed in the context of Core Principle X were the following: the transparency of the system organisation and the decision-making procedures to the public, the accountability of management for the performance of the system, the involvement and consultation of the systems' users as well as auditors and overseers on decisions affecting the system, the existence of conflict resolution procedures as well as the existence of business plans. In addition, the assessments considered whether or not there are indications that the services delivered by the system are not useful to the users.

The assessment reports conclude that all nineteen systems fully observe Core Principle X.

For both the TARGET components and the three non-TARGET euro LVPSs, it was noted that the range and level of detail of information on the systems and the decision-making procedures made available to the general public differed considerably. For most systems, there are no formal conflict resolution procedures in the event of conflicts between users and system operators. In four TARGET components (FR, IT, PT, UK), as well as in two non-TARGET euro LVPSs (PNS, SPI), the consultation procedures for the involvement of users, auditors and overseers in major decisions are

## 3 CONCLUSION

The outcome of the assessments carried out by the ESCB and coordinated by the PSSC is positive overall. All TARGET components and non-TARGET euro LVPSs have been assessed as achieving a high degree of compliance with all relevant Core Principles.

The review of the assessment reports has shown that one of the sixteen TARGET components (ES) fully observes the nine applicable Core Principles. For the other TARGET components, Core Principle VII (on security and operational reliability) and Core Principle VIII (on efficiency and practicality) are those that are most frequently assessed as being only broadly or partly observed. The issues in question relate to business continuity arrangements and economic efficiency.

The compliance gaps identified have been brought to the attention of the operators of the systems concerned, with the acknowledgement that some of them, and especially those related to Core Principles VII and VIII, should be addressed with the implementation of TARGET2, which is expected to become operational at the beginning of 2007.

The review of the assessments of the non-TARGET euro LVPSs has not revealed any major shortcomings.

## ANNEX: LIST OF SYSTEMS ASSESSED

The table below lists the euro LVPSs that have been assessed either by the respective EU national central banks or by the ECB against the Core Principles for systemically important payment systems.

Table

No.	Name of the system	System overseen by
1	ARTIS	Oesterreichische Nationalbank
2	RTGS <sup>plus</sup>	Deutsche Bundesbank
3	ELLIPS	Nationale Bank van België/Banque Nationale de Belgique
4	KRONOS	Danmarks Nationalbank
5	BoF-RTGS	Suomen Pankki – Finlands Bank
6	POPS*	Suomen Pankki – Finlands Bank
7	SLBE	Banco de España
8	SPI*	Banco de España
9	TBF	Banque de France
10	PNS*	Banque de France
11	IRIS	Central Bank and Financial Services Authority of Ireland
12	HERMES	Bank of Greece
13	LIPS-gross	Banque centrale du Luxembourg
14	BI-REL	Banca d'Italia
15	TOP	De Nederlandsche Bank
16	SPGT	Banco de Portugal
17	RIX	Sveriges Riksbank
18	euro CHAPS	Bank of England
19	EPM	European Central Bank

\*) These systems are not components of TARGET.

