



EUROPEAN CENTRAL BANK

EUROSYSTEM

OVERSIGHT ASSESSMENT OF THE EURO SYSTEM OF THE EBA CLEARING COMPANY (EURO 1) AGAINST THE CPSS CORE PRINCIPLES

NOVEMBER 2011





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EXECUTIVE SUMMARY

The euro system of the EBA CLEARING Company (hereafter “EURO1”) is a key payment infrastructure which plays an important role in the processing of large-value payment transactions in euro. Given the systemic relevance of EURO1 in the euro area payment landscape, the Eurosystem assessed the EURO1 system against the currently applicable oversight standards, namely the CPSS Core Principles for Systemically Important Payment Systems and the Eurosystem’s Business Continuity Oversight Expectations for Systemically Important Payment Systems (BCOE).

The assessment was carried out using the Eurosystem’s oversight assessment methodology for systemically important payment systems (SIPS) that was adopted by the ECB’s Governing Council in November 2007. Prior to this assessment, the EURO1 system had also been subject to an oversight assessment in 2001 performed by the International Monetary Fund (IMF) in cooperation with the ECB. The assessment focused primarily on the legal, financial, operational and governance arrangements and system functioning of EURO1.

The current assessment was headed and coordinated by the ECB with the involvement of volunteering euro area central banks (Banca d’Italia, De Nederlandsche Bank, Deutsche Bundesbank, Banque de France and Banco de España). The assessment began in 2010 and was completed in July 2011. At the end of the process, oversight recommendations were brought to the attention of the EURO1 system operator, EBA CLEARING. Some oversight findings require further action on the part of EBA CLEARING. However, none of these imperfections adversely affects the smooth operation of EURO1.

This report describes the main findings and the final oversight conclusion regarding EURO1’s compliance with the CPSS Core Principles and the BCOE.

On the basis of the assessment conducted by the Eurosystem, the conclusion is that *the euro system of the EBA CLEARING Company (EURO1) complies with CPSS Core Principles I to IX and, due to the absence of a dedicated Risk Management function within the company, broadly complies with Core Principle X (Governance).*

INTRODUCTION

On 25 January 2001, the Governing Council of the ECB adopted the CPSS Core Principles for Systemically Important Payment Systems (hereafter referred to as “the Core Principles”) as the minimum standards for the Eurosystem’s common oversight policy on systemically important payment systems (SIPS). Prior to this assessment, the EURO1 system had also been subject to an oversight assessment in 2001 performed by the International Monetary Fund (IMF) in cooperation with the ECB. Since then, changes introduced by EBA CLEARING to the functionality of EURO1 have been systematically assessed by the ECB and volunteering euro area NCBs.

It is worth remembering that before the adoption of the Core Principles by the Governing Council in 2001, an initial collective assessment exercise at the ESCB level had been carried out in the second half of 1998. At that time, the compliance of all large-value net settlement systems with the Lamfalussy standards was assessed before they began operating in euro at the start of Stage Three of Economic and Monetary Union (EMU) on 1 January 1999. On that basis, EURO1 was also assessed against the Lamfalussy standards, which concluded that the design of the EURO1 system was appropriate for the provision of its services at the start of Stage Three of EMU in 1999.

In 2010, the ECB in its capacity as the lead overseer for EURO1 launched a new assessment of the EURO1 system against the Core Principles. The assessment was carried out with the participation of a number of volunteering euro area NCBs (Banca d’Italia, De Nederlandsche Bank, Deutsche Bundesbank, Banque de France and Banco de España).

This report consists of three chapters: Chapter 1 briefly describes the EURO1 system; Chapter 2 provides an overview of the background to the assessment, its scope, the organisational

framework and procedural aspects; Chapter 3 presents the outcome and main findings of the assessment.

I THE EURO1 SYSTEM

EURO1 is a system for large-value net settlement in euro between participating banks with a registered office or branch within the European Union (EU). EURO1 has some similarities with a RTGS system; its design is such that it separates the finality of payments, achieved after processing each payment message in real time, and the settlement of the participants' end-of-day positions, conducted in central bank money in TARGET2.

EURO1 became operational on 4 January 1999. The system is operated by the EBA CLEARING Company, which was created specifically for the purpose of operating and managing EURO1. EBA CLEARING is owned by the banks participating in EURO1. In order to be eligible for admission to, and participation in, the EURO1 system, an applicant must fulfil certain legal, financial and operational criteria. In addition, a satisfactory country legal opinion must have been obtained confirming the validity and enforceability of the legal basis for the EURO1 system and, more broadly, of the EURO1 system documentation under the laws of all jurisdictions that are relevant to participation by a given participant.

The legal basis for EURO1, known as the 'Single Obligation Structure' (SOS), is effective at a cross-border level in all jurisdictions relevant to the system. Pursuant to this structure, each participant only has, at any time during the operating day (and beyond the cut-off time for processing until settlement), one single claim (in the case of a positive amount) or one single obligation (in the case of a negative amount) vis-à-vis the community of all other participants. Each participant (or applicant) has to provide a legal opinion to corroborate its ability to participate in the system (capacity opinion), while a legal opinion (country opinion) must be issued to confirm that the Single Obligation Structure (SOS) is recognised and enforceable in the country in which the participant is incorporated and/or its system office is located.

EURO1 distinguishes between two types of participants, namely 'EURO1 participants', who must fulfil all admission criteria and participate in the loss-sharing arrangements of the system, and 'pre-fund participants', who do not have to fulfil the financial admission criteria and may only have a positive position (i.e. single claim) in the system. Central banks are eligible for admission as pre-fund participants. As of April 2011, EURO1 has 67 participants' and 10 'pre-fund participants', seven of them central banks. Banks from non-EU countries can participate in EURO1 via a branch located within the EU. Participants may include in the system their branches and entities included in the same consolidated accounts.

The operation of EURO1 is based on the use of a messaging infrastructure and processing service provided by the Society for Worldwide Interbank Financial Communication (SWIFT). EURO1 processes credit and debit transfers which are based on the SWIFT FIN payments format and the use of SWIFTNet Browse, InterAct and FileAct for the operational management of the system. The EURO1 system settles on the same day in central bank funds in TARGET2-ECB using Ancillary System Interface module 4 ("AS14").

EBA CLEARING, in its role as system operator, is responsible for continuous management, monitoring and control of payment processing and the system's settlement operations. EURO1 participants have real-time access to their position at any given time during the day, inter alia to monitor and manage payments and queues.

Payments sent by participants to EURO1 are processed individually and cannot be cancelled once they have been processed by the system. Finality of a payment is achieved once the payment message has been processed. Each processed payment prompts an adjustment to the participant's single claim or obligation. However, settlement of the single claim or obligation occurs only during the end-of-day

settlement process, which takes place after the cut-off time at 16:00 CET. In EURO1 the settlement asset, i.e. central bank fund transfers via the settlement account for EURO1 in TARGET2-ECB, is transferred after the finality of the payments. The participants continue to be subject to certain credit and liquidity risks in relation to their single claim or single obligation vis-à-vis the community of all other participants until final settlement in central bank money is completed.

EBA CLEARING has implemented procedures and tools aimed at ensuring proper risk management and the smooth processing of payments in EURO1. These include (i) the setting of bilateral limits between the participants, (ii) the application of debit and credit limits for each participant, (iii) the implementation of a 'circles processing' function that is activated by EBA CLEARING in case of gridlock, and (iv) the use of a liquidity bridge for liquidity management. To handle abnormal events in EURO1 that may endanger the smooth functioning of the system and the daily settlement process, EBA CLEARING has also put in place additional risk management procedures. These include the use of a liquidity pool and the activation of the loss-sharing arrangements established to cope with liquidity and credit risk situations as may arise due to failure on the part of one or more participants.

2 CONDUCTING THE EURO1 ASSESSMENT

2.1 ASSESSMENT METHODOLOGY

The current assessment of EURO1 against the Core Principles was conducted on the basis of the Eurosystem's "Terms of reference for the oversight assessment of euro area systemically and prominently important payment systems (SIPS) against the Core Principles (ToR)" implemented in November 2007.¹ The ToR aim to provide clear and comprehensive guidelines for conducting oversight assessments on euro area systemically and prominently important payment systems.

The use of the ToR for the assessment of SIPS minimises the risk of major inconsistencies in the assessment of comparable payment infrastructures (e.g. EURO1 and TARGET2) and thus contributes to a level playing field across the systems.

2.2 ORGANISATIONAL FRAMEWORK

The ECB performed the assessment with contributions from a number of volunteering NCBs (Banca d'Italia, De Nederlandsche Bank, Deutsche Bundesbank, Banque de France and Banco de España). The oversight findings have been presented to, and discussed with, the system operator.

The assessment is based on all relevant system-related documents regarding the design and operation of the system as well as on legal, organisational and technical arrangements with service providers.

¹ The Eurosystem oversight methodology for the assessment of SIPS against the CPSS Core Principles can be accessed via the following link: <http://www.ecb.europa.eu/press/pr/date/2007/html/pr071112.en.html>

3 OVERSIGHT ASSESSMENT AND MAIN FINDINGS

3.1 OVERVIEW

Following the detailed analysis of the answers to the key questions of the ToR, and the review of the system and other supporting documentation received from EBA CLEARING, the conclusion is that the EURO1 system observes Core Principles I to IX and broadly observes Core Principle X. Subject to the successful implementation of a dedicated R the system's level of compliance with CPX can be expected to improve further.

The following table presents the level of observance for each of the Core Principles:

Furthermore, for some of the Core Principles the assessment has identified a few areas of recommendable improvements and outstanding actions (see Section 3.2). In particular, improvements have been recommended in the change and incident management process established with the service providers and relating to various system documents such as IT security policy and EURO1's risk management framework. Concerning outstanding actions, it should be noted that EBA CLEARING still needs to update the remaining country opinions in line with the relevant provisions of the EU's Settlement Finality Directive (SFD). It is expected that the system operator will implement

these recommendations by September 2012. In order to ensure that the recommendations are properly followed up and addressed by the EURO1 system operator, the Eurosystem will assess the requested changes and actions performed by EBA CLEARING.

3.2 DETAILED ASSESSMENT (BY CORE PRINCIPLE)

Core Principle I – The system should have a well-founded legal basis under all relevant jurisdictions

Under this Core Principle, the assessment focused mainly on the soundness of the system's legal basis, the clear definition of irrevocability and finality in EURO1 legal documentation and, more generally, the validity and enforceability of the EURO1 legal framework under the applicable laws.

German law has been chosen as the governing law and only the by-laws of EBA CLEARING and the contractual relationship with SWIFT for the messaging layer are governed by other legislation (respectively, French and Belgian law).² The applicable law is consequently clearly identified.

The system documentation lays down detailed and clearly defined provisions regulating the moments of entry, irrevocability and finality of

² Article 37 of the by-laws of EBA CLEARING.

Core Principle	Observed	Broadly observed	Partly observed	Not observed
I (Legal basis)	X	-	-	-
II (Understanding financial risks)	X	-	-	-
III (Management of financial risks)	X	-	-	-
IV (Prompt final settlement)	X	-	-	-
V (Multilateral netting)	X	-	-	-
VI (Settlement assets)	X	-	-	-
VII (Security and operational reliability, including BCOE)	X	-	-	-
VIII (Efficiency)	X	-	-	-
IX (Access criteria)	X	-	-	-
X (Governance)	-	X ¹⁾	-	-

¹⁾ Subject to the successful implementation of the Risk Management function by EBA CLEARING, EURO1 compliance with this Core Principle could be improved.

payment orders in line with the relevant provisions of the Settlement Finality Directive³ (SFD).

This is confirmed by an updated German country opinion and the French capacity opinion. EBA CLEARING informed the overseers that the other country opinions would be updated after the transposition of the SFD (amended by Directive 2009/44/EC) within the respective national laws.

Therefore, for the present exercise it was agreed with EBA CLEARING to confine the assessment solely to the German country opinion and the French capacity opinion, which includes confirmation of the validity and enforceability under French law of the system documentation governed by German law.

In accordance with SFD Article 10, the EURO1 system was designated and notified to the Commission by Deutsche Bundesbank in 1999.

EURO1 observes Core Principle I.

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

In the context of this Core Principle, the oversight analysis focused specifically on the clarity of the system’s rules and provisions pertaining to the management and containment of financial risks and the transparency of these rules for participants (including other parties involved, such as service providers) as well as for the general public, thereby taking due account of possible confidentiality constraints.

The rules and procedures of EURO1 are described in detail in two main documents: “EURO1 Rules” and “EURO1 Regulations”. These documents are legally binding and define the system’s legal basis (the “Single Obligation Structure”) and the rights and obligations of participants as regards participation in the

system. Practical information on system usage is provided in the “User Manual”, which also describes the various events that occur during the business day both in normal and abnormal circumstances. Guidelines for participants on the appropriate use of the system are contained in the “Code of Conduct” for EURO1/STEP1. The full set of EURO1 system documentation is listed in the EURO1 Rules and available to participants on the EBA CLEARING website.

Many provisions under the EURO1 Rules are relevant to the management and containment of financial risks. Explanatory materials are available to applicants and new participants. More information and presentations on specific issues are provided during meetings at country/regional level or with individual participants.

The system’s legal and operational documentation is complete and up to date and correctly reflects the actual functioning of the system. A consultation process with users is activated when changes to the system are going to be introduced, both through informal channels (presentations at country or regional group meetings) and through the Standing Committees (Operations and Technical Committee and Legal Advisory Group) which include representatives from all the user communities.

The EURO1 Rules contain detailed descriptions of the rights and obligations of participants. They also define the liquidity management features available to participants and to the system operator, the obligations of participants and system operator in case of emergency, and the applicable procedures in case of default. The system operator monitors the settlement operations in order to identify unusual patterns of

³ 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, 11.6.1998, p. 45), as amended by Directive 2009/44/EC of 6 May 2009 amending Directive 98/26/EC on settlement finality in payment and securities settlement systems and Directive 2002/47/EC on financial collateral arrangements as regards linked systems and credit claims (OJ L 146, 10.6.2009, p. 37).

behaviour and, in the event of problems, contacts the participant(s). A testing programme and self-certification are in place to assess the ability of a participant to implement system changes.

EURO1 observes Core Principle II.

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 provide appropriate incentives to manage and contain those risks

The assessment focused on the quality of the rules and procedures for the management and containment of financial risks as well as on the tools and incentives provided to the participants to monitor and manage these risks (e.g. queue management, liquidity pooling, prioritisation of payments, etc.).

CREDIT EXPOSURE

The creditworthiness of a participant is checked in two ways. Before a new participant joins the system, the system operator verifies that it fulfils the access criteria in terms of creditworthiness. Thereafter, it is up to each individual participant to assess the creditworthiness of the other participants and to reflect this in the limit-setting process. The system operator monitors each participant's continued compliance with the access criteria other than the financial criteria.

EURO1 offers participants various ways of limiting credit risk. The limit system is the most important instrument; by defining its limits and thereby its credit cap, the participant itself determines the amount of risk which it is willing to take by reason of its participation in the system. The system restricts the maximum size of the credit and debit cap to €1 billion. The SOS is designed in such a way that no bilateral claims and obligations arise between the participants, but any one participant always has just one claim or obligation vis-à-vis the community of all participants. If there are technical problems, or one or more participants

default, the liquidity pool, which is the same size as the maximum credit cap, namely €1 billion, is used first to cover losses.

The rules and procedures, as well as the division of responsibilities, are described unequivocally and clearly in the EURO1 Rules. Participants can monitor and manage their single claim or obligation electronically and in real time. The limits can be changed up until 18:00 CET on settlement day D-1 to take effect from the next business day D. Limits are composed of a mandatory element, which must be maintained unless a majority of participants request its cancellation, and a discretionary element which can be set between zero and a maximum amount defined at system level. In 2011, EBA CLEARING plans to change the cut-off time of discretionary limit changes to 07:00 CET on the day when the limits take effect (settlement day D), a lesson learned from the recent financial crisis.

LIQUIDITY EXPOSURE

The processing of payments in EURO1 occurs within the binding intra-day limits, namely the credit cap and debit cap of each participant. The system provides different tools to manage and contain liquidity risks. First of all, participants have real-time access to their positions in EURO1. Furthermore, different warning messages are sent to the participants involved. Participants can also use the liquidity bridge functionality to control their single claim or obligation via pre-funding or intra-day liquidity distribution. At the level of the system operator a special function can be used if ever a gridlock situation threatens to arise. In addition, the system operator monitors compliance with the Code of Conduct that sets forth throughput guidelines in terms of volume and value.

The rules and procedures as well as the responsibilities of all parties concerning the management and containment of liquidity risks are clearly defined.

EURO1 observes Core Principle III.

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

Compliance with this Core Principle was ascertained by means of a detailed assessment of rules relating to the various stages of the life cycle of a payment (i.e. submission, validation, acceptance, irrevocability, rejection and finality). In addition, this assessment also covered the system's capabilities for briefing the participants on the status of their payments.

Any payment order that is accepted by the system for settlement ultimately should be settled promptly and at the latest by the end of the intended day of value on which it is due to the receiving participant in the system. EURO1 provides finality for each payment once it has been processed. As soon as a payment order has been processed, the payment becomes irrevocable and unconditional and the single claim or obligation of each participant vis-à-vis the community of the other participants as joint creditors/debtors is updated. The single claim or obligation is settled on central bank accounts during the end-of-day settlement process which starts at 16:00 CET.

The cycle of a payment in EURO1 is explained in the EURO1 Rules and in the User Manual. The *submission* of payments is possible on the day of value and up to five days ahead of the value date. The *validation* requirements of a payment, e.g. concerning the format and limit system, are stipulated in the EURO1 Rules. As long as a payment has not yet been processed it can be *revoked* by the sending participant. Furthermore, a payment will be rejected if it does not fulfil the *validation* and submission requirements. A payment shall become *irrevocable* once it is processed. The rules and procedures of the system comply with the minimum requirements established in this Core Principle. As far as the enforceability of the SOS is concerned the remaining country opinions should be updated after the transposition into national law of the modifications to

the SFD adopted by Directive 2009/44/EC (see Core Principle I) and consequently assessed by the Eurosystem.

EURO1 observes Core Principle IV.

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

The functioning of the EURO1 system is based on the Single Obligation Structure (SOS). Under the SOS, payments sent to the system are processed in real time if the processing of the payment message does not breach the debit and credit caps of the sending and receiving participants respectively (otherwise payments are put on hold until they can be processed without breaching those caps). Payments are final once processed. As a result of the SOS, participants have a single claim or obligation vis-à-vis the community of other participants (jointly, but not severally). Settlement of the system is deferred until the end of the day, when all single obligations are paid by the short participants to the settlement agent (ECB) and the funds obtained are distributed by the settlement agent to the long participants to settle their claims. Settlement occurs among the participants and does not result in any payment obligations or claims on the part of the system operator or the settlement agent.

The main feature established by the system in order to ensure daily settlement in case of inability to settle on the part of the participant with the largest single settlement obligation is a liquidity pool comprising the sum of the deposits of the participants. The liquidity pool is held in a guarantee fund account opened with the ECB in TARGET2-ASI4.

The amount contained in the liquidity pool ensures that settlement can be made in case of inability to settle on the part of the participant with the largest single settlement obligation.

The maximum single obligation that any participant can have is €1 billion (the same amount as the maximum debit cap). It is ensured that the liquidity pool (as the sum of the participants' deposits) equals or exceeds at all times the amount of the maximum debit cap, which is also the potential maximum single obligation a participant may have. The liquidity pool is under the control of the system operator. Only the system operator is entitled to give instructions to the ECB as settlement service provider and holder of the deposits in order to use the Guarantee Fund Account in TARGET2-ECB ASI4 to complete settlement or to allocate the use of the pool to the participants' deposits. If the pool is used, it must be replenished prior to starting up the system on the next operating day. Replenishment shall be done by the EURO1 participant who caused the need to use the pool (e.g. in the event where the failure was due to technical problems for that participant), or by the surviving EURO1 participants (e.g. in case of insolvency).

It should be mentioned that pre-fund participants in the EURO1 system do not participate in the liquidity pool or loss-sharing arrangements of the system. Pre-fund participants can only have a single claim (never a single obligation) and thus always participate in the settlement operations as 'long' participants.

EURO1 observes Core Principle V.

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 aim of this Core Principle is to eliminate or minimise liquidity and credit risk arising from the use of a particular asset to settle payments through the respective system. Thus, the nature of the settlement asset is of crucial importance.

EURO1 settlement takes place in TARGET2, i.e. in central bank money. In accordance with the signed settlement agreement between

EBA CLEARING and the ECB, the ECB acts as service provider to:

- (i) receive funds from participants in connection with pre-funding and the settlement of payment obligations;
- (ii) pay such funds as instructed by EBA CLEARING for the benefit of all participants;
- (iii) notify EBA CLEARING of the source, amount, and exact time of receipt and exact time of payment of all such funds.

The single obligations of EURO1 participants (so-called short participants) are debited on the participants' account in TARGET2 by means of direct debits, while the single claim of EURO1 participants (so-called long participants) are credited by means of credit transfers to the participants' account in TARGET2.

EURO1 observes Core Principle VI.

Core Principle VII – The system should ensure a high degree of security and operational reliability and should have contingency arrangements for the timely completion of daily processing

The oversight investigations under this Core Principle include the establishment of a security policy, the adequacy of the framework applied for the management of operational risk, and the arrangements relating to business continuity with a special focus on the capabilities of the system to cope with contingency situations.

IS SECURITY AND RISK MANAGEMENT

The objectives of the EURO1 security policy along with a wide range of tools and procedures to achieve them are defined in the document "IT Security Policy for Operations Services Unit (OSU) systems". The content of the policy is based on the recommendations of the ISO/IEC 27002:005 (formerly ISO/IEC 17799:2005) standard with regard to those chapters that are applicable to OSU security requirements.

This policy aims to ensure that all systems installed in the EBA CLEARING Company's OSU environment are operated and maintained at the appropriate level of security without at the same time impeding the ability of OSU users and support staff to go about their work. EBA CLEARING's IT security policy comprises a set of sub-policies which are applicable to specific subject areas. The sub-policies are included as attachments and refer to particular objectives, areas or applications in order to keep the main IT policy document focused and compact. The OSU staff operating the EURO1 system receive regular training and updates on the EURO1 policies and procedures as relevant to their job function. Ongoing training includes security requirements, legal responsibilities and business controls. EURO1 operational staff are regularly made aware of security threats and concerns, and are equipped to support operational risk management and reduce the risk of human error in abnormal situations.

Through the organisation of regular tests, EBA CLEARING ensures that staff understand the overall IS policy and their responsibilities deriving from it. This includes, but is not necessarily limited to, conducting tests on IT security, physical and environmental security, capacity planning, and crisis management and communication arrangements.

EBA CLEARING has in place a system of OSU staff rotation between positions, enabling staff members to broaden their experience on various operational tasks and provide greater flexibility if there is a system failure. The four-eyes principle is applied for critical functions, which are performed by the staff in the OSU.

Staff security roles and responsibilities are defined and documented in "IT Security Policy for Operations Services Unit (OSU) Systems". To disseminate the tasks and associated privileges the principle of separation/segregation of duties has been implemented with the establishment of two security officers.

Concerning changes in EURO1, EBA CLEARING has in place a change management process aimed at ensuring that EURO1 changes relating to new requirements, design, configuration and operations are prioritised and performed in a controlled manner.

With regard to the critical services of EURO1 which are provided by third-party service providers such as SWIFT and the ECB, EBA CLEARING has agreed service levels with these providers and relies on their IT security policy and IT risk management framework for EURO1 to function properly. Although it is not within the scope of this assessment, both SWIFT and TARGET2-ECB have IT security policies in place which are also in line with the ISO/IEC 27002:005 standard aimed at ensuring confidentiality, integrity and availability of the two critical services.

Observance among the participants is ensured through the contractually binding obligations of the participants to abide by any periodic instructions that are issued by EBA CLEARING.

OPERATIONAL RELIABILITY

Since the start of live EURO1 operations in 1999, no downtime or non-availability affecting the central EURO1 processing system and/or the client applications used by the system operator have been recorded. Service-level requirements for the EURO1 system are met. These include a processing capacity which is within agreed volume assumptions, transmission and recovery objectives, data retention and EURO1 service availability (100%).

EBA CLEARING staff have appropriate levels of business knowledge and operational experience for conducting their tasks. Skilled staff responsible for the operational support of EURO1 are available at both EBA CLEARING sites when required to solve operational issues and resolve problems. EBA CLEARING staff are constantly monitoring and assessing whether EURO1 meets the system's performance objectives and levels of service. The system's

performance is reported regularly to the Board, participants and overseers.

EBA CLEARING has established operational and technical procedures with the core service providers. These are described in coordination manuals and service-level descriptions. The two main EURO1 processes, namely EURO1 processing and the end-of-day settlement in TARGET2, have been outsourced to SWIFT and the ECB respectively.

All incidents detected by EBA CLEARING, or reported by either the EURO1 participants or by the service providers, are systematically logged and escalated to the appropriate level.

EBA CLEARING holds regular meetings with the service providers. During these meetings the operational reliability of the outsourced services is discussed. EBA CLEARING has agreed maximum response times with the service providers in case of failure. Follow-up actions or potential mitigation procedures for incidents are also presented by the service provider to EBA CLEARING. The capacity requirement for the EURO1 processing service is regularly monitored by EBA CLEARING and SWIFT, assessed during the regular service meetings that are held between the two parties, regularly tested with regression tests, and upgraded where appropriate.

In terms of participants' resilience, EURO1 participants are requested regularly to perform connectivity tests with the EURO1 application from their fallback facilities. In addition, every three months participants are requested to verify their capability to log in to the SWIFT FIN network via a different SWIFT access point. In cooperation with the ECB, EURO1 participants are also requested to participate in mandatory country group TARGET2 settlement tests organised by EBA CLEARING in cooperation with the Eurosystem.

The external auditors carry out regular reviews of the system's business continuity and operational reliability arrangements. The audit reports are

presented to the Audit and Finance Committee (AFC) and to the Board.

BUSINESS CONTINUITY

EBA CLEARING's business continuity strategy and policy are based on the widely-used British standard BS25999 dedicated to Business Continuity Management (BCM). The business continuity policy documents and guidelines have been implemented by EBA CLEARING and endorsed by the Audit and Finance Committee of the Board of EBA CLEARING.

EBA CLEARING has performed a Business Impact Analysis (BIA) for all critical functions in order to identify which business processes are critical or essential to the continuation of the EURO1 service. The assumptions for assessing the business impacts and the outcome of the analysis have been documented in the Business Impact Analysis. The BIA provides a sound general overview of the IT infrastructure and the system's various functions and processes. From this, it is possible to deduce critical points in the system.

The business continuity objectives defined in the Business Continuity Strategy (BCS) document are aimed at the recovery and resumption of critical functions within two hours after an incident. This is fully in line with the Eurosystem's Business Continuity Oversight Expectations (BCOE), which require that business continuity objectives for SIPS should aim to recover and resume critical functions at least within the same settlement day (with "good practice" being two hours after the disruption occurs).

In terms of crisis communication, EBA CLEARING has in place a Crisis Management Arrangement (CMA) document, which describes the crisis management arrangements and procedures as such, and the scenarios under which they should be activated.

In 2009, the Eurosystem assessed the implementation of the BCOE in the EURO1

system. The assessment result was published in a report approved by the Governing Council in June 2010. The assessment conclusion on EURO1 was that all four BCOE key issues were to a very large extent adequately addressed by EBA CLEARING and that the business continuity arrangements of EURO1 are well established and provide a sufficiently high and consistent level of resilience.

EURO1 observes Core Principle VII.

Core Principle VIII – The system should provide a means of making payments which is practical for its users and efficient for the economy

The assessment of this Core Principle relates chiefly to the procedures applied for the continuous harmonisation of the system's services with the needs and requirements of the users, the adequacy of the pricing policy, and the level of cost efficiency.

EURO1 is a private system owned by the participating banks. Each participant has one share in the capital of the Company, which enables them to take collectively all relevant decisions concerning the system. The system has been designed and is updated to meet user needs, as specified by user committees and working groups. Taking into account the existence of alternative settlement channels and the fact that, according to EBA CLEARING, nearly all the potential euro area eligible participants join the system in practice, it is reasonable to conclude that the users regard the system as an efficient settlement channel. The information needs of the users are satisfied through a wide range of communication channels and fora: user committees, working groups, road shows, and bank and country group visits. Users receive so-called 'Participant Information Notes' in the event of changes and relevant upcoming projects.

Users' needs are taken into account by representatives from all countries within the Operations and Technical Committee, which monitors the system and also discusses and

validates its evolution. At present the system's services are tailored to meet the needs of EURO1 participants, who have to comply with all admission criteria and participate in the loss-sharing agreement, and pre-fund participants, who do not have to fulfil the financial admission criteria and can only have a positive position in the system.

Statistics released by EBA CLEARING reveal that payments are processed smoothly, always with a declared average queuing time of less than five minutes. The same data seem to confirm that the EURO1 Code of Conduct, which has been implemented and monitored by the system operator, is properly observed on a daily basis, thus providing adequate incentives for participants to pay promptly.

EURO1 observes Core Principle VIII.

Core Principle IX – The system should have objective and publicly disclosed criteria for participation, which permit fair and open access

The main aspects assessed in the context of this Core Principle concern the clarity and objectivity of the access/exit criteria and the related procedures, including the regular monitoring of the fulfilment of these criteria, as laid down in the relevant EURO1 documentation.

A EURO1 participant needs to comply with three sets of criteria in order to access the system: legal, financial, and operational. The main legal criteria specify that the applicant institution must be an entity authorised to conduct banking business and also a member of the Euro Banking Association (EBA). The registered office of the applicant should be located in the EU or in an OECD country and must participate in the system from an office located in the EU. Other legal criteria refer to the analysis of the validity and enforceability of the system documentation (in particular, the Single Obligation Structure) under all laws relevant to participation by the applicant in the EURO1 system. Financial criteria specify the minimum quantity of the applicant's own funds and credit ratings. Operational criteria require that

the applicant has direct access to TARGET2 and also adequate staff and technical and operational facilities for participation in the system.

Pre-fund participants are only allowed to maintain a single claim (never a net obligation towards the rest of the participants in the system), which is why the financial risks that these participants bring to the system are limited; as a result, the financial criteria are not applicable to them. Exit criteria include the conditions under which a participant can be excluded from the system (inter alia, if affected by an insolvency event or if losing the authorisation to conduct banking business) or temporarily suspended from participation (suspension can be caused, inter alia, by the failure to pay settlement-related obligations when due or by failure to comply with the system rules). Participants also have the right to exit the system voluntarily (withdrawal).

Access and exit criteria are clearly and explicitly defined in the system's Rules, leaving little room for discretion in their application. Access criteria are based on appropriate risk and efficiency considerations, and they do not seem unduly to restrict participation in the system, permitting fair access to it.

Access and exit criteria are adequately disclosed to participants. The basic access criteria are publicly available on the EBA CLEARING website. Potential participants can obtain additional information concerning the legal, technical and operational requirements for participating in EURO1, subject to the signing of a confidentiality agreement.

The general fee structure as such is described in the EURO1 Rules and Regulations and regarded as fair. There are one-off system fees, payable upon joining (entrance fee) and leaving (exit fee), which are aimed at recovering the costs related to admission to the system (reflecting past design, development and system improvement costs) and exit from it (share of the service fees that would otherwise have been borne by a participant for a specific period after

the exit date). Both entrance and exit fees are determined by the system operator. The entrance fee is the same for each new EURO1 participant and has been stable for many years.

Pre-fund participants pay no entrance fee, but do pay a connection fee. Pre-fund participants pay an annual fee covering their participation in the system and all transactions (transaction fees payable by the pre-fund participants are set at zero). The exit fee for pre-fund participants covers administrative costs relating to the withdrawal of a participant from the system.

The regular administration and operating costs are intended to be covered by transaction fees. This structure should ensure that there is no cross-subsidisation in the system (e.g. trying to offset shortfalls in covering operating costs by levying high entrance fees).

The continuous fulfilment of the criteria (other than the financial criteria) by the participants is monitored by the system operator. The monitoring process requires that participants should inform the system operator once changes have occurred in the legal, operational or technical set-up of the participant. Depending on the level and nature of the changes, the system operator will take the necessary actions to ensure that the participant fulfils the participation criteria once the changes are implemented.

EURO1 observes Core Principle IX.

Core Principle X – The system's governance arrangements should be effective, accountable and transparent.

The key issues that were examined under this Core Principle were the unambiguous and transparent specification of the governance structure, the accountability and effectiveness of system management, the involvement of stakeholders in decisions, and the definition of business objectives.

EURO1 is governed by EBA CLEARING as a limited liability company incorporated under the laws of France in the form of a *société par actions*

simplifiée. EBA CLEARING is entrusted with the operation and management of EURO1. It has its registered office in Paris and its shareholders are the participants in EURO1. Relevant documents in relation to Core Principle X include the by-laws of EBA CLEARING, the EURO1 Rules, and the “Crisis Management Arrangements” document on decision-making in emergency situations.

Board Committees report to the Board. Final decisions are taken by the Board. Each Committee is chaired by a Board member and is composed of Board members. However, the Operations and Technical Committee and the Innovation Committee are composed of representatives from participants based in different EU countries. Some of the documents and information provided are already openly available to the public on the EBA CLEARING website, including its governance structure, composition of its Board and Committees, and strategy.

The responsibility for day-to-day management rests with the Chief Executive Officer (CEO). The CEO reports to the Board. Service Directors and Heads of Unit have delegated powers for managing the activities relating to their units. In addition to the formal governance arrangements, EBA CLEARING maintains a broad set of information channels with its participants, e.g. there are regular country or regional participant meetings including all respective participants which are attended by EBA CLEARING executives; at these, ongoing activities and projects are discussed and feedback is registered.

According to the organisational structure of EBA CLEARING, the company does not have a risk management unit or an internal audit department. The Board has established the Audit and Finance Committee (AFC) in order to control risk management aspects independently of those responsible for day-to-day operations. However, the AFC is a high-level group composed of Board members that meets on a quarterly basis and it cannot perform the day-to-day tasks of a regular risk management or internal audit department. It is suggested that EBA CLEARING

should consider the creation of a dedicated Risk Management function and implement a risk management framework addressing threats that may have an adverse impact on the smooth functioning of the system and its participants. The efficiency and independence of the RM function should be regularly assessed by an internal or external auditor.

EBA CLEARING has defined clear procedures with regard to the responsibility of ensuring service levels on a day-to-day basis. These procedures designate the precise levels of power and authority in this regard, as well as the persons empowered to act. Compliance with such procedures comes under the scrutiny of the Audit and Finance Committee of the Board. Under the guidance of the Audit and Finance Committee there is a tri-annual audit programme conducted by external auditors relating to the robustness and resilience of service delivery, while the external audit includes, inter alia, compliance with internal procedures.

The participants and the system operator have specifically agreed that, in the case of a dispute between two or more participants or one or more participants and the system operator, the parties to any such dispute shall observe a mediation procedure. No disputes have arisen so far, and the mediation procedure has not been used.

Business plans, including financial objective plans, are established annually and reviewed on a quarterly basis. The Audit and Finance Committee of the Board of EBA CLEARING examines in detail the financial situation on a quarterly basis. Basic financial results are included in the report of the Board presented at the shareholders’ annual meeting.

Pending the establishment of an independent and efficient Risk Management function within EBA CLEARING, EURO1 broadly observes Core Principle X.⁴

⁴ The Board of EBA CLEARING, at its meeting held on 6 September 2011, decided to implement a dedicated Risk Management function within the company and to set up a Board Risk Committee.

