

Classification: Public

EURO1
PFMI Disclosure Report
by EBA CLEARING

7 August 2023

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Responding institution:

ABE CLEARING S.A.S. à capital variable (EBA CLEARING), hereafter referred to as “the Company”

Registered office:

40 Rue de Courcelles, 75008 France RCS Paris 419 020 193

Authorised share capital:

€200,000

Jurisdiction(s) in which the FMI operates:

EU

Authority(ies) regulating, supervising or overseeing the FMI:

EURO1 is overseen by the European Central Bank (ECB) as lead overseer, with the involvement of national central banks of the Eurosystem.

EURO1 is classified as a Systemically Important Payment System (SIPS). The list of payment systems in the eurozone and their classification can be found at:

<https://www.ecb.europa.eu/press/pr/date/2014/html/pr140821.en.html>

The date of this disclosure is 7 August 2023.

This disclosure can also be found at <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/reference-documents/>

For further information, please contact regulatory@ebaclearing.eu

I. Executive summary

EBA CLEARING is a provider of pan-European payment infrastructure solutions. Founded in 1998 by 52 banks, the Company is owned by 48 banks operating in Europe as of the date of this disclosure and is based on a country-neutral governance model. The payment systems of EBA CLEARING are pan-European by design and desire: they are developed in line with the Company's multinational user community needs and in close co-operation with best-of-breed technology partners.

EBA CLEARING aims to allow cost optimisation for its users and does not seek profit or shareholder value maximisation. In pursuing its mission, EBA CLEARING is guided by the objective to offer its users solutions that are fit for purpose and efficient, with a special focus on safety and ensuring compliance with regulatory and oversight requirements. EBA CLEARING recognises its role in supporting financial stability and promoting fair and efficient markets and is committed to discharging these responsibilities.

EURO1 was launched in 1999 and was developed to provide an efficient, secure and cost-effective multilateral net settlement infrastructure, with immediate finality for all processed payments, for large-value payments in euro.

It is the only private sector large-value payment system for single same-day euro transactions at a pan-European level. The EURO1 System processes transactions of high priority and urgency, and primarily of large amount, both at a domestic and at a cross-border level.

The system combines a high liquidity efficiency with immediate finality of each processed individual transaction; 96 percent of the EURO1 transactions are processed within two minutes at system level and over 99 percent within one hour.

As of the date of this disclosure, the system counts 34 participant banks and processes on average 170,000 payments per day with an average daily total value of about EUR 190 billion. The service counts close to 4,800 participant BICs with about 10,000 additional BICs reachable via the EURO1/STEP1 Participants, as listed in the EURO1/STEP1 Directory.

The EURO1 System is governed by the EURO1 System Documentation, including in particular the EURO1 Rules and Regulations. The EURO1 Rules and Regulations comprehensively cover the rights and obligations arising from participation in the system. The EURO1 System Documentation is governed by German law.

The legal basis of the EURO1 System is known as the 'Single Obligation Structure' (SOS). This means that, at any time on any given business day, each participant only has one single obligation/claim towards all other participants as joint creditors/obligors which is adjusted automatically and in real time every time a payment is duly processed.

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In summary, the SOS legal basis of EURO1 is:

- Valid any time of the day;
- Enforceable in all relevant jurisdictions;
- A unique legal structure that allows for RTGS-equivalent multilateral net settlement

At the time a payment is processed (= time of fund transfer) it is irrevocable and final. There is no unwind.

The Principles for Financial Market Infrastructures (PFMIs) are the international standards for financial market infrastructures, i.e. payment systems, central securities depositories, securities settlement systems, central counterparties and trade repositories, issued by the Committee on Payments and Market Infrastructures (CPMI) and the International Organisation of Securities Commissions (IOSCO). The PFMIs are part of a set of 12 key standards that the international community considers essential to strengthening and preserving financial stability.

The PFMIs are implemented in the euro area by the ECB Regulation (EU 795/2014)¹ on Oversight Requirements for Systemically Important Payment Systems (SIPS Regulation) as amended by ECB Regulations EU 2017/2094² and 2021/728³. The SIPS Regulation covers both large-value and retail payment systems of systemic importance, whether operated by the Eurosystem's national central banks or private entities. In 2014, EURO1 and STEP2-T were identified by the ECB as SIPS. Therefore, EURO1 is overseen by the ECB as "Competent Authority" within the meaning of the SIPS Regulation, with the involvement of national central banks of the Eurosystem.

As an operator of SIPS, EBA CLEARING must ensure that it meet the requirements of the SIPS Regulation. Article 20(5) of the SIPS Regulation sets out that "*a SIPS operator shall complete and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures.*" The present document fulfils this requirement.

Section II of this report summarises the changes to the system since the last disclosure report.

Section Error! Reference source not found. provides the general background of the Financial Market Infrastructure (FMI).

Section IV contains a detailed description of how EBA CLEARING ensures compliance with the requirements under the PFMIs and the SIPS Regulation for EURO1.

Section V lists various public sources of additional information about EBA CLEARING and EURO1.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0795>

² <https://eur-lex.europa.eu/eli/reg/2017/2094/oj>

³ [EUR-Lex - 32021R0728 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/eli/reg/2021/728/oj)

II. Summary of changes since the last update of the disclosure report

This section summarises the key changes that have impacted EURO1 since April 2020.

The 2020 release comprised minor technical updates and cosmetic changes. There were no functional changes to the system.

In 2021, EBA CLEARING introduced the possibility to EURO1 Participants that the cash deposit representing each participant's share in the Liquidity Pool is only held with the ECB during the operating hours of EURO1 and until successful end-of-day settlement, after which it is returned to the participant until the opening of the next TARGET business day. The function is provided for in the rules governing the system. Participants that wish to use the function must respect certain operational and technical requirements.

In March 2023, EURO1 migrated from FIN-based payment and reporting messages to the ISO 20022 standard equivalent messages. The date of the migration was aligned with the TARGET RTGS ("TARGET") operated by the European Central Bank, to maintain full intra-day ability of EURO1 Participants to switch between the two payment systems. The migration was also based on guidelines from HVPS+. The migration to the ISO 20022 standard did not introduce any changes to the system functionality. Enhancements of the functionality and inclusion of additional information in the messages can be proposed by the community for implementation in the future.

In parallel with the migration to the ISO 20022 standard, the Company adapted the network topology for the EURO1 System, from SwiftNet Y-copy to the more generic V-shape, which is also used by TARGET.

In addition, the EURO1 operating hours were extended. EURO1 processes payments from 02:30 CET to 16:30 CET.

Finally, as part of the TARGET migration to the ISO 20022 standard:

- The settlement of Single Amounts at Close of Processing occurs via the RTGS AS settlement procedure A, which is the successor procedure to the ASI 4 settlement procedure previously used by EURO1 in TARGET.
- Pre-funding messages and liquidity distributions now use the RTGS AS settlement procedure D. Prior to March 2023, EURO1 used single credit and debit payment messages for the Liquidity Bridge transactions.

III. General background of the FMI

(i) General description of the FMI and the markets it serves

EBA CLEARING is a provider of pan-European payment infrastructure solutions. Founded in 1998 by 52 banks, the Company is owned by 48 of the major banks operating in Europe and based on a country-neutral governance model. The payment systems of EBA CLEARING are pan-European by design and desire: they are developed in line with the Company's multinational user community needs and in close co-operation with best-of-breed technology partners.

EBA CLEARING's mission is to deliver market infrastructure solutions for the pan-European payments industry, to support its users' needs in line with user requirements. The strategic aims of the Company are to ensure a pan-European and country-neutral approach for the development and delivery of infrastructure solutions, thereby ensuring excellence and robustness in delivering our services. EBA CLEARING maintains its track record of timely delivery of user-driven solutions responding to evolving and new demands for infrastructure solutions, thereby demonstrating its openness to stakeholders' needs and agility in its role as market infrastructure solutions provider.

EBA CLEARING aims to allow cost optimisation for its users and does not seek profit or shareholder value maximisation. In pursuing its mission, EBA CLEARING is guided by the objective to offer its users solutions that are fit for purpose and efficient, with a special focus on safety and ensuring compliance with regulatory and oversight requirements. EBA CLEARING recognises its role in supporting financial stability and promoting fair and efficient markets and is committed to discharging these responsibilities.

EBA CLEARING manages two Systemically Important Payment Systems, the large-value euro payment system EURO1, and STEP2-T, a pan-European payment infrastructure system for retail payments in euro across Europe processing SEPA Credit Transfers and Direct Debits.

EURO1, launched in 1999, is a large-value payment system for single same-day euro transactions at a pan-European level. The EURO1 system processes transactions of high priority and urgency, and primarily of large amount, both at a domestic and at a cross-border level.

Since 2003, EBA CLEARING has been managing and operating the STEP2-T System, a pan-European Automated Clearing House (ACH) for retail payments in euro, which has been offering SEPA services since January 2008. Today, the STEP2-T System extends SEPA-wide reach to over 4,800 financial institutions through its SEPA services and is one of the key euro retail payment systems in Europe.

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Leveraging the STEP2-T infrastructure, EBA CLEARING also offers STEP2 Card Clearing Service (STEP2-CC), a dedicated system for the clearing and settlement of pre-authorised card-based transactions based on the SEPA Card Clearing Framework. It is currently used for clearing and settling debit card transactions under the German girocard scheme.

In 2017, with the support of 39 funding institutions from across SEPA and its technology partner SIA at the time, which has now merged into Nexi Payments, EBA CLEARING implemented RT1, a pan-European real-time payment infrastructure system for euro transactions. The system is open to any AS-PSP adhering to the EPC's SCT Inst Scheme and has handled instant payments in line with the scheme since its launch.

General organisation of the FMI

EBA CLEARING was created in the form of a *société par actions simplifiée* (SAS) under French law registered with the Paris Trade and Company Register (RCS Paris) and its head offices are located in Paris, France.

The by-laws of EBA CLEARING as amended with effect as of 05 March 2021, are publicly available on the website of EBA CLEARING at <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/reference-documents/>.

EBA CLEARING has 48 shareholders as of the date of this disclosure. Each shareholder holds one share and has one vote at the Shareholders Meeting. The list of shareholders is publicly available on the website of EBA CLEARING at <https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/the-shareholders/>.

The Board is responsible for setting the strategic direction, overseeing management, and adequately controlling the Company, with the ultimate aim of directing the Company towards the fulfilment of its strategic aims and long-term objectives. EBA CLEARING's by-laws provide that the Company is managed by a Board composed of not more than seventeen (17) members including the Chairperson, the Deputy Chairperson and up to two (2) but not less than one (1) Outside Director who are appointed *intuitu personae* by the Shareholders Meeting for a renewable three-year term.

The Board is assisted by five Board Committees in carrying out its functions:

- the Audit & Finance Committee (AFC)
- the Board Risk Committee (BRC)
- the Strategy and Policy Committee (SPC)
- the Remuneration Committee (RemCo)
- the Nomination and Governance Committee (NGC)

The mission and activities of the Board Committees are set forth in each Committee's Terms of Reference and reflected in the Company's Annual Report.

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In addition, the following expert groups have been created and are consulted on the matters under their expertise:

- Operations and Technical Group
- Treasury and Liquidity Group
- Legal Advisory Group

The responsibility for the day-to-day management rests with the Chief Executive Officer (CEO). The CEO reports to the Board. Heads of Unit have delegated power for managing the activities relating to their units. The roles attributed to the various Units coincide with the functions required for carrying out the activities of EBA CLEARING.

Since 2015, a single Service Development and Management Unit has been entrusted with the management of the EURO1/STEP1, STEP2, and RT1 Services, with dedicated senior managers being assigned to the each service line as well as to marketing, user relations and new initiatives.

EBA CLEARING applies a three-lines-of-defence approach for its risk management, ensuring different levels of control. The Chief Risk Officer and the Internal Audit function are independent and have a dotted reporting line to the Board Risk Committee and to the Audit and Finance Committee respectively.

In order to ensure that all types of users are considered in the design and evolution of its systems and offerings, the Company maintains a broad range of communication channels with its (current and potential) users and other stakeholders. There are regular country or regional user meetings with the participation of all respective users and EBA CLEARING management. During these meetings, ongoing activities and projects are discussed and user feedback is requested. In the context of specific projects, steering groups and task forces may be created to ensure efficient exchanges throughout the project or initiative. Furthermore, the Company organises individual user visits and, when appropriate or desired, roadshows and information campaigns.

An identical structure has been adopted for user consultation for the two SIPS operated by the Company. Two Business Committees have been established:

- the EURO1 Business Committee
- the STEP2 Business Committee

Business Committees are consultative bodies providing recommendations to the Board. Business Committees are chaired by a Board member.

A dedicated corporate governance section, setting forth the governance arrangements, lines of responsibility, Board and management role and composition, and relations with stakeholders is included in the Annual Report. A report on the risk management and internal control functions is equally included in the Annual Report. The Annual Report is publicly

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available on the website of the Company at <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/reference-documents/>.

Further, the composition and mission of the Board is published on the website of EBA CLEARING at <https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/the-board/> and <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/mission-and-objectives/> respectively.

Legal and regulatory framework

EBA CLEARING, the SIPS operator of EURO1 and STEP2-T, is a limited liability company incorporated under French law in the form of a *société par actions simplifiée à capital variable*. The Company has branches in Belgium and in Germany, and representative offices in Italy and Finland.

EBA CLEARING's role is primarily that of a 'business administrator'. The Company does not incur any rights or obligations arising from the sending and receiving of payment messages in EURO1, and at no time does it hold any funds or deposits in relation to the operation of its systems.

EURO1 is governed by the EURO1 System Documentation, including in particular the EURO1 Rules. The EURO1 System Documentation, including the provisions regarding the settlement operations and the collateral arrangements, is governed by German law. The EURO1 Rules comprehensively cover the rights and obligations arising from participation in the system.

The legal basis of the EURO1 system is known as the Single Obligation Structure 'SOS', which means that, at any time on any given business day, each participant only has one single amount, which can be: (1) a Single Obligation towards all other participants as joint creditors; or (2) a Single Claim against all other participants as joint obligors. Such Single Amount is adjusted automatically and simultaneously every time a payment is duly processed.

In summary, the SOS legal basis of EURO1 is:

- Valid any time of the day;
- Enforceable in all relevant jurisdictions;
- A unique legal structure that allows for RTGS-equivalent multilateral net settlement

At the time a payment is processed (= time of fund transfer) it is irrevocable and final. There is no unwind.

Country opinions, in a form satisfactory to the System Operator and to the Overseer, have been obtained under the laws of all jurisdictions relevant to participation in the system, analysing, among others, that the Single Obligation Structure is legally valid in every

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jurisdiction where participants, or offices used for participation, are located. Further, capacity opinions must be provided by each EURO1 Participant in order to be admitted to EURO1. The country opinions, as well as the capacity opinions, are issued based upon terms of reference established by the System Operator, which are in conformance with the terms of reference applied for oversight of large value payment systems. Country opinions are regularly updated. Capacity opinions are updated when relevant.

Although the legal basis for EURO1 was designed without reliance on the 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 (“Settlement Finality Directive” or “SFD”), EURO1 falls into the scope of the SFD. EURO1 is a designated system under the SFD and transfers made in EURO1 therefore benefit from the protection granted by the SFD⁴.

The legal country opinions confirm the validity and enforceability of the EURO1 System Documentation, even in the event of insolvency proceedings, under the laws of non-EU/European Economic Area (EEA) jurisdictions that are relevant to participation in the system.

The SIPS Regulation applies to and is binding on EURO1, which has been identified as a SIPS because it meets the criteria laid down in Article 1(3) of the SIPS Regulation.

The use of networks for the sending and receiving of payment and other messages is outside of the scope of the EURO1 System. Entities participating in the system contract directly with the provider of the communication network on a bilateral basis.

The EURO1 System

EURO1 was launched in January 1999 for the start of the European Monetary Union and was developed to provide an efficient, secure and cost-effective RTGS-equivalent net settlement infrastructure, for large-value payments in the single currency environment. EURO1 is the only private sector large-value payment system (LVPS) for single same-day euro transactions at a pan-European level. EURO1 processes transactions of high priority and urgency, and primarily of large amount, both at a domestic and at a cross-border level.

It combines a high liquidity efficiency with finality of each processed individual transaction; 96 percent of the EURO1 transactions settle within two minutes at system level and over 99 percent within 1 hour.

The system provides a unique RTGS-equivalent multilateral net settlement arrangement, providing finality of payments upon processing of each individual payment message in real time. Upon the real-time adjustment of the participants’ positions, EURO1 provides immediate finality for every processed payment. EURO1 thereby offers an RTGS-equivalent

⁴ See <https://www.esma.europa.eu/regulation/post-trading/settlement>

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system operating on a multilateral net basis. The Single Obligation Structure does not allow unwinding or partial unwinding of a participant's position. Instead of having to manage multiple bilateral accounting arrangements, participants have one multilateral position.

EURO1 is based on ISO 20022 payments messages and the use of SwiftNet WebAccess, InterAct and FileAct. The system is developed and maintained by Swift.

Settlement of participants' positions (Single Obligations and Single Claims) takes place on a daily basis with the ECB using the Ancillary System Interface of TARGET.

EURO1 assists participants in keeping costs down by enabling them to optimise their liquidity use. The system is equipped with a liquidity bridge, which makes it possible for participants to withdraw excess liquidity from the system through 10 liquidity distribution windows during the opening hours of the system. The liquidity bridge also enables the participants to inject additional funds into EURO1 in order to allow for additional outgoing payments to be processed. The functionality supports the participants in resolving on-hold queues.

Given these characteristics, EURO1 enables its participants to send and receive payment messages in a technological and legal environment that fulfils the participants' requirements for efficiency and security in transaction processing and liquidity usage.

EURO1 is held to the highest oversight requirements and overseen by the ECB with the involvement of National Central Banks of the Eurosystem. EURO1 is designated under the SIPS Regulation.

The EURO1 System has been designed and evolves as a result of requirements from users' and related market needs and is intrinsically user defined. Practicality and cost for the users are prime considerations underlying the design of the system, without compromising on the resilience and robustness of the system and its compliance with oversight requirements.

Based on the outcome of a comprehensive user consultation on the future positioning of EURO1 conducted in the spring of 2018, EBA CLEARING charted the future course for the service. A key focus of the resulting work programme was ensuring maximal alignment with the evolution of TARGET in the context of the migration of large-value payment systems to the ISO 20022 messaging standard. The work programme is also aimed at optimally supporting the EURO1 users in their integration of management and monitoring tasks across different services. In addition, the EURO1 Participants position EURO1 as a non-similar back-up to TARGET, in the event TARGET is unavailable.

In terms of safety, security and resilience, the system benefits from the resilience of Swift, which provides the processing service of EURO1.

EBA CLEARING runs three separate operations centres for system monitoring in different countries with rotating shifts to ensure that staff in all three locations are regularly engaged

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in day-to-day activities. Specific dedicated procedures with critical service providers, including in particular Swift and the ECB as provider of settlement services, are ready for activation in case of abnormal events.

All operational procedures, including the resilience arrangements of all EURO1 Participants, are reviewed at regular intervals. In co-operation with its major infrastructure partners, including the ECB and Swift, EBA CLEARING is engaged in a continuous process of testing, revising and further enhancing the resilience arrangements and procedures around its services.

The level of usage of EURO1 for the processing of large-value single payments in euro, and its position vis-à-vis other large value euro payment systems i.e., in particular TARGET, indicate that the system is considered as an efficient means to make interbank high-value payments. EURO1 is an important channel benefiting the broader eco-system and contributes to the attractiveness of the Euro. EURO1 enables participants to exchange liquidity-efficient high-value payments through a European owned and governed private-sector operated market infrastructure.

System design and operations

(ii) Architecture

The operation of EURO1 is based upon the use of a messaging infrastructure and processing service provided by Swift. EURO1 is based on ISO 20022 payments messaging and the use of SwiftNet WebAccess, InterAct and FileAct for the operational management of the system.

EURO1 settles same day in central bank funds in TARGET-ECB using the Ancillary System settlement procedure A.

EBA CLEARING, in its role as System Operator, monitors continuously the payment processing and the settlement operations of the system. This includes the daily monitoring of alert management, real-time monitoring of the status of processed EURO1 payments, monitoring of the liquidity bridge processing and completion of the settlement in TARGET.

(iii) Payment message processing

Payment messages sent by participants for processing in EURO1 must carry the tag “EBA” in the message business application header. Messages with this tag are accepted by the central system.

The system supports the following message types: pacs.004, pacs.008, pacs.009 COV and CORE, and pacs.010.

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Payment messages are sent via Swift network to the central system in view of being processed, and immediately forwarded to the receiving participant if and once they are processed.

Payment messages are processed on an individual basis and on a first in first out “FIFO”⁵ basis in the order they are received. The technical features of the system are such that payment messages are only processed by the central computer after it has been checked that the message meets the criteria for being processed. These criteria include, in particular, that a payment message can only be processed if this does not lead to breaching binding intra-day limits – corresponding to the debit caps and credit caps of the respective participants – that are built into the system.

Payment messages that cannot be processed at the time they are sent are queued. These queues are revisited on a regular basis to allow their processing. Queues are revisited each time a payment message in relation to the sending or receiving participant, as applicable, is processed to check whether the adjusted balance allows for further processing of payment messages that are held in a participant's on-hold queue. To that effect, the system follows the principle of “by-passing” FIFO if queued transactions with lower amounts could be processed while larger amounts could not.

A payment message can be revoked or cancelled by the sending participant as long as it is not processed. Once processed, payment messages cannot be revoked.

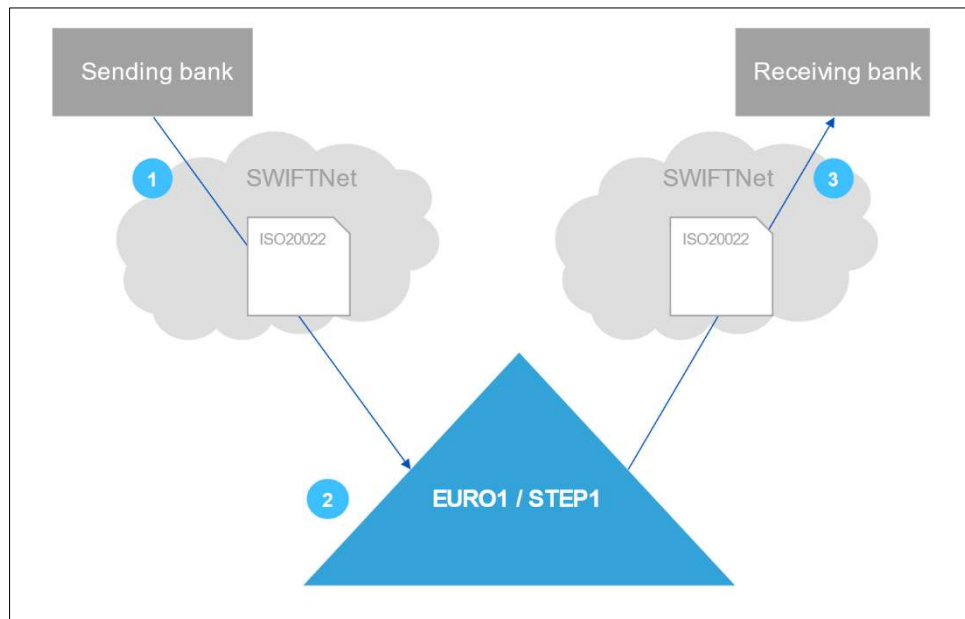
The Interactive Workstation provides real-time access to the position of a participant at any given time in the day, and enables participants, inter alia, to monitor and manage payments and queues. The System Operator also has real-time monitoring tools at its disposal including the Business Administration Workstation (BAWS) providing (among others) functionality to monitor overall positions and limits of the participants.

To address potential gridlock situations, an automated functionality, circles processing, allows for simultaneous processing of a number of payment messages from/to different participants which, if processed simultaneously, will not breach the applicable debit caps and credit caps.

Payment processing starts at 02:30 CET. Cut-off time for processing is at 16:30 CET.

⁵ First in, first out

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EURO1 Message routing and real-time processing

(iv) Immediate finality of processed payments

As mentioned above, EURO1 is governed by German law and is based on a legal structure that creates only one Single Obligation or Single Claim of each participant. This means that, at any time on any given business day, each participant only has one Single Obligation towards all other participants as joint creditors, or a Single Claim against all other participants as joint obligors, which is adjusted automatically and simultaneously every time a payment is duly processed. The Single Obligation Structure is legally validated in every relevant jurisdiction.

Upon the simultaneous adjustment of the participants' positions in real-time, EURO1 provides immediate finality for every processed payment. EURO1 thereby offers an RTGS-equivalent system operating on a multilateral net basis. The Single Obligation Structure does not allow unwinding or partial unwinding of a participant's position. Instead of having to manage multiple bilateral accounting arrangements, participants have one multilateral position.

Although the legal basis for EURO1 was designed without reliance on the SFD, EURO1 falls into the scope of the SFD. EURO1 is a designated system under the SFD and transfers made in EURO1 benefit from the protection granted by the SFD. The legal opinions per country also confirm the validity and enforceability of the EURO1 System Documentation, even in the event of insolvency proceedings, under the laws of non-EU/European Economic Area (EEA) jurisdictions that are relevant to participation in the system.

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(v) Legal basis

EURO1 has a unique system design. The EURO1 System provides immediate and continuous intraday finality for each payment upon processing thereof. In addition, the time of irrevocability of each payment message coincides with the point in time at which the payment becomes final (i.e. irrevocable and unconditional fund transfer).

EURO1 is a notable exception to a common large-value payment system design where the settlement asset is transferred at the same time as finality is achieved. In EURO1, the transfer of the settlement asset (central bank fund transfers across the Settlement Account held in TARGET-ECB using Ancillary System settlement procedure A) takes place after the time of finality of the payment messages. Discharge of individual payments does not require a transfer of monies, and the related payment obligations are discharged upon the adjustment of the Single Obligation or Single Claim of the respective participants.

The Single Obligation Structure entails that at each and any moment throughout the operating day – from the moment the first payment message is processed until cut-off time for processing (and beyond such time until settlement) – each participant only has one Single Claim (in the case of a positive number) or one Single Obligation (in the case of a negative number) towards the community of all other participants. Each time a payment message is processed, the calculation of the balance of the participants concerned constitutes the establishment of a Single Obligation or, as applicable, a Single Claim of the relevant participant owed to or owed by all other participants in the system.

The Single Obligation Structure does not allow unwinding or partial unwinding. In addition, and importantly, it achieves real-time finality of payments. The adjustment of the Single Amount of a sending and a receiving participant upon processing of a payment message (sent in performance of a payment obligation arising outside of the system and owed by the sending participant to the receiving participant) results in the discharge of the payment obligation as between the sending and the receiving participant; the fund transfer so made is irrevocable and unconditional upon processing of the payment message.

(vi) Settlement

The cut-off time for the system to receive payment messages for processing the same business day is 16:30 CET. The settlement process starts immediately after the cut-off time, to be completed prior to the closing time of TARGET at 18:00 CET.

The EURO1 settlement uses the Ancillary System settlement procedure A of the TARGET RTGS system. At cut-off time, the EURO1 System completes the processing of all payment messages acknowledged before cut-off and informs each participant of their final position resulting from all payment messages processed during the day.

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Upon receipt of the final positions for EURO1 Participants, from the central system, EBA CLEARING sends a file to TARGET with the amounts to be debited from and credited to the participants' Dedicated Cash Accounts (DCAs) in TARGET.

The ECB as settlement service provider first debits the DCAs in TARGET, of the participants with a negative final position, against the technical account of the EURO1 System. After all debit transactions have been processed, the credit transactions are processed: the DCAs in TARGET of the participants with a final credit position are credited against the technical account of the EURO1 System.

Once all debit and credit transactions have been processed, EBA CLEARING receives confirmation from TARGET that the settlement is completed. Upon receipt of this confirmation, EBA CLEARING notifies all participants that the settlement has been completed. Settlement is typically completed within seven minutes after the cut-off time.

(vii) Decentralised liquidity and credit risk management

Liquidity in EURO1 is generated by the mutual giving and receiving of bilateral limits between the participants. The bilateral limits granted by a EURO1 Participant to each of the other participants in total provide the multilateral net receiving limit (Credit Cap) of the grantor. Similarly, the total of the bilateral limits received by a EURO1 Participant from all the other participants provides the multilateral net sending limit (Debit Cap) of the grantee.

With the system of bilateral limits and the Single Obligation Structure, counterparty exposure is managed directly by the EURO1 Participants.

The bilateral limits do not restrict the bilateral payment flows between the individual participants. Participants can send payments to any of the other participants within the limit of the total amount of their Debit Cap.

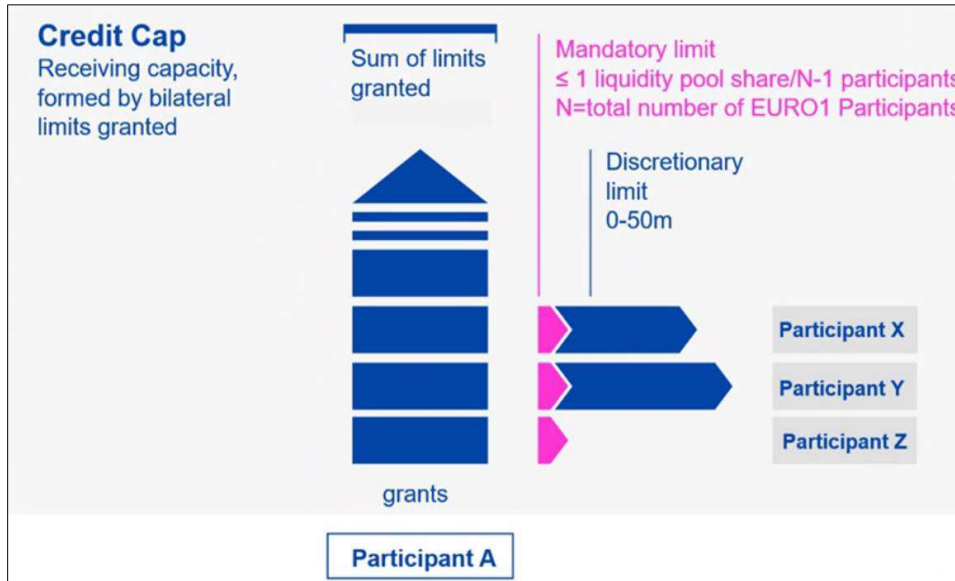
The overall risk a participant can bring to the system is limited to the amount of the Maximum Debit Cap set at system level. In case of a change of the number of participants, the amount of the Maximum Debit Cap is revised. Revision of the amount of the Maximum Debit Cap and Maximum Credit Cap is notified in advance to the participants.

All participants contribute in equal shares to a Liquidity Pool (which constitutes the maximum possible exposure of any two participants) in the form of cash deposits held with the ECB. The risk for a participant based on a single failure of another participant is capped at the amount of the limits granted to the failing participant.

EURO1 Participants can adjust the discretionary element of their limits to the other participants up until 02:00 CET, to take effect from 02:30 CET, allowing participants to quickly react to any changing circumstances.

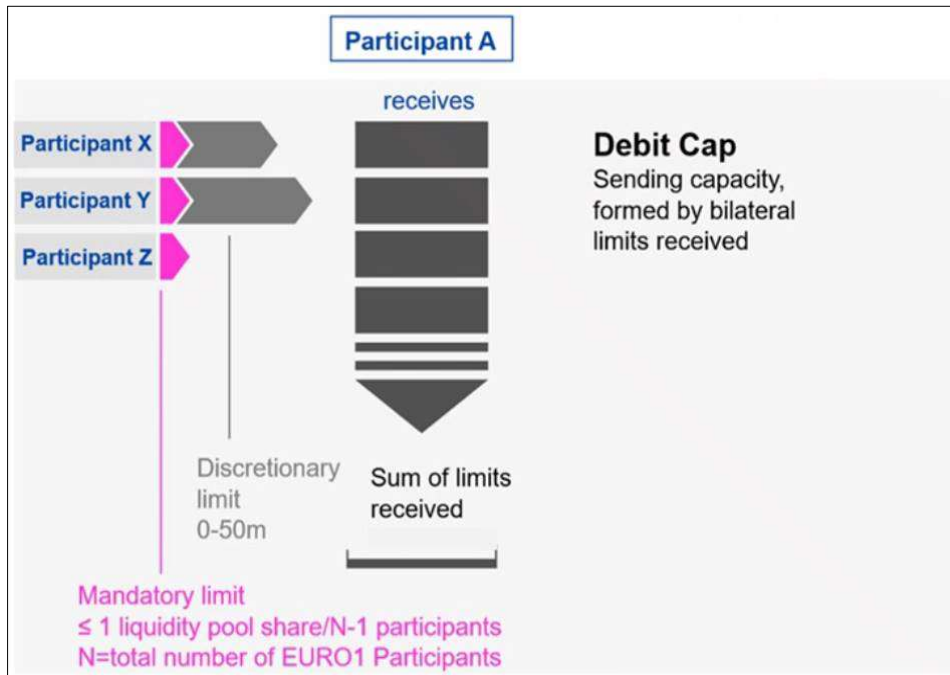
Classification: Public

Participants are granted, by each of the other participants, a Mandatory Limit, the sum of which is equal to its deposit in the EURO1 Liquidity Pool (Liquidity Share). Accordingly, the Mandatory Limit a participant has to allocate to each other participant in the service amounts to the individual participant's Liquidity Pool deposit divided by the number of participants, less one.



EURO1 Credit Caps
All figures in EUR.

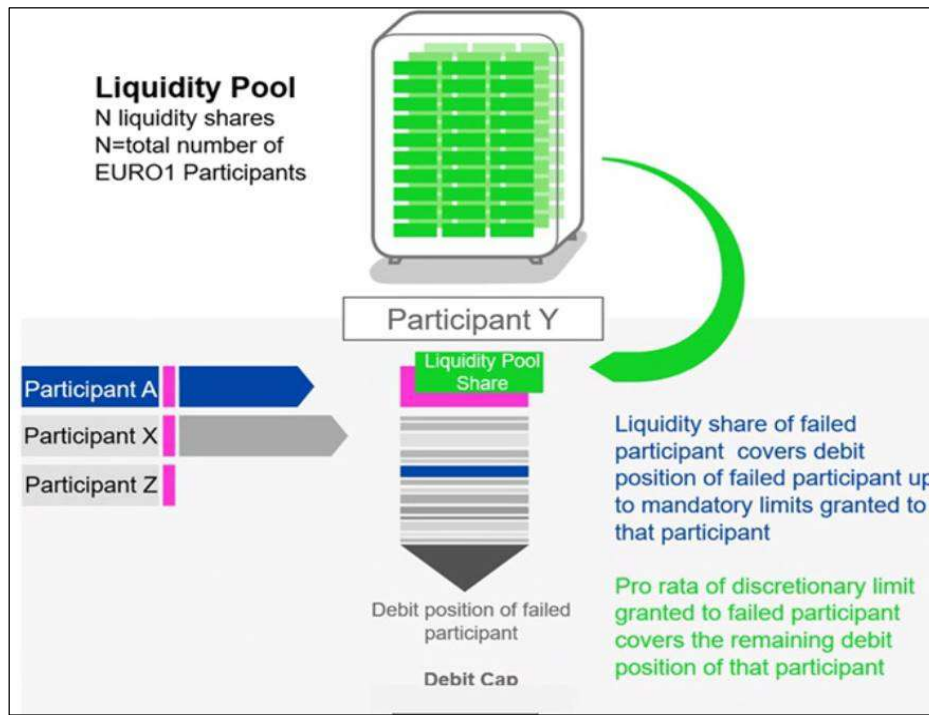
N = total number of EURO1 Participants



EURO 1 Debit Caps
All figures in EUR.

N = total number of EURO1 Participants

Classification: Public



Loss sharing in EURO1: allocation of shortfall in case of a single failure

(viii) Liquidity management tools

EURO1 enables participants to significantly reduce the liquidity required to support their payments business. Thanks to the binding intra-day limits in EURO1, individual payments do not need to be fully covered beforehand, unlike in a real-time gross system. Consequently, there is no requirement to pre-fund at the start of the day. The possibility to go into a debit position until the Debit Cap allows for participants to have immediate sending capacity and to send payments without having to wait for incoming funds. This considerably lowers the liquidity and capital support costs for participants.

In order to further recycle liquidity, EURO1 offers a Liquidity Bridge, which enables participants to manage their liquidity:

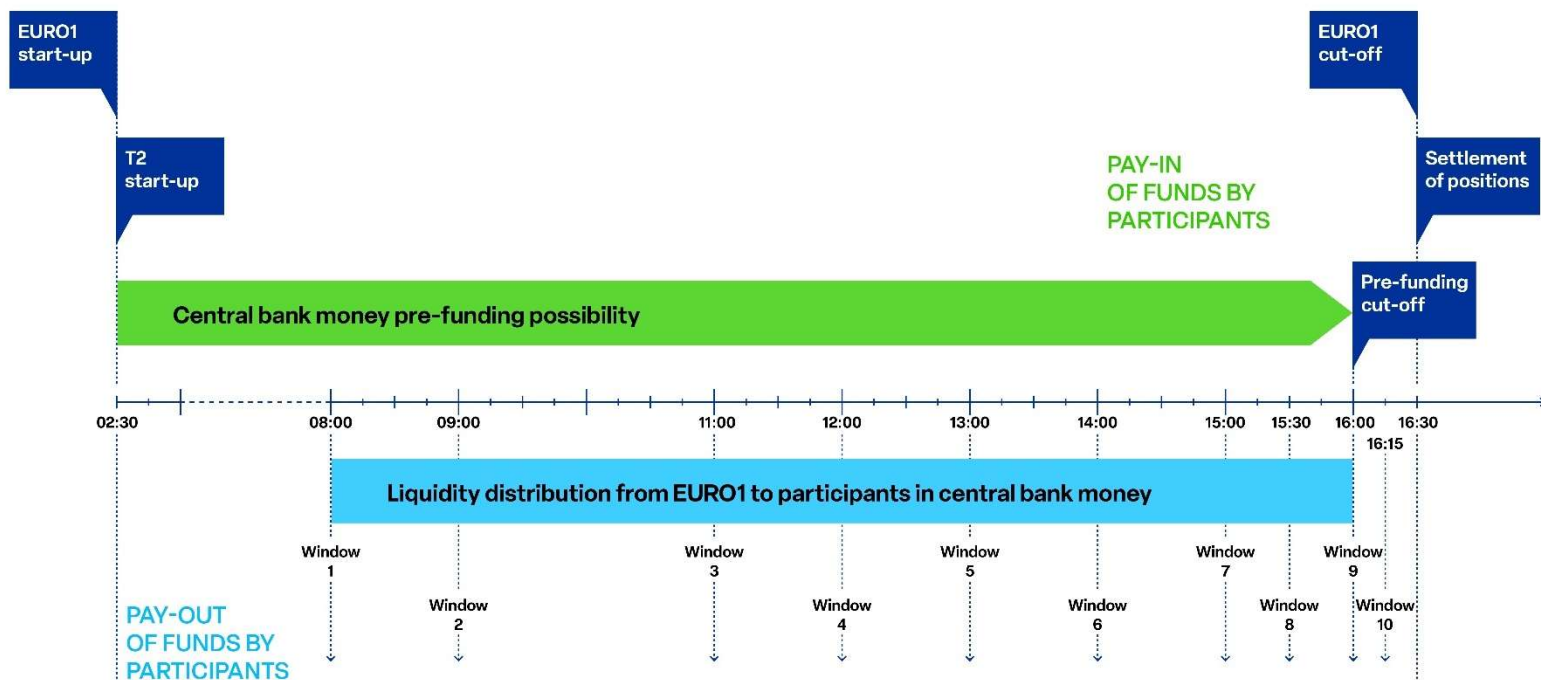
- Participants that have reached the maximum level of their Debit Cap can pay in funds from their Dedicated Cash Account (pre-fund), against which their position in EURO1 is adjusted upwards. The participant has, as a result, acquired increased sending capacity against pre-funded liquidity.
- Participants that have incoming payments queued because they have reached the maximum level of their Credit Cap can authorise EBA CLEARING to withdraw liquidity from their credit position in EURO1 (liquidity distribution), which is then credited to the participants' Dedicated Cash Accounts.

Classification: Public

- Pre-funding takes place throughout the day and liquidity distributions take place at seven relevant times of the day to ensure the release of the maximum number of queued payments.
- The liquidity distribution algorithm operates in 10 cycles during the day and allows for the pre-funded liquidity to be recycled.

As a result of the liquidity management tools available, the EURO1 System is able to achieve a high Liquidity Efficiency Ratio (LER).

Participants can further exploit the liquidity-saving benefits of EURO1 by including branches as well as consolidated affiliates within the European Economic Area (EEA) under the single liquidity position of the participant.



EURO1 Liquidity Bridge

(ix) Interactive Workstation

All participants and sub-participants have access to the Interactive Workstation (IWS) which provides the following real-time information online and via the Information Services for an automated feed of information:

- the participant's position, limits and any on-hold payments
- intraday and end-of-day position reports and statements for processed, queued and held-over payment messages

Classification: Public

- pre-advice statements of payments for future value dates

In addition, numerous possibilities to use customised queries are also available.

(x) Admission

In order to be eligible to participate in the EURO1 System, an applicant has to fulfil certain legal, financial and operational criteria.

Legal criteria

An applicant must:

- be authorised to conduct banking business
- have its registered office in a member state of the EU or in an OECD country
- participate in the EURO1 System from its registered address or a branch located in the EU
- provide a capacity opinion
- not be a member of the same group as an existing EURO1 Participant (for Pre-fund Participants the requirement is to be a member of the same group as a EURO1 Participant)

In addition, the laws of all the jurisdictions from where a participant accesses the system must recognise the Single Obligation Structure, which forms the legal basis of the system.

Financial criteria (applying upon admission)

An applicant must:

- have own funds of at least EUR 1.25 billion
- have a short-term credit rating of at least P2 (Moody's) or A2 (S&P), or equivalent

Operational criteria

An applicant must:

- have direct access to TARGET
- have adequate technical and operational facilities, including back-up facilities, and staffing for the purposes of participation in the system

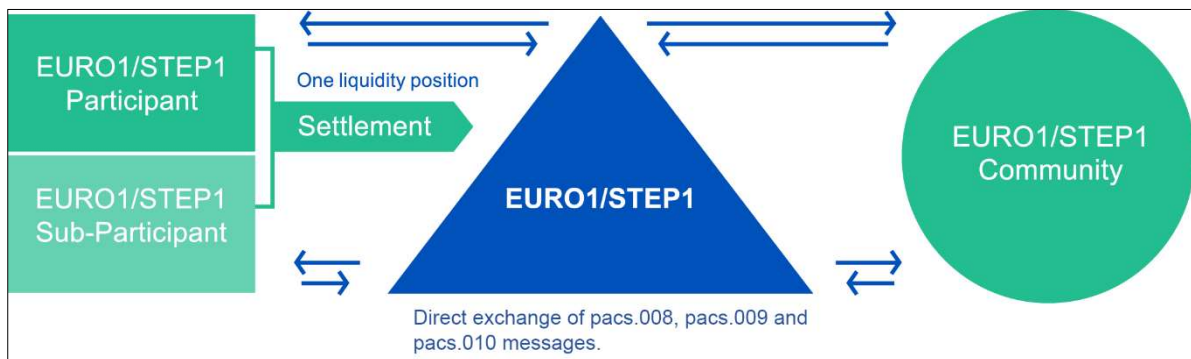
(xi) Sub-participants

The system design allows a EURO1 Participant to have multiple access points to the system via sub-addresses that can be its branches in the EEA or entities authorised to conduct banking business incorporated in the same consolidated accounts as the EURO1 Participant.

Classification: Public

Distinct entities (i.e. excluding branches) included as sub-addresses are often referred to as 'sub-participants'.

A sub-participant can directly send to and receive payment messages from the EURO1 Participants, sub-participants and STEP1 Participants. A sub-participant can also list its client banks in the EURO1/STEP1 Directory, increasing the percentage of payments it sends and receives on behalf of these client banks through this efficient and cost-effective intraday payment channel. Payments sent and received by a sub-participant are included in the position of the participant and covered by the liquidity of the participant. Sub-participants benefit from the same service features as the participant. The participation mode enables banking groups to centralise their liquidity management and directly connect their branches and subsidiaries within the EEA to a pan-European single payment system. It further allows participants to leverage their liquidity in the system.



EURO1 Sub-participation model

In order to qualify as a sub-participant in EURO1 an entity has to be:

- authorised to conduct banking business
- a subsidiary or another entity included in the same consolidated accounts as the participant
- incorporated or established in the EEA.

Participants may also include their branches established in the EEA as sub-addresses.

A full list of all participants and directly addressable sub-participants is published on the website of EBA CLEARING and are available at <https://www.ebaclearing.eu/services/euro1/participants/>.

(xii) Basic statistical data

The average daily volumes and values on a monthly basis are published on the EBA CLEARING website and available at <https://www.ebaclearing.eu/services/euro1/statistics/>.

A monthly statistical report, including on the usage of the Liquidity Bridge, is available to all participants in the EBA CLEARING customer portal.

Classification: Public

A dedicated statistical report on operational reliability for distribution to stakeholders is also published in the EBA CLEARING customer portal.

(xiii) Envisaged changes to the system

EBA CLEARING plans yearly service releases to be implemented in Q4 each year. The proposed content of the service releases can be based on:

- User initiated change requests;
- Consultation on received change requests through the EURO1 Business Committee and the Operational and Technical Group;
- Change requests proposed by EBA CLEARING as the System Operator; and/or
- Technical upgrades proposed by Swift as the Service Provider.

IV. Principle-by-principle summary narrative disclosure

EURO1 has been classified as a SIPS falling under the SIPS Regulation implementing the PFMI for payment systems in the euro area, and notification of such classification was made to EBA CLEARING on 21 August 2014.

The below table details how EURO1 complies with the Principles for Financial Market Infrastructures applicable to payment systems.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>Principle 1: Legal basis (Article 3 SIPS Regulation) An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.</p>	<p>EURO1 processes transactions of high priority and urgency, and primarily of large amount, both at a domestic and at a cross-border level. The system provides a unique RTGS-equivalent multilateral net settlement arrangement, providing finality of payments upon processing of each individual payment message in real time.</p> <p>EURO1 has a well-founded legal basis under all relevant jurisdictions.</p> <p>EURO1 is governed by the EURO1 System Documentation, including in particular the EURO1 Rules, which comprehensively cover the rights and obligations arising from participation in the system. The EURO1 System Documentation, including the provisions governing the settlement operations and the collateral arrangements, are all governed by one single governing law, German law.</p> <p>EURO1 is based on a 'Single Obligation Structure' (SOS). This means that, at any time on any given business day, each participant only has one Single Obligation or Single Claim towards all other participants jointly, as joint claimants or joint obligors, which is adjusted automatically and in real time every time a payment is duly processed. The Single Obligation Structure does not allow unwinding or partial unwinding of a participant's position. Instead of having to manage multiple bilateral accounting arrangements, participants have one multilateral position.</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>All material aspects of the EURO1 System and activities relevant thereto are governed by the documents forming part of the System Documentation, which are governed by and construed in accordance with the laws of the Federal Republic of Germany.</p> <p>To ensure that the EURO1 System provides the adequate legal certainty for all relevant aspects, the System Operator follows the established approach to the system's legal basis, summarised hereafter:</p> <p>The EURO1 System Documentation has been elaborated and is maintained by German law external counsel, allowing for a continued high degree of legal certainty. At the occasion of changes to the EURO1 System, the legal documentation is amended and updated as required in a timely manner. The Legal & Regulatory Affairs Unit of EBA CLEARING analyses changes required to the legal documentation and closely liaises with the business, risk, and operations teams. Proposals on the approach for major changes are discussed by the Legal Advisory Group of EBA CLEARING (LAG), and the LAG also reviews the draft provisions for new versions of or amendments to the legal documentation.</p> <p>A reasoned legal opinion is provided on issues arising under the laws of Germany in connection with the participation by credit institutions in the EURO1 System, including the validity and enforceability of the System Documentation. Additional country opinions, in a form satisfactory to the System Operator and to the Overseer, have been obtained under the laws of all jurisdictions relevant to participation in the system, analysing, among other, that the Single Obligation Structure is legally valid in every jurisdiction where participants, or offices used for participation, are located. Further, capacity opinions must be provided by each EURO1 Participant in order to be admitted to EURO1. The country opinions, as well as the capacity opinions, are issued based upon terms of reference established by the System Operator, which are in conformance with the terms of reference applied for oversight of large value payment systems.</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>The features of EURO1 in terms of finality and settlement of Payment Messages are recognised under German law.</p> <p>The validity and enforceability of the EURO1 System Documentation is also confirmed, even in the event of insolvency proceedings, under the laws of non-EU/European Economic Area (EEA) jurisdictions that are relevant to participation in the system.</p> <p>The EURO1 System is included in the list of designated systems under the 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 (Settlement Finality Directive or SFD). https://www.esma.europa.eu/esmas-activities/markets-and-infrastructure/central-securities-depositories</p> <p>In 2014, EURO1 was identified by decision of the Governing Council of the European Central Bank (ECB) as a Systemically Important Payment System under the SIPS Regulation. Therefore, the EURO1 System is overseen by the ECB as Competent Authority, with voluntary participation by national central banks of the Eurosystem. Details of the oversight framework can be found in the Company's Annual Report in the "Oversight of the Payment Systems of EBA CLEARING" section.</p> <p>The EURO1 System Documentation, as well as related operational and technical documents concerning the operation of the system are available to all participants. Updates and changes, as well as explanatory notes when relevant, are notified prior to their effective date to all participants.</p>
Principle 2: Governance	EBA CLEARING has a user-say governance, based on the needs and feedback of its users.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>(Article 4, SIPS Regulation) An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.</p>	<p>The governance arrangements of EURO1 are effective, accountable, and transparent, thereby supporting the stability of its payment services. For more information about the Company's governance bodies, please see the Corporate Governance section on the EBA CLEARING website (https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/).</p> <p>The involvement of stakeholders in decisions, as well as the objectives of the system, are specified in an unambiguous and transparent manner within the Company's internal policies and procedures. Governance arrangements are clearly and thoroughly documented ensuring clear and direct lines of responsibility and accountability. The set of governance arrangements are fit-for-purpose to meet the strategic aims and objectives of the Company, and they are designed to make them future-proof. The Board Nomination and Governance Committee supports in monitoring the effectiveness of the corporate governance framework.</p> <p>In addition to the Company's governance bodies, to ensure that all types of users are represented in the design and evolution of its systems and offerings, the Company maintains a broad range of communication channels with its (current and potential) users and other stakeholders. An identical structure has been adopted for user consultation for the two SIPS operated by the Company in the form of two business committees: the EURO1 Business Committee and the STEP2 Business Committee. Business committees are consultative bodies providing recommendations to the Board. Business committees are chaired by a Board member.</p> <p>In order to ensure tools provided are adequate for the participants of the EURO1 System, EBA CLEARING's governance comprises an active collaboration with its participants in order to seek continuous feedback on its systems. The EURO1 Business Committee, the Operations and Technical Group, the Treasury and Liquidity Group and the Legal Advisory Group serve as the main consultation mechanisms to receive feedback, discuss any issues related to</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>the system and highlight any potential changes to the functionalities of EURO1.</p> <p>As per EBA CLEARING's user-say governance model, the Company uses these channels to ensure that the systems and the tools provided in them, evolve as per user needs and are found to be adequate on a consistent basis.</p>
<p>Principle 3: Framework for the comprehensive management of risks (Article 5, SIPS Regulation) An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.</p>	<p>EBA CLEARING's risk management activities are organised in a "three lines of defence" model. The Heads of Unit are the first line of defence, the Risk Management Unit and the Regulatory and Oversight Affairs Unit are the second line of defence and Internal Audit is the third line of defence. The three lines of defence model incorporates the embedding of risk management and risk awareness throughout the entire Company. Moreover, the model highlights the different levels of control and means for escalation, if required.</p> <p>The second line of defence, the risk management function supported by the Chief Risk Officer, ensures high standards of risk management through the development and maintenance of the risk management framework, including specific guidelines and policies. It coordinates the implementation of risk initiatives and raises the Chief Executive Officer's awareness of risks and consolidated levels, and it supports the Board in optimising EBA CLEARING's overall risk tolerance and risk limits. In addition, organisational arrangements are in place to ensure operational independence of the Chief Risk Officer from the rest of the organisation.</p> <p>EBA CLEARING's risk management framework has been developed based on EBA CLEARING's specific risk universe. The risk management framework is composed of the risk assessment methodology, risk tolerance methodology, risk tolerance statement, risk universe and risk identification.</p> <p>The Company's risk management framework governance policy (approved by the Board of Directors) describes the organisational structure, management oversight, roles, responsibilities, and activities that EBA CLEARING considers</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>necessary to support the embedding of strong risk management throughout its activities.</p> <p>Reviews of the policies and methodologies of the risk management framework are prepared annually by the Chief Risk Officer and updates are communicated to the Chief Executive Officer, senior management and to the Board Risk Committee (and reported to the Board via the Board Risk Committee).</p> <p>In addition, in order to manage risks in the EURO1 System, participants are required to have technical and operational controls and procedures in place, particularly with regards to security. EBA CLEARING monitors and collects further information about those additional requirements on those participants that are regarded as critical due to their significant participation in the system.</p> <p>As part of the third line of defence, Internal Audit provides assurance on the proper design and implementation of the risk governance framework and observance of guidelines, policies and processes. The purpose of Internal Audit is to bring a systematic and disciplined approach to evaluate and improve the effectiveness of EBA CLEARING's risk management, control, and governance processes. The Internal Audit function determines an annual internal audit plan, based on prioritisation using a risk-based methodology, including input of senior management and the Board of Directors. The execution of the annual audit plan is monitored closely by the Audit and Finance Committee (AFC), and audit reports relevant to the SIPS are shared with the Overseer.</p> <p>Finally, the Risk Management Framework is audited by external firms periodically in order to determine whether it is still aligned with best industry practices.</p>
Principle 4: Credit risk (Article 6, SIPS Regulation)	EURO1 has clearly defined procedures for the management of credit risk, which specify the respective responsibilities of the System Operator and the participants and provide appropriate incentives to manage and contain those risks.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.</p>	<p>The framework for management of credit risk is defined in the EURO1 Rules and Regulations. It refers only to credit exposures among participants, since the system has been designed such that EBA CLEARING as System Operator of EURO1 is not interposed and is not a party to the loss sharing arrangements of the system. Therefore, in the management of any credit risks arising from participation in EURO1 the participants themselves have the pivotal role. With the system of bilateral limits and the Single Obligation Structure, counterparty exposure is managed directly by the EURO1 Participants themselves. Processing in EURO1 occurs within binding intra-day limits, namely the Credit Cap and Debit Cap of each participant in the system.</p> <p>In addition, risk mitigation measures are in place in EURO1 to enable the timely completion of the end of day settlement. Measures are also in place to allow completion of settlement in the case of the inability of one or more participants to pay their Single Obligation when due, in particular through the creation of the Liquidity Pool, which covers a default of the two participants with the largest possible Single Obligation.</p>
<p>Principle 5: Collateral (Article 7, SIPS Regulation) An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.</p>	<p>“Defaulter pay” arrangements are supported by cash deposits maintained by each of the EURO1 Participants at the European Central Bank, for the purpose of the Liquidity Pool.</p>

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>Principle 7: Liquidity risk (Article 8, SIPS Regulation)</p> <p>An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.</p>	<p>The system has clearly defined procedures for the management of 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 framework for the management of liquidity risk is defined in the EURO1 Rules and Regulations. It refers only to liquidity exposures among participants, since the system has been designed such that EBA CLEARING as System Operator of EURO1 is not interposed and is not a party to the loss sharing arrangements of the system. Therefore, in the management of any liquidity risks arising from participation in EURO1 the participants themselves have the pivotal role. With the system of bilateral limits and the Single Obligation Structure, counterparty exposure is managed directly by the EURO1 Participants themselves. Processing in EURO1 occurs within binding intra-day limits, namely the Credit Cap and Debit Cap of each participant in the system.</p> <p>Through the real-time adjustment of the participants' positions, EURO1 provides immediate finality for every processed payment. EURO1 thereby offers an RTGS-equivalent system operating on a multilateral net basis. The Single Obligation Structure does not allow unwinding or partial unwinding. Instead of having to manage multiple bilateral accounting arrangements, participants have one multilateral position.</p> <p>Further, liquidity in EURO1 is generated by the mutual giving and receiving of bilateral limits between the participants. The bilateral limits granted by a EURO1 Participant to each of the other participants in total provide the multilateral net receiving limit (Credit Cap) of the grantor participant. Similarly, the total of the bilateral limits received by a EURO1 Participant from all the other participants provides the multilateral net sending limit (Debit Cap) of the grantee participant. In addition, every participant contributes in equal shares to a Liquidity Pool (which constitutes the maximum possible exposure of any two participants) in the form of cash deposits held with the ECB. Holding this Liquidity Pool with the ECB guarantees that liquidity is readily available if needed to complete end of day settlement.</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>EBA CLEARING offers a range of liquidity management tools to its participants, including the Liquidity Bridge which makes it possible for participants to withdraw excess liquidity from the system through 10 liquidity distribution windows during the opening hours of the system. The liquidity bridge also enables the participants to inject additional funds into EURO1 to allow for additional outgoing payments to be processed. All participants have access to the Interactive Workstation (IWS) which provides the following real-time information online and via the Information Services for an automated feed of information:</p> <ul style="list-style-type: none">• the participant's position, limits and any on-hold payments• intraday and end-of-day position reports and statements for processed, queued and held-over payment messages• pre-advice statements of payments for future value dates. <p>EBA CLEARING also refers to the framework for managing operational risk described below in response to Principle 17/Article 15, including monitoring by EBA CLEARING.</p> <p>Sufficient liquid resources to effect same-day settlement of payment obligations in a wide range of potential stress scenarios is ensured by the design of EURO1 System itself. EBA CLEARING nevertheless has developed the EURO1 stress testing framework and testing guidelines which describe different scenarios of potential liquidity needs as per Principle 7 (Article 8 of the SIPS Regulation). Based on this framework, stress tests are to be carried out at least on an annual basis and more often, if needed. The stress testing framework is reviewed on an annual basis as per the Annual Review Calendar that is maintained by the Company, to ensure it is adapted to new service features, and changes in the system and in the market.</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>In order to ensure tools provided are adequate for the participants of the EURO1 System, EBA CLEARING's governance comprises an active collaboration with EURO1 Participants in order to seek continuous feedback on its systems. The EURO1 Business Committee, the Operations and Technical Group, the Treasury and Liquidity Group and the Legal Advisory Group serve as the main consultation mechanisms to receive feedback, discuss any issues related to the system and highlight any potential changes to the functionalities of the systems operated by EBA CLEARING.</p> <p>As per EBA CLEARING's User Say Governance model, the Company uses these channels to ensure that the systems and the tools provided in them, evolve as per user needs and are found to be adequate on a consistent basis.</p>
<p>Principle 8: Settlement finality (Article 9, SIPS Regulation) An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.</p>	<p>Through the simultaneous adjustment of the participants' positions, EURO1 provides immediate finality for every processed payment. EURO1 thereby offers an RTGS-equivalent system operating on a multilateral net basis. The Single Obligation Structure does not allow unwinding or partial unwinding. Instead of having to manage multiple bilateral accounting arrangements, participants have one multilateral position. EURO1 benefits from the protection of the Settlement Finality Directive (SFD) and is included in the list of designated systems under the SFD.</p> <p>Final settlement takes place no later than at the end of the intended settlement date.</p> <p>This requirement is met through the relevant provisions in the EURO1 System Documentation, as well as in the technical specifications of EURO1 pursuant to which:</p> <ul style="list-style-type: none">• At each time a Payment Message is processed, the calculation of the balance of the participants concerned constitutes the establishment of a Single Obligation or, as applicable, a Single Claim of the relevant participant owed to, or owed by, all other participants in the system.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<ul style="list-style-type: none"> • The adjustment of the Single Obligation or Single Claim of a sending and a receiving participant upon processing of a payment message (sent in performance of a payment obligation arising outside of the system and owed by the sending participant to the receiving participant) shall result in the discharge of the payment obligation as between the sending and the receiving participant; the fund transfer so made shall be irrevocable and unconditional upon processing of the payment message. • The transfer of the settlement asset (central bank fund transfers across the Settlement Account held in TARGET-ECB using Ancillary System settlement procedure A) takes place after the time of finality of the payment messages. • All participants contribute in equal shares to a Liquidity Pool (which constitutes the maximum possible exposure of any two participants) in the form of cash deposits held with the ECB. • The Liquidity Pool maintained for EURO1 serves to ensure timely settlement, within the normal constraints of the money markets, in the case of a default of any number of participants with an aggregate position not exceeding the amount of the Liquidity Pool. The size of the Liquidity Pool would cover multiple failures by all participants in respect of whom the limits have been reduced by the other participants to the minimum amount. <p>Should there be multiple failures occurring during the same day for an aggregate amount exceeding the Liquidity Pool, liquidity reserves to complete settlement are in place in the form of binding obligations of the non-defaulting participants (towards the other non-defaulting participants) to transfer central bank funds to complete settlement. Discharge of individual payments does not require a transfer of monies, and the related payment obligations are discharged upon the adjustment of the Single Obligation or Single Claim of each participant.</p>
Principle 9: Money settlements (Article 10, SIPS Regulation)	Money settlements among participants in EURO1 take place in TARGET, i.e. in central bank money.



PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.</p>	
<p>Principle 13: Participant-default rules and procedures (Article 12, SIPS Regulation) An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.</p>	<p>EURO1 is designed to ensure completion of settlement in the case of a default by any number of participants, based on the Liquidity Pool and Loss Sharing arrangements. The Liquidity Pool maintained for EURO1 serves to ensure timely settlement, within the normal constraints of the money markets, in the case of a default of any number of participants with an aggregate position not exceeding the amount of the Liquidity Pool. The size of the Liquidity Pool would cover multiple failures by all participants in respect of whom the limits have been reduced by the other participants to the minimum amount. Should there be multiple failures occurring during the same day for an aggregate amount exceeding the Liquidity Pool, liquidity reserves to complete settlement are in place in the form of binding obligations of the non-defaulting participants (towards the other non-defaulting participants) to transfer central bank funds to complete settlement.</p> <p>The EURO1 Rules further specify a list of Exclusion and Suspension Events which include, for example, failure to comply with the operational and legal criteria for participation and failure to pay or replenish when due settlement related obligations.</p>

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>Principle 15: General business risk (Article 13, SIPS Regulation) An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.</p>	<p>Within its enterprise risk management framework, EBA CLEARING has robust management and controls systems to identify, monitor and manage general business risks, including losses resulting from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.</p> <p>Further, in compliance with Article 13 of the SIPS Regulation, the Company has developed a Recovery and Orderly Wind Down (ROWD) Policy, a ROWD Plan and a detailed Plan to Raise Additional Capital, if ever required, to ensure the Company holds sufficient (ring-fenced) liquid net assets to cover potential general business losses so that it can continue operating its critical services, including the operation of EURO1, as a going concern. (N.B. this amount shall be no less than that represented by six months of current operating expenses).</p> <p>The Company has designed a number of Early Warning Indicators that are assessed and presented to the Board Risk Committee on a semi-annual basis in order to determine whether there are any initial signs of financial distress that can be anticipated, managed, and dealt with in adequate time frame in order to prepare the Company to withstand any financial deterioration.</p> <p>The Recovery and Orderly Wind Down Policy and Plan are reviewed on a yearly basis to ensure they are up to date with current circumstances.</p> <p>Finally, the Plan is overseen by the European Central Bank as lead overseer of EBA CLEARING's core payment systems and the Eurosystem Central Banks, as part of their ongoing oversight activities of EBA CLEARING, as per the relevant Oversight frameworks and applicable regulation.</p>

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>Principle 16: Custody and investment risks (Article 14, SIPS Regulation)</p> <p>An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.</p>	<p>EBA CLEARING does not incur any rights or obligations arising from the sending and receiving of payment messages. At no time does EBA CLEARING hold any funds or deposits in relation to the operation of its systems.</p> <p>The Company has developed and maintains a Treasury and Investment Policy which documents how the liquid net assets funded by equity are held and how the sufficiency of the amount is monitored. The review of this policy is under the responsibility of the Audit and Finance Committee.</p>
<p>Principle 17: Operational risk (Article 15, SIPS Regulation)</p> <p>An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate,</p>	<p>EBA CLEARING has embedded the identification of operational risks to its services within its enterprise risk management framework, through which operational risks are monitored and the implementation of mitigating controls is tracked. Further, EBA CLEARING leverages its Business Continuity Management System and its ISO 27001 certified Information Security Management System to ensure a high degree of security and operational reliability and that it has adequate contingency arrangements in place for the timely completion of daily processing in its services.</p> <p>The EURO1 System is a highly resilient processing system with full disaster recovery features and operational procedures, including an information and cyber security strategy and framework, that are regularly practiced with the user community.</p> <p>It provides the following key benefits:</p>

PFMI Principle/ SIPS Regulation Article	Summary of compliance
<p>scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.</p>	<ul style="list-style-type: none"> • A highly experienced operator: the technical provider of EURO1 is Swift, one of the largest financial processors in Europe. The Swift processing environment offers state-of-the-art technology with exceptional resilience features. • The EURO1 System is deployed with a dual-site capability, as well as disaster recovery infrastructure at a third site. • EBA CLEARING runs three separate operations centres in different countries. Two of these independent sites operate in parallel mode during the processing day. The three sites are engaged in a regular rotation of shifts. • Customer support for operations-related queries and emergency situations: the Investigations and Customer Support Unit (ICU) is EBA CLEARING's single point of contact for all operations-related queries. • The Company has several channels and tools in place for incident and crisis communication. • Crisis simulation exercises: these exercises are organised by EBA CLEARING and Swift on an annual basis. Their main objective is to test the functionality of the disaster recovery arrangements, both in terms of file sending/receiving and connectivity to participants' workstations, including in a cyber-attack scenario. • ISO 27001 certification: since January 2013, EBA CLEARING's information security management system, which is geared towards managing and securing the Company's information assets, has been certified as ISO 27001- compliant. In 2018 and in 2022, the Company's information management system was re-certified to the new 27001:2013 standard, valid until 2025. <p>On a quarterly basis, EBA CLEARING provides a service report to its participants, containing information related to EURO1's performance and availability indicators.</p>



PFMI Principle/ SIPS Regulation Article	Summary of compliance
	Finally, EBA CLEARING participates in the Euro Cyber Resilience Board for Financial Infrastructures (ECRB) as per the applicable mandate ⁶ to contribute to the overall stability of the EU financial system and enhance the cyber resilience of financial market infrastructures, as well as in the ECRB's Cyber Information and Intelligence Sharing Initiative (CIISI-EU).
<p>Principle 18: Access and participation requirements (Article 16, SIPS Regulation)</p> <p>An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.</p>	<p>EURO1 has objective and publicly disclosed criteria for participation, which permit fair and open access. These criteria have been developed using a risk-based approach and are available on the EBA CLEARING website: https://www.ebaclearing.eu/services/euro1/admission-criteria-and-default-rules/</p> <p>To be eligible to participate in EURO1, an applicant has to fulfil certain legal, financial and operational criteria.</p> <p>Legal criteria: An applicant has to:</p> <ul style="list-style-type: none">• be authorised to conduct banking business• have its registered office in a member state of the EU or in an OECD country• participate in EURO1 from its registered address or a branch located in the EU• provide a capacity opinion• not be a member of the same group as an existing EURO1 Participant (for Pre-fund Participants the requirement is to be a member of the same bank group as a EURO1 Participant) <p>In addition, the laws of all the jurisdictions from where a participant accesses the system must recognise the Single Obligation Structure, which forms the legal basis of the system.</p>

⁶ See https://www.ecb.europa.eu/paym/groups/euro-cyber-board/shared/pdf/ECRB_mandate.pdf

PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>Financial criteria (applying upon admission): A bank has to:</p> <ul style="list-style-type: none"> • have own funds of at least EUR 1.25 billion • have a short-term credit rating of at least P2 (Moody's) or A2 (S&P), or equivalent <p>Operational criteria:</p> <p>A participant has to:</p> <ul style="list-style-type: none"> • have direct access to TARGET • have adequate technical and operational facilities, including back-up facilities, and staffing for the purposes of participation in the system
<p>Principle 19: Tiered participation arrangements (Article 17, SIPS Regulation) An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.</p>	<p>In line with the PFMI, the approach by EBA CLEARING for determining tiered participation in EURO1 is based on the premise that tiered participation arrangements occur in a payment system when some firms (tiered participants) rely on the services provided by other firms (participants) to use the system's central payment, clearing or settlement facilities.</p> <p>EBA CLEARING has identified the following possible categories of "tiered participants" within EURO1:</p> <ol style="list-style-type: none"> a) Entities included as sub-addresses under the main address of a EURO1 Participant, referred to as "sub-participants". b) STEP1 Participants using the EURO1 System to directly send and receive payment messages as part of the distinct STEP1 payment arrangement and relying on a EURO1 Participant to act as Settlement Bank. c) Legal entities that do not have direct access to the EURO1 system whose transfer orders are processed through a EURO1 Participant, under a contractual relationship between this entity and the EURO1 Participant.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>Participants and the management of risks they present are fully covered by the Rules and Regulations and related procedures for EURO1. Risks are addressed according to the standards of the PFMI implemented by the SIPS Regulation. The Rules and Regulations of EURO1 include an obligation on participants to promptly provide upon request any information deemed necessary by the EURO1 System operator to identify, monitor, and manage any material risks to the EURO1 System arising from tiered participation arrangements.</p>
<p>Principle 21: Efficiency and effectiveness (Article 18, SIPS Regulation) An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.</p>	<p>EURO1 provides an efficient, secure and cost-effective settlement infrastructure, with immediate finality for all processed payments, for large-value payments in euro. The availability of a Debit Cap allows for participants to have immediate sending capacity and to send payments without having to wait for incoming funds. Thanks to the binding intra-day limits in EURO1, individual payments do not need to be fully covered beforehand, unlike in a real-time gross system. Consequently, there is no requirement to pre-fund at the start of the day. This considerably lowers the liquidity and capital support costs for participants.</p> <p>In order to further recycle liquidity, EURO1 offers a liquidity bridge, which enables participants to proactively and independently manage their liquidity. EURO1 is geared at keeping cost down by enabling participants to optimise their liquidity use. The system's liquidity bridge makes it possible for participants to withdraw excess liquidity from the system through seven daily liquidity distribution windows. The liquidity bridge also enables the participants to inject additional funds into EURO1 throughout the business day in order to allow for additional payments to be processed. This functionality supports the participants in resolving any queuing situations.</p> <p>As a result of the liquidity management tools available, EURO1 is able to achieve a high Liquidity Efficiency Ratio (LER).</p> <p>To ensure the Company understands its users' needs and in accordance with its user say governance structure, and in order to facilitate that all types of users are considered in the design and evolution of its systems and offerings, the</p>



Classification: Public

PFMI Principle/ SIPS Regulation Article	Summary of compliance
	<p>Company maintains a broad range of communication channels with its (current and potential) users and other stakeholders. An identical structure has been adopted for user consultation for the two SIPS operated by the Company in the form of two business committees: the EURO1 Business Committee and the STEP2 Business Committee.</p> <p>These business committees are consultative bodies providing recommendations to the Board. All decisions affecting a system for which a Business Committee has been established are made by the Board upon consultation with the relevant Business Committee. Business Committees are chaired by a Board member.</p> <p>In addition, the following expert groups have been established:</p> <ul style="list-style-type: none">• Operations & Technical Group (OTG): analyses and reviews proposals, and formulates recommendations relating to operational, procedural, functional and technical aspects of the systems of EBA CLEARING.• Legal Advisory Group (LAG): analyses and reviews proposals from a legal point of view and formulates legal recommendations regarding same. It also assists in the monitoring of legal projects and formulates recommendations regarding the resourcing for given projects.• Treasury and Liquidity Group (TLG): acts as an advisory expert group relating to the management and use of liquidity within the systems operated by EBA CLEARING.• Other expert fora may be established in accordance with identified needs.⁷ <p>Finally, availability and performance indicators are published on a quarterly basis on the EBA CLEARING Customer Portal for users and other relevant stakeholders.</p>

⁷ For example, a EURO1 Payments Risk Forum was created in 2022 to foster discussion between the service participants on different contingency scenarios and measures, and to facilitate ad-hoc exchanges on payment processing and liquidity management matters in case of incidents.

PFMI Principle/ SIPS Regulation Article	Summary of compliance
	(Please also refer to Section III on system design and operation for more details on EURO1's efficiency and effectiveness to meet user and market needs).
<p>Principle 22: Communication procedures and standards Article 19 An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.</p>	<p>EURO1 uses internationally accepted communication procedures and standards, such as BIC codes to identify its participants and payment messages must respect the ISO 20022 standard.</p> <p>In accordance with its user say governance structure, and in order to ensure that all types of users are considered in the design and evolution of its systems and offerings, the Company maintains a broad range of communication channels with its (current and potential) users and other stakeholders, such as EBA CLEARING's critical service providers.</p>
<p>Principle 23: Disclosure of rules, key procedures, and market data Article 20 An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the</p>	<p>The System Documentation, which is available to all EURO1 Participants, enables participants to have a clear understanding of the system's impact on the risks they incur through their participation. In addition, the Company publishes key information via relevant updates of the publicly available pages of the website of EBA CLEARING. The Company has also made available to participants in the Customer Portal all the service documentation including Rules and Regulations, and responses to FAQs for compliance and due diligence purposes. The present disclosure report also complements EBA CLEARING's disclosure of rules, key procedures and market data.</p> <p>Finally, EBA CLEARING organises a Governance, Risk and Compliance Day twice per year for its users in order to cover all third party assurance and vendor management topics such as Information and Cyber Security, Business</p>



Classification: Public

PFMI Principle/ SIPS Regulation Article	Summary of compliance
FMI. All relevant rules and key procedures should be publicly disclosed.	Continuity, Risk Management, Change Management, Resolution, Data Privacy and Governance, Legal and Oversight matters.

V. List of publicly available resources

EBA CLEARING and EURO1:

- “About EBA CLEARING” section on website: <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/the-company/>
- By-laws of EBA CLEARING: <https://www.ebaclearing.eu/about-eba-clearing/at-a-glance/reference-documents/>
- EBA CLEARING Shareholders: <https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/the-shareholders/>
- EBA CLEARING Board: <https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/the-board/>
- EBA CLEARING Board Committees: <https://www.ebaclearing.eu/about-eba-clearing/corporate-governance/board-committees/>
- EBA CLEARING Annual Report 2022: [eba-clearing-annual-report-2022-print-version.pdf \(ebaclearing.eu\)](https://www.ebaclearing.eu/eba-clearing-annual-report-2022-print-version.pdf)
- EURO1 section on EBA CLEARING website: <https://www.ebaclearing.eu/services/euro1/overview/>
- EURO1 Statistics: <https://www.ebaclearing.eu/services/euro1/statistics/>
- EURO1 Participants and sub-participants: <https://www.ebaclearing.eu/services/euro1/participants/>