



# Payment and settlement systems subject to oversight

14 Jul 2021 – Analysis – Money and payments



Timo Iivarinen  
Senior Economist



Anne Wirtavuori

Payment and settlement systems comprise the financial market infrastructure. A reliable, undisrupted infrastructure makes economic activity a smoother process and promotes the efficient movement of capital. It allows financial institutions to make payments and settle securities transactions. There are also risks involved, however, and if these become widespread, they can affect the stability of the financial markets and society as a whole. Central bank oversight aims to reduce the risks associated with payment and settlement systems.



## Financial market infrastructure

In order to function properly, the financial markets need systems that link the financial institutions and allow financial market operations to be carried out. [The Bank of Finland's oversight policy](#) defines the financial market infrastructure as systems that are used to clear, settle and record payments as well as securities, derivatives and other

financial transactions.<sup>[1]</sup>

**Payment systems** are the multilateral arrangements and systems used for the transmission of electronic payments between payer and payee.

**Settlement systems** refer to the multilateral arrangements and systems used to clear, settle and record securities, derivatives and other financial transactions.

Payment and settlement systems that work reliably and without disruption promote the efficient movement of capital and ensure that all financial activities run smoothly. For example, in commerce and the production of goods there is a need for viable systems. Thus, payment and settlement systems contribute towards the stability of the financial system and society as a whole.

## Infrastructure and financial stability

The financial institutions, the market infrastructure and the way in which they interrelate are important for the stability of the financial system. The problems faced by a single operator can spread through the infrastructure, have a widespread impact on the financial markets and society and pose a systemic risk. If a risk to the infrastructure materialises, its impact can at the same time extend to the parties involved and even directly, or via those parties, to other infrastructures.

The stability of the financial system is promoted, inter alia, by the identification, assessment and management of systemic risks associated with the activities of operators in the financial sector. Of crucial importance is the reliability of the financial market infrastructures (FMIs).<sup>[2]</sup>

**The infrastructures connected with the Finnish financial markets** are almost entirely systems maintained by international actors that link the financial markets of many countries together. Centralised infrastructures boost the efficiency of the financial markets, but when they function poorly, they can have an adverse impact on society. The market infrastructures are of crucial importance for the stability of the financial system, and ultimately for society as a whole. For that reason, they are monitored closely and need to meet certain requirements.

The Bank of Finland ensures that the infrastructures function effectively and securely. This is known as oversight and is a key component in improving the risk resilience of the financial system and in safeguarding the continuity of operations that are critical for society to function satisfactorily. Oversight is part of the central banks' role in preserving stability.

---

1. The CPMI-IOSCO: [Principles for Financial Market Infrastructures \(bis.org\)](https://www.bis.org/cpmi/publ/12/Principles%20for%20Financial%20Market%20Infrastructures.pdf), published by the Bank for International Settlements and used globally for oversight work, define infrastructure as a multilateral system among participating institutions (including the operator of the system), used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.

2. See also <https://www.bofbulletin.fi/en/2016/2/market-infrastructures--the-pillars-of-financial-stability/>.

## Oversight

Oversight refers to the systemic supervision by central banks of payment and settlement systems. Its main purpose is to prevent systemic risks and safeguard the efficient implementation of monetary policy. Payment and settlement systems must be secure, to ensure that the technical problems of an individual party or system, or a party's inability to honour their obligations, do not affect other parties or systems over the entire network, thus compromising their ability to function properly. One key objective of oversight is also considered to be to promote the efficiency of systems.

There is oversight of systems and of entire structures comprised of systems. Oversight should not be confused with the supervision of single institutions, as practised by the financial and banking supervisory authorities.<sup>[3]</sup> In oversight and institutional supervision there are areas where the authorities collaborate.<sup>[4]</sup> In Finland, the relevant authorities are the Bank of Finland, responsible for oversight, and the Financial Supervisory Authority (FIN-FSA), which supervises institutions. The other authorities involved in the process are the Ministry of Finance and the Financial Stability Authority.

### Oversight as a function of the Bank of Finland

The Act on the Bank of Finland states that the Bank of Finland is part of the European System of Central Banks (ESCB). When carrying out its tasks under the Eurosystem, the Bank of Finland acts in accordance with the instructions and guidelines issued by the European Central Bank (ECB).

Oversight is based on the Bank of Finland's function as defined in law. The Bank must help ensure that the payment system and overall financial system work reliably and efficiently and may contribute to their development.<sup>[5]</sup> Under the law, the Bank of Finland has a broad mandate to obtain from authorities and credit and financial institutions the information it needs to perform its statutory tasks.<sup>[6]</sup> This also applies to confidential information.

In its oversight work, the Bank of Finland adheres to the principles agreed within the Eurosystem.<sup>[7]</sup> Article 22 of the Statute of the European System of Central Banks and of the European Central Bank states that the ECB may make regulations to ensure efficient and sound clearing and payment systems.

---

3. Hannu Karppinen – Kari Kemppainen: Keskuspankkien tehtävistä ja roolista maksujärjestelmien yleisvalvojana (The Functions and Role of Central Banks as Overseers of Payment Systems), 1999.

4. In Finland, oversight and the supervision of institutions are the responsibility of separate authorities, although elsewhere in Europe the same authority may be responsible for both tasks.

5. Act on the Bank of Finland, Section 3.

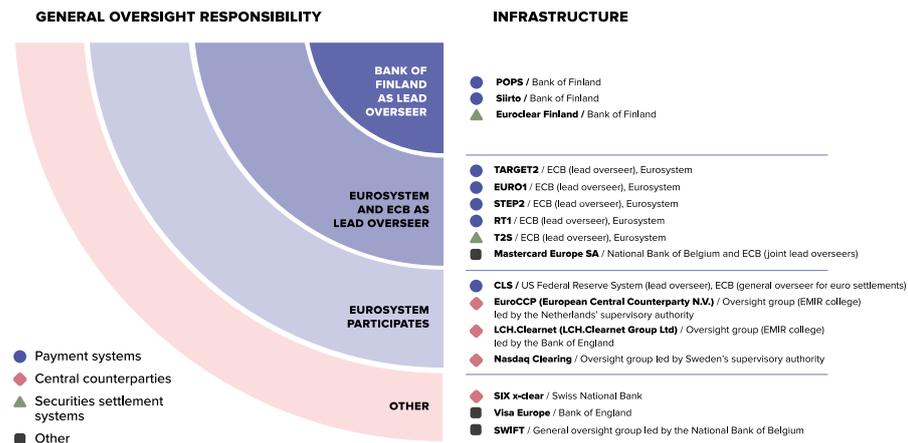
6. Act on the Bank of Finland, Section 26.

7. The Treaty on European Union and the Statute of the European System of Central Banks and of the European Central Bank define the basics of oversight work carried out by central banks participating in the Eurosystem. According to Article 127(2) of the Treaty on the Functioning of the European Union, one of the four basic tasks to be carried out through the European System of Central Banks is to promote the smooth operation of payment systems. Accordingly, the members of the Eurosystem conduct oversight by ensuring that settlement, clearing and payment systems function efficiently and stably.

The Bank of Finland functions as an overseer of the European financial market infrastructure as part of the Eurosystem.<sup>[8]</sup> Its main task is oversight of the infrastructure that is vital to the health of the Finnish economy and Finnish society.

Chart 1.

### Infrastructure critical to Finland's financial system and general oversight responsibility



Source: Bank of Finland.

## Oversight of payment systems

### Division of roles and oversight cooperation

The euro area currently has 42 payment systems. They differ from one another in many ways. Overseers divide them into systemically important payment systems (SIPS), prominently important retail payment systems (PIRPS) and other retail payment systems (ORPS).<sup>[9]</sup> SIPS cover several countries in the euro area. On the other hand, the volume of payments transmitted by prominently important systems plays a significant role locally. Payment systems that are not systemically or prominently important are classified as other payment systems.

For example, TARGET2, a system owned by the Eurosystem, transfers funds for the settlement of payments via other payment systems. If TARGET2 is unable to effect settlement, the other payment systems also cannot forward the payments to the payees. TARGET2 is thus classified as systemically important.

The central banks in the Eurosystem and the European Central Bank (ECB) are jointly

8. The Eurosystem oversight report 2020 was published in April 2021: <https://www.ecb.europa.eu/pub/pdf/eurosystemoversight/eurosystemoversightreport2020~a1e4fced7.en.pdf>.

9. See <https://www.ecb.europa.eu/paym/pol/activ/systems/html/index.en.html>.

responsible for oversight of the payment systems. Every year the ECB website publishes details of the division of the payment systems in the euro area into the categories referred to above, as decided by the overseers.<sup>[10]</sup> The general principle here is that the main responsibility for oversight lies with the central bank best equipped for the task. In practice this means that if a system is associated with a head office in a certain country or the laws of a certain country are applied to the system, it is generally the central bank of that country that is also the lead overseer of the system. The other central banks in the Eurosystem may, should they so wish, contribute to the system's oversight. The Eurosystem can also decide that the lead overseer should be the ECB, with which the other central banks in the euro area will then collaborate.

Thus, the Bank of Finland is the best candidate for overseer of payment systems which have their head office in Finland. Many payment systems used by the financial markets, however, are pan-European, and hence oversight on the part of the Bank of Finland is largely based on cooperation with other banks in the Eurosystem.

The systemically important payment systems as far as Finland is concerned are TARGET2, EURO1, STEP2 and card payment systems. The ECB is the lead overseer for TARGET2, a system mainly used for transmitting large-value payments between banks and owned by the Eurosystem. It is also the lead overseer for EURO1, again used for transmitting large-value payments between banks, and the STEP2 system for the processing of SEPA credit transfers throughout the euro area. The latest newcomer to the systemically important group is the Mastercard Clearing Management System, which provides credit card services and whose lead overseer is the ECB in collaboration with the central bank of Belgium.<sup>[11]</sup>

From a Finnish perspective, important international payment systems are also the Continuous Linked Settlement (CLS) for the settlement of foreign exchange transactions and the RT1 instant payment system. Important national payment systems are the POPS system for traditional express transfers and the newer Siirto system for real-time transfers of money, in use by some of the Finnish banks.

## Objectives and standards

In order to fulfil its function as overseer as provided in law and regulations, the Eurosystem, and thus also the Bank of Finland, has defined the principles, guidelines, recommendations and standards that are associated with oversight of payment systems and that help to ensure that the task is performed properly. These standards and recommendations are what the entire task of oversight is based on. The central banks make an oversight assessment of each of the payment systems concerned with reference to the relevant oversight standards.

Teams of experts known as joint oversight teams have been set up to deal with the oversight of payment systems. These teams lay the groundwork for oversight assessments. The provisional oversight assessments they make are reviewed, modified and adopted by the ECB and the Eurosystem. The Bank of Finland is involved both in the

---

10. See <https://www.ecb.europa.eu/paym/pol/activ/systems/html/index.en.html>.

11. See [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020D0026\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020D0026(01)&from=EN).

work done by the oversight teams and in the adoption of the final assessments. An oversight assessment is a reflection of how reliable and efficient the payment system being overseen is. The overseers use the assessments and other monitoring exercises to make recommendations on how the systems can be improved. Continuous oversight work allows the central bank to ensure that the recommendations for improvements are also actually followed up. If a systemically important system does not follow the recommendations, sanctions may be imposed. With other systems, proposed remedial measures are just recommendations.

When oversight assessments are being made in respect of systemically important systems, use is made of the Principles for Financial Market Infrastructures (PFMI) created by the Bank for International Settlements (BIS) and the national central banks working together with it, or standards derived therefrom. These are used globally as oversight tools for the central banks. The first standard was published by BIS in 2001. It was updated and extended in 2012, e.g. to cover securities brokering systems.

The PFMI standard incorporates 24 principles in all. These comprise recommendations concerning systemic, legal, credit, liquidity and general business risk, custody of securities and operational risk.

The Eurosystem has established its own [PFMI-based](#) regulation and other definitions as a basis for oversight in the euro area. The Eurosystem distinguishes between [systemically important payment systems, prominently important systems and other payment systems](#). The oversight regulation for systemically important systems (SIPS)<sup>[12]</sup> sets out the criteria for a payment system to be regarded as systemically important and the requirements the system must meet. It also provides for sanctions and mandatory remedial measures, which are not mentioned in the PFMI.

Systemically important systems must fulfil all the oversight requirements under the SIPS Regulation. Prominently important retail payment systems and other retail payment systems must meet the subset of oversight requirements in the PFMI, as defined on the basis of their degree of importance.<sup>[13]</sup>

When the customer of a bank pays a bill via that bank, the customer does not know what payment system the bank will be using. Banks and other payment service providers always choose the most appropriate channel of payment from among a group of payment systems at their disposal. They often, furthermore, customise the best solution for their clients by offering additional services and assign their own marketing name to these solutions.

Payments have long been in a state of rapid change. Technical developments and changing regulatory frameworks create new payment options. In addition to the conventional payment systems, there are many additional, supplementary services associated with payment. For this reason, the Eurosystem has established a framework

---

12. See <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0795&from=EN> and <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2094&from=EN>.

13. See [https://www.ecb.europa.eu/pub/pdf/other/Revised\\_oversight\\_framework\\_for\\_retail\\_payment\\_systems.pdf](https://www.ecb.europa.eu/pub/pdf/other/Revised_oversight_framework_for_retail_payment_systems.pdf).

known as PISA: a single Eurosystem oversight framework for electronic payment instruments, schemes and arrangements (europa.eu). The requirements under PISA extend to payment arrangements, the agencies that administer them and the producers of the support services for electronic payments. The instruments and arrangements typically affected are card payment services, electronic money, direct debits, credit transfers, digital wallets and payment initiation services. The new oversight requirements set for these are largely the same as those for regular payment systems.

## Oversight of securities settlement systems

The Eurosystem has been assessing the securities settlement systems it uses in its credit operations and the links between them since European Monetary Union was established. This has ensured that the Eurosystem's credit operations adhere to practices that reduce risks to the central banks posed by the settlement systems when they conduct monetary policy operations.

The PFMI published by BIS were implemented in the Central Securities Depositories Regulation (CSDR), which entered into force in 2014. The CSDR sets out harmonised requirements for securities settlement and central securities depositories (CSDs) in the European Union.

When the CSDR and the related regulatory technical standards entered into force, the Eurosystem switched to a system of assessment based on the new Regulation. This covers the requirements under the Eurosystem User Assessment Framework previously in use. The Eurosystem qualifies as relevant authority in the role of a central bank of issue.<sup>[14]</sup> The Bank of Finland represents the Eurosystem in relation to the central securities depository (CSD) in Finland and acts as overseer of said depository.

The CSDR requires CSDs to apply for authorisation, in connection with which the Eurosystem is consulted by the national competent authorities<sup>[15]</sup>. The view expressed is based on a comprehensive assessment conducted by the Eurosystem as to whether the features of the securities settlement system meet the requirements under the Regulation. After authorisation is granted, the Eurosystem produces at least once a year an assessment of how the settlement system is functioning. The annual review and evaluation focuses on earlier observations made by the Eurosystem, risk management, operational activity, changes to the operation, and insolvency and preparedness tests.

The Bank of Finland produces assessments of the securities settlement system in Finland, and these are considered by the Payment and Securities Oversight Working Group and the Market Infrastructure and Payments Committee of the Eurosystem before

---

14. The CSDR describes the authorities responsible for the authorisation and supervision of CSDs. The competent authorities in Finland include the Ministry of Finance, which is responsible for granting authority, and the Financial Supervisory Authority, which is responsible for the ongoing supervision of the CSD. Relevant authorities include the Bank of Finland, which is responsible for oversight of the securities settlement systems in Finland, and the Eurosystem as the central bank of issue and as the central bank in whose books the cash leg of securities transactions is settled. On its website, ESMA publishes a list of the competent and relevant authorities for CSDs: <https://www.esma.europa.eu/document/csd-register>.

15. In Finland it is the Ministry of Finance that grants authority.

they are approved by the ECB Governing Council. The Bank of Finland mentions any shortcomings identified to the Financial Supervisory Authority (FIN-FSA) and the CSD, and ensures that the problems are addressed.

In addition to conducting these assessments, the Bank of Finland regularly organises oversight meetings, which are also attended by the FIN-FSA. The Bank also monitors any disruptions to the settlement system, notification of which must always be made immediately by the CSD both to the FIN-FSA and to the Bank of Finland. The volume of settled transactions and the availability of the systems are monitored with reference to monthly statistics.

The Bank of Finland oversees settlement system development projects both while they are being implemented and after the changes have been introduced.



## THE BANK OF FINLAND OVERSEES EUROCLEAR FINLAND AND CONTRIBUTES TO THE OVERSIGHT OF T2S AS PART OF THE EUROSISTEM

### Euroclear Finland

There is one central securities depository in Finland, Euroclear Finland, and the Bank of Finland acts as its overseer. Euroclear Finland was granted its authorisation under the CSDR in 2019, at which time the Bank of Finland conducted a comprehensive assessment of it. Since authorisation was granted there has been one annual review and evaluation, which relates to the period from that time up to the end of April 2020.

Oversight on the part of the Bank of Finland has involved the supervision of the settlement system deployed by Euroclear Finland in 2018, both during the implementation project and after the system was introduced. Similarly, the Bank is overseeing Euroclear Finland's preparations for joining T2S,<sup>[16]</sup> which is scheduled for September 2023.

The Bank of Finland is also involved in cooperation between the supervisors and overseers of the CSDs in the Euroclear group. Cooperation focuses on the parent company of the CSDs in the Euroclear group, Euroclear SA, which is responsible for the joint services produced for the group's CSDs. Euroclear SA's lead supervisor and overseer is the National Bank of Belgium.

### TARGET2-Securities

Target2-Securities (T2S) is a securities settlement platform owned by the Eurosystem and now used in 20 European countries. The European Central Bank is the lead overseer for T2S. The Bank of Finland participates in this oversight work as part of the Eurosystem. Oversight of T2S is carried out using the PFMI and assessments are conducted regularly.<sup>[17]</sup> The first comprehensive oversight assessment was conducted in 2019. The Oversight Division of the European Central Bank organises quarterly oversight meetings with the T2S Operator, which are also attended by representatives of the central banks participating in T2S.

T2S operation is also supervised by the T2S Cooperative Arrangement set up by the European Central Bank. This allows the dissemination of information between the European Central Bank and the European Securities and Markets Authority (ESMA) and the supervisors and overseers of the CSDs participating in T2S.

---

16. T2S, TARGET2 Securities is a securities settlement platform provided by the Eurosystem.

## Oversight of central counterparties

Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories (European Market Infrastructure Regulation, EMIR) regulates the performance of the activities of central counterparties and trade repositories and the use of their services.<sup>[18]</sup>

Central counterparties (CCPs)<sup>[19]</sup> are supervised by a college appointed by the competent authorities responsible for supervision of the CCPs. When authorisation is being sought, the competent authority undertakes a risk assessment of the CCP concerned and delivers a report on it to the college. The college considers the report and issues an opinion as to whether the CCP seeking authority fulfils all the requirements provided in EMIR. It is the competent authority's task to assess the CCP's operation at least once a year. The authority reports the results of the assessment to the college, indicating the need for any remedial action or sanctions.

Participating in the work of the college are the Eurosystem as the central bank of issue, the central bank responsible for oversight of the CCP in question, and the central banks responsible for oversight of the CCPs involved in interoperability arrangements.<sup>[20]</sup> In the colleges, the members of the Eurosystem are involved in the following activities: authorisation of CCPs, their supervision, the recognition of CCPs in third countries and the approval of interoperability arrangements. They are also closely involved in producing regulatory technical standards and instructions and making recommendations.

The central counterparties serving the Finnish securities market are EuroCCP in the Netherlands, LCH in the UK, and SIX x-clear in Switzerland. The central banks in the countries in which the CCPs are located are members of the colleges for the CCPs concerned. The Bank of Finland attends the EuroCCP college as an observer. The Eurosystem contributes to the supervision of CCPs for derivatives transactions offering services to the European Economic Area.

## Other oversight tasks

Oversight also extends to the monitoring of the development of payment and settlement systems. If necessary, the Bank of Finland itself will also contribute to this development. It is important that the oversight experts are conversant with the new technologies and services in the field. The work of the experts also involves, for example, monitoring phenomena in the area of payment and securities and developments in the area of digitalisation. The exploratory work under way in Finland concerning contingency planning for payment and settlement systems is also part of the Bank of Finland's oversight function. In addition, the Bank of Finland monitors legislative developments

---

17. T2S is not a system operated by a CSD, and so no CSDR-based assessment is employed in its oversight.

18. See <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0648&from=EN>.

19. For an account of CCPs and the risks associated with them, see: <https://www.bofbulletin.fi/en/2016/2/central-counterparties-can-reduce-but-also-cause-risks/>.

20. An interoperability arrangement makes it possible to clear the transactions of a counterparty that uses the services of two different CCPs.

and will if necessary express its views when consulted.

## Oversight in a changing operational environment

The financial markets and their infrastructure are changing continuously, and the speed of change has increased in recent years. While new regulation in the area of payment and settlement systems imposes stringent requirements on systems and operators, it boosts competition, allows for new approaches and makes it possible for new kinds of service providers to enter the market. Furthermore, political and economic developments influence the operating conditions governing the financial markets and their infrastructure.

The focus of activities has largely switched from national markets to the euro area as a whole. Efforts are still being made to make cross-border payments and settlement a more efficient process. Technical developments, meanwhile, open up new possibilities, although at the same time they pose new risks. For example, the infrastructures may become ever more dependent on the service providers that are critical for the activity concerned. The same external service provider could also offer its services to several infrastructures and thus form a clear risk cluster. That is why it is important that payment and settlement systems focus attention on managing these risks. To ensure good risk management, Eurosystem overseers have started to identify critical service providers and, in future, oversight measures could also be targeted at these actors.

In the changing operational environment, oversight policy and practices need to be developed proactively and continuously. Oversight involves monitoring changes and opportunities on the financial markets from the perspective of digitalisation, for example. In recent years, oversight has become more and more associated with cyber risks. Over the last year, of course, oversight has been closely connected with the impact of the COVID-19 pandemic on the financial markets.

In the last few years, the standards and procedures used in the area of oversight have been developed to reflect market changes and the changes brought by regulation. As regards payment systems, the Eurosystem has introduced new requirements governing electronic payment instruments and payment arrangements. Supervisors and overseers have created a new type of collegiate regulatory supervisory framework for CCPs. Since the entry into force of the CSDR, the Eurosystem has reformed the way it assesses securities settlement systems. To deal with cyber threats, the Eurosystem has developed certain oversight guidelines. Market changes and regulatory developments mean that oversight policy and measures need to be developed continuously and that there will have to be reforms of the ongoing oversight work with overseen entities.

### Tags

[settlement systems](#), [financial stability](#), [oversight](#), [payment systems](#)