

THE OVERSIGHT OF FINANCIAL MARKET INFRASTRUCTURES

REPORT 2023

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TABLE OF CONTENTS

FOREWORD	5
INTRODUCTION	7
1. REGULATORY DEVELOPMENTS IN THE FIELD OF FINANCIAL MARKET INFRASTRUCTURES	9
1.1 Consolidating the regulatory framework applicable to CCPs	9
1.2 Implementing a CCP recovery and resolution framework	10
1.3 Amending the regulations on systemically important payment systems	11
1.4 Strengthening the securities settlement and delivery framework	11
1.5 Reinforcing the regulatory framework for operational resilience	12
1.6 CPMI-IOSCO international work	13
2. REVIEW OF THE OVERSIGHT OF FINANCIAL MARKET INFRASTRUCTURES	19
2.1 LCH SA	19
2.2 Euroclear France and ESES France	22
2.3 CORE(FR) and SEPA(EU)	23
2.4 Cooperative oversight	25
BOXES	15
① Reducing risks from systemic UK CCPs	15
② Tensions on commodities markets	16
③ Pilot regime for market infrastructures	17
④ Issues related to margin practices	18
GLOSSARY	29

FOREWORD

Pursuant to Article L. 141-4 (I) and (II) of the *Code monétaire et financier* (the French Monetary and Financial Code), the Banque de France oversees the smooth functioning and security of payment systems, and the security of systems for the clearing and settlement of financial instruments.

The smooth functioning and security of financial market infrastructures and means of payment are vital for the entire economy, for the effective implementation of monetary policy, and for financial stability and user confidence in the currency.

The Banque de France reports regularly to the public on the performance of its duty to oversee financial market infrastructures. The last report was published in 2020. This report covers the period from 2021 to 2023, and the scope is limited to financial market infrastructures, as the oversight of means of payment now appears in a separate report.¹

¹ OSMP (2023), *Observatory for the Security of Payment Means – Annual Report 2023*, September.

INTRODUCTION

As a national competent authority, the Banque de France, alongside the *Autorité de contrôle prudentiel et de résolution* (ACPR – Prudential Supervision and Resolution Authority) and the *Autorité des marchés financiers* (AMF – Financial Markets Authority), depending on the entities concerned, is tasked with the oversight of France's financial market infrastructures. It also contributes to the cooperative oversight of various European and international market infrastructures and payment systems. Over the past three years, there have been a number of significant developments in the supervision of market infrastructures, in terms of changes to the regulatory framework, the emergence of new challenges and the amplification of previously observed trends.

The regulatory framework, which had been completely overhauled in previous years, has been reviewed, rounded out and clarified, with the entry into force of several pieces of key European legislation, such as EMIR² on clearing requirements for CCPs³ and CSDR.⁴

As for CCPs, in order to strengthen the prerogatives of the European authorities in their regard, additions to the regulatory framework initially covered the supervision of third-country clearing houses – deemed of systemic importance for the European Union (EU) – in the run-up to Brexit. They also concerned the framework applicable to recovery and resolution, so as to incorporate the principles laid down by the Financial Stability Board (FSB) into EU law.

With regard to settlement and delivery, CSDR has been revised to clarify and simplify the requirements applicable to the provision of services, including for cross-jurisdictional activities. The revision has also enhanced convergence in supervision between EU jurisdictions, facilitated the provision of bank-type ancillary services, reduced excessive costs arising from settlement discipline and enhanced the framework applicable to third-country central securities depositories (CSDs).

The regulations have also evolved to keep pace with market developments. The pilot market infrastructure programme regulation, based on distributed ledger technologies (DLT)⁵, came into force on 23 March 2023. It aims to create a derogatory regulatory framework to test the use of DLT in securities and post-trading activities, and to enable the issue, storage and transfer of securities⁶ (equities, bonds and units in investment funds – UCITS), where ownership and rights are represented by a digital token recorded in a distributed ledger. These are known as “tokenised” securities or securities issued natively on DLT.

As regards cyber security, against a backdrop of increasing threats, and in line with the relevant principles of the Committee on Payments and Market Infrastructures (CPMI)⁷ and the International Organization of Securities Commissions (IOSCO),⁸ the Eurosystem has also clarified its expectations regarding monitoring of the cyber risks faced by market infrastructures under its jurisdiction.

2 European Market Infrastructures Regulation.

3 Central counterparties.

4 Central Securities Depositories Regulation.

5 Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 concerning a pilot market infrastructure programme based on distributed ledger technology and amending Regulations (EU) 600/2014 and 909/2014 and Directive 2014/65/EU.

6 Subject to certain conditions and ceilings set out in Article 3: these must comply with issue ceilings defined according to the securities issued (for equities, a market capitalisation

threshold of EUR 500 million; for bonds and other forms of secured debt, an issue volume threshold of EUR 1 billion; for units in investment funds, a market value threshold of less than EUR 500 million; for corporate bonds, a market capitalisation threshold of EUR 200 million; together with a cap on the total market value of tokens traded of EUR 6 billion per central securities depository or multilateral trading facility).

7 Committee on Payments and Market Infrastructures:
<https://www.bis.org/cpmi/>

8 International Organization of Securities Commissions:
<https://www.iosco.org/>

Lastly, pursuant to the work carried out by the G7 in 2019 under the French Presidency, and subsequently by the FSB at the end of 2020, the European Commission published a legislative proposal on the regulatory framework for crypto-assets, as part of a legislative package on digital finance. Regulation (EU) 2023/1114 on Markets in Crypto-Assets (MiCA) comes into force in 2024 in two different stages: on 30 June for provisions relating to stablecoins,⁹ and on 30 December for the rest of the regulation.

The Banque de France's supervisory actions have focused on two main areas. The first and primary area was – and remains – the continuing assessment of market infrastructures' compliance with the laws that apply to them. The analyses conducted on this issue provide an overview of all risks to which they are exposed (financial, operational, cyber, etc.), as well as the mechanisms in place or the measures taken to prevent them and, ultimately, serve to ensure both their robustness and their performance. The second was closer monitoring of market infrastructures to ensure their resilience in the face of operational risks – especially cyber risks – to their information systems and organisation.

⁹ Crypto-assets are digital representations of values or rights. Stablecoins are defined by the European Regulation on Markets in Crypto-assets (MiCA), amending Directive (EU) 2019/1937, as a subset of crypto-assets consisting of "asset-referenced tokens". These tokens aim to maintain a stable valuation benchmark by being tied to legal tender currencies, one or more commodities, one or more crypto-assets enabling such valuation, or a basket of such assets. By stabilising their value, these tokens are often intended to be used by their holders as a means of payment for acquiring goods or services or as a store of value.

1 REGULATORY DEVELOPMENTS IN THE FIELD OF FINANCIAL MARKET INFRASTRUCTURES

Previous periods were marked by the transposition into EU law of the Principles for Financial Market Infrastructures (PFMI), defined in 2012 by the CPMI and IOSCO committees (2012-14 and 2015-17), and more recently by the consideration of new issues related to Brexit or cyber risks (2018-20). The current period under review (2021-23) has witnessed the adjustment of the existing regulatory framework, the adoption of new provisions on innovation and the ad hoc adaptation of supervision to exogenous events, such as the energy crisis.

1.1 Consolidating the regulatory framework applicable to CCPs

The European EMIR regulation published in July 2012 on CCPs, was reviewed twice during the previous period: first to ensure proportionate implementation of clearing and reporting obligations (Regulation 2019/834, known as EMIR REFIT for regulatory fitness); and second to focus on the supervisory framework for CCPs outside and inside the European Union (Regulation 2019/2099, known as EMIR 2.2).

This revamped regulatory framework was deployed over the 2021-23 period. The European Commission has adopted several delegated acts. For example, regulations now require clearing service providers to offer these services under fair, reasonable, non-discriminatory and transparent (FRANDT)¹⁰ commercial terms (Delegated Regulation 2921/1456). For non-centrally cleared derivatives, they also require counterparties to exchange collateral bilaterally (Delegated Regulation 2021/236). Moreover, the European Securities and Markets Authority (ESMA)¹¹ has published

the final report on the regulatory technical standards specifying the criteria for qualifying CCP proposals to extend their business or make a significant change to their business model¹² – which require an opinion from the CCP's supervisory college and validation from ESMA, in addition to approval from the national authorities. This report has already harmonised national practices. These criteria were partly incorporated into the regulation itself by the EMIR 3 review, for which an agreement was found in February 2024, with a new fast-track procedure for approving licence extensions or significant changes to the business model for small-scale proposals.

Amendments to other Level 2 texts¹³ have also proven necessary to adapt the regulatory framework to exogenous events. The 2022 shock on commodity derivative markets led to an increase in the threshold for the clearing obligation for these products (Delegated Regulation 2022/2310) and a temporary relaxation in the framework for collateral accepted by CCPs in response to the liquidity shock triggered by the sharp rise in prices and volatility (Delegated Regulation 2022/2311) – see *Box 2 on tensions on commodities markets*. In addition, the clearing obligation scope has been amended to take account of the transition to new interest rate benchmarks (Delegated Regulation 2022/750).

¹⁰ Fair, reasonable, non-discriminatory and transparent (commercial terms).

¹¹ European Securities and Markets Authority.

¹² ESMA (2021), *Final Report RTS. Article 15 and 49 EMIR*, March.

¹³ Delegated regulations issued by the European Commission on the technical advice of ESMA, as provided for under the EMIR regulation (known as Level 1 regulation, because it is issued directly by the European legislator).

Lastly, regarding the supervisory framework for CCPs established outside the EU, the European Commission has adopted numerous delegated acts that recognise the equivalence of the regulatory frameworks of the jurisdictions in which these CCPs are established. On this basis, ESMA has been able to recognise these CCPs either as non-systemic CCPs for the EU (known as Tier 1) or as systemic CCPs (known as Tier 2), and therefore subject to specific supervision. The European Commission has also decided to recognise the UK regulatory framework as equivalent to the EU framework on a temporary basis through 30 June 2025. ESMA deemed several services provided by UK CCPs classified as Tier 2 (LCH Ltd and ICEU Ltd) as “substantially systemic” for the European Union to mitigate the financial stability risks they cause for the EU.

1.2 Implementing a CCP recovery and resolution framework

Recovery measures are designed to ensure business continuity and to provide essential services in the event of a major interruption to the CCP’s financial flows or operational services. CCPs are responsible for initiating recovery measures, whereas resolution measures are conducted by the resolution authorities, particularly when the recovery phase has failed or needs to be interrupted for financial stability reasons. The aim of resolution is to wind down operations in an orderly manner, avoiding the use of public funds as much as possible.

A clearer international framework

In 2021, the Financial Stability Board (FSB) began an assessment of the international framework that is intended to serve as a basis for its future enhancement. The framework includes the FSB’s 2014 recommendations on CCP resolution,¹⁴ the FSB’s 2017 guidance¹⁵ setting up a standard international framework, and the FSB’s guidelines published in 2020¹⁶ on the adequacy of resources and the treatment of CCPs’ own funds in resolution.

First, a 2022 report produced by a joint FSB and CPMI-IOSCO working group provided a quantitative assessment of the adequacy of resources for CCPs in recovery and resolution (see *Changes in international standards based on PFMI in Section 1.6*). Second, the FSB conducted qualitative work to assess the advantages and disadvantages of resources already covered by the existing framework and potential new resources (bail-inable bonds,¹⁷ resolution funds, insurance, etc.). A report published in 2023, together with

the associated public consultation, should bring the work to completion and allow this “toolbox” to be eventually incorporated into the international framework.

A finalised European framework

The European Union has adopted a framework for the recovery and resolution of CCPs that was published in December 2020 (Regulation 2021/23, known as CCP RRR). It transposes international standards and creates a harmonised EU framework based primarily on shareholders’ resources, without exempting clearing members from their share of default-related losses. As regards recovery, it creates a second “skin in the game”¹⁸ and requires CCPs to draw up recovery plans that may include haircuts on variation margin gains owed by the CCP, or partial or full contract tear-ups. Regarding resolution, the text provides for six tools: three tools common to the banking system (conversion of equity instruments, disposal of activities and bridge CCPs), and three tools specific to CCPs (cash calls, haircuts on variation margin gains owed by the CCP, or partial or full contract tear-ups). The framework does not provide for any haircuts on initial margins (which could have created significant exposure for participants and an incentive to exit the CCP as soon as a participant defaults), or for forced allocation of positions (which could have forced certain members to take positions that they are incapable of handling). The CCP RRR regulation also establishes a system of ad hoc cooperation between supervisory and resolution authorities.

This framework was deployed over the 2021-23 period, with the adoption of Level 2 texts by the European Commission to specify the methods for calculating the second “skin in the game” (Delegated Regulation (EU) 2023/840)¹⁹ and the methods for compensating clearing members who have had to take haircuts on variation margin gains for losses not due to a default and therefore attributable solely to the CCP (Delegated Regulation (EU) 2023/450). As regards the cooperation framework, the criteria for assessing CCP recovery plans applicable to the national authorities have been set out in detail (Delegated Regulation (EU) 2023/451). A technical standard drafted by ESMA on the procedures for setting up and operating resolution colleges has yet to be adopted by the European Commission.

In 2022, the national authorities carried out an initial assessment of the recovery plans, validated by the supervisory colleges of the different CCPs in the EU. In 2023, the resolution authorities produced a first version of the resolution plans and set up the CCP resolution colleges. In France, the ACPR set up the resolution college

for the French CCP, LCH SA, which met for the first time in November 2023, and in which the Banque de France participated as the competent national authority.

1.3 Amending the regulations on systemically important payment systems

An initial revision of Regulation (EU) 795/2014 of the European Central Bank of 3 July 2014 on supervisory requirements for systemically important payment systems (the SIPS²⁰ Regulation) took place in 2017. It clarified existing obligations, added new risk management requirements, (particularly in regard to cyber resilience) and expanded the powers of the authorities.

The operators of the four euro area SIPS were given 12 months to comply with the amended regulation (and 18 months for the provisions on financial obligations). Following the self-assessment required of the operators, the competent authorities (Banque de France for CORE(FR), the ECB for TARGET2, EURO1 and STEP2-T)²¹ conducted a gap assessment to determine whether the SIPS fully complied with the new requirements, which was completed in July 2020.

In tandem with the conduct of this assessment phase, the Governing Council identified Mastercard CMS as a SIPS on 4 May 2020. This new SIPS is now supervised by two competent authorities, the ECB and the National Bank of Belgium.

The SIPS regulation was revised again in 2021, mainly to specify the arrangements for joint supervision by two competent authorities and to clarify the procedure for identifying a payment system as a SIPS.

1.4 Strengthening the securities settlement and delivery framework

Regulation (EU) 909/2014 (CSDR)²² was adopted in 2014 following the reforms undertaken in the EU to strengthen the resilience of financial market infrastructures in the wake of the 2007-08 financial crisis. It aimed to establish a harmonised framework for the settlement of financial securities, as well as a common framework applicable to central securities depositories (CSDs) in terms of licensing, provision of cross-border services, supervision and prudential requirements. The Level 1 text came into force in September 2014, while the Level 2 measures were published in 2017.

Most of the measures concerning the introduction of penalties to boost market discipline came into force in February 2022. They are set out in Delegated Regulation (EU) 2018/1229 and introduce a system of penalties and a mandatory buy-in for defaulting participants. Although mandatory buy-ins have not yet come into force, the other market discipline provisions have been applicable in full since 1 February 2022.

In France, the AMF and the Banque de France ensure that the provisions of the CSDR are properly applied and jointly supervise the CSDs established in France. As part of its financial stability mandate, the Banque de France's responsibilities focus primarily on settlement finality, cash settlements, links between CSDs, operational risk and investment policies. To date, France's only authorised CSD is Euroclear France.

After authorisation, the CSDR currently requires the competent authorities to review the arrangements, strategies, processes and mechanisms implemented by the CSDs, and to assess the risks to which the CSDs are exposed (see *below*). The competent authorities determine the level of detail and frequency of this assessment depending on the size and systemic importance of the CSDs, as well as the nature, scale and complexity of their activities. They must inform the relevant authorities (in particular the Eurosystem) of the results of the review and evaluation.

14 FSB (2014), *Key Attributes of Effective Resolution Regimes for Financial Institutions*, October.

15 FSB (2017), *Guidance on Central Counterparty Resolution and Resolution Planning*, July.

16 FSB (2020), *Guidance on Financial Resources to Support CCP Resolution and on the Treatment of CCP Equity in Resolution*, November.

17 Bail-inable bonds are junior debt securities issued by a CCP that may be used to recapitalise the CCP (through conversion into equity) or to absorb losses in the event of resolution.

18 An additional amount of CCP own resources, varying between 10% and 25% of total capital requirements, to be used prior to CCP recovery tools.

19 This rounds out Regulation (EU) 2021/23 with regulatory technical standards specifying the method for calculating and maintaining the additional amount of prefunded and specially allocated own resources to be used in accordance with Article 9(14) of Regulation (EU) 2021/23.

20 Systemically important payment systems.

21 Presentation in Chapter 2.

22 Central Securities Depositories Regulation on improving securities settlement in the European Union and on central securities depositories.

Since 2020, and in accordance with the provisions set out in the CSDR, a process for amending the regulation has been initiated. A review clause was inserted²³ with the aim of assessing the effectiveness of the existing framework and making any improvements that may prove necessary. The European Commission submitted its report on the CSDR in July 2021. It concludes that, overall, the Regulation has achieved its original objectives of enhancing the effectiveness of regulation in the EU and the robustness of CSDs. However, the Commission considered that improvements were needed in other areas. On that basis, on 16 March 2022, it published a proposal for a partial revision of the Regulation – CSDR Refit – accompanied by an impact study, which has been sent to the European Parliament and Council for consideration and adoption.

The European Commission's proposal was examined by the Council and a compromise was reached at the end of 2022. The Parliament finalised its position in ECON²⁴ on 1 March 2023, paving the way for trilogue negotiations to begin in April 2023. The Council and Parliament reached a compromise on the CSDR Refit at the end of June 2023 and the legislation was adopted and published in the Official Journal of the European Union on 27 December 2023.

The most important aspects of the compromise are as follows.

- Simplification of the passport system and creation of supervisory colleges for CSDs whose activities are carried out in at least two Member States and are considered to be of substantial importance, or for which passports exist. Furthermore, the passport procedure has been greatly simplified as it had proven especially cumbersome to deploy.
- Greater flexibility in the use of commercial bank money in order to facilitate foreign currency settlement and encourage cross-border activity. The revised CSDR now provides for: (i) the possibility for banking CSDs to offer bank-type ancillary services to other CSDs (excluded by the first version of the CSDR); and (ii) raising of the thresholds below which credit institutions may provide bank-type ancillary services to a CSD without having to comply with the conditions of principle that apply to credit institutions designated by a CSD to provide said services. The compromise mandates the European Banking Authority to define the new threshold.
- Clarification of the procedures for implementing market discipline measures. A decision was taken to prioritise a system of penalties²⁵ over the mandatory buy-in (MBI) mechanism, which has proven to be technically

complex and costly to apply, and has been the subject of longstanding opposition from certain countries. MBI will only be initiated by decision of the European Commission if the following two conditions are met: (i) the application of penalties or suspension measures have not resulted in a long-term and continuous reduction in defaults; and (ii) the level of settlement defaults in the EU has, or is likely to have, a negative impact on financial stability within the EU.

- Less frequent formal reviews of CSDs' compliance with their conditions of authorisation, which will now be conducted every three years instead of each year.

1.5 Reinforcing the regulatory framework for operational resilience

The EU's Digital Operational Resilience Act (DORA), published in December 2022,²⁶ defines a common legislative base that applies to virtually the entire financial sector. As *lex specialis* for the financial sector, it rounds out the cross-sectoral NIS2 directive²⁷ on network and information systems security, which was published on the same day and outlines objectives designed to ensure a high common level of cybersecurity across the EU. The DORA regulation must be applied by a wide range of entities, both in terms of their activity and their size, including in particular CSDs and CCPs.²⁸ Payment system operators who are already subject to oversight by the European System of Central Banks (ESCB) under the Treaty on the European Union, are excluded from the scope of the regulation, with a review clause within three years of the future third European directive on payment services (PSD3) coming into force.

The DORA Regulation harmonises "from the top down" all existing provisions in a large number of sector-specific texts (directives, regulations). The regulation applies directly and focuses on four major issues: (i) the requirements covering governance and management of risks linked to information and communication technologies (ICT); (ii) the management, classification and reporting of ICT-related incidents; (iii) the testing of digital operational resilience; and (iv) the management of risks associated with third-party ICT service providers. These four focuses are rounded out by arrangements to share information and intelligence on cyber threats and by cooperation between authorities. This harmonisation should eliminate differences and overlap between sector-specific regulations.

The creation of a supervisory framework for critical third-party ICT service providers is a genuine institutional

innovation, particularly with the creation of a supervisory forum. The European supervisory authorities (ESAs),²⁹ acting through the Joint Committee, and on the recommendation of the Supervisory Forum, will designate the critical third-party ICT service providers for financial entities and appoint a lead supervisor for each. This lead supervisor will be responsible for determining whether each critical third-party ICT service provider has set up comprehensive, robust and effective rules, processes, mechanisms and arrangements to manage the ICT risk it may pose to financial entities.

The DORA regulation, which is due to come into force on 17 January 2025, will be supplemented by delegated acts currently being prepared by the ESAs. The ESAs led a public consultation from June to September 2023 on an initial package of delegated acts, four draft technical standards and one implementing act on ICT risk management, major ICT incident reporting and risk management on third-party ICT service provision.

1.6 CPMI-IOSCO international work

The Banque de France took part in all the work and analyses coordinated by CPMI-IOSCO, which focused mainly on monitoring the implementation of Principles for Financial Market Infrastructures (PFMI) and expanding on certain topics (such as cyber-risk monitoring) covered by the PFMI.

Monitoring PFMI implementation

PFMI have become the international benchmark for market infrastructure oversight. In the EU, they have been reflected via the directly applicable European regulations EMIR, CSDR and SIPSr.³⁰ The legal arrangements for adopting the PFMI and the interpretation of certain terms or requirements may differ from one jurisdiction to another. Within the CPMI-IOSCO committees, the public reports published on specific issues will lead to a gradual convergence of interpretations and practices by market infrastructures, a key factor for a consistent implementation of PFMI across the various jurisdictions. The convergence of rules and practices is assessed at three levels.

- The first level involves each jurisdiction conducting a self-assessment of the progress of PFMI into local law. As most jurisdictions now deem that they have completed the transposition, the work is now focused on the next two levels.

- The second level involves an assessment of the extent to which jurisdictions' legislative and regulatory framework are complete and consistent with the PFMI. Since 2021, the CPMI-IOSCO committees have completed the assessment of the Turkish framework³¹ (for payment systems, CSD/securities settlement and delivery systems, CCPs and trade repositories) and are finalising the assessment of the EU and UK frameworks (for payment systems and CSDs/SSSs).³²
- The third level involves the assessment of the consistency of the implementation of the PFMI by market infrastructures. In July 2021, the group finalised the report on market infrastructure practices (CCPs, CSD/securities settlement systems and payment systems) in terms of business continuity planning and operational risk management, with an analysis of a sample of 37 entities from 29 jurisdictions, and then, in November 2022, an assessment of their cyber-risk management.³³ In early 2023, work began on assessing practices for identifying and managing business risk.

23 Articles 74 and 75 of the CSDR.

24 See European Parliament (2023), "MEPs adopted changes to financial instruments settlement regime", press release, 1 March.

25 The system of penalties came into effect on 1 February 2022.

26 Digital Operational Resilience Act: <http://data.europa.eu/eli/reg/2022/2554/oj>

27 Networks and Information Systems Security: <http://data.europa.eu/eli/dir/2022/2555/oj>

28 The regulation will also apply to credit institutions, payment institutions, electronic money institutions, investment firms, crypto-asset service providers, trading platforms, trade repositories, insurance and reinsurance undertakings (and intermediaries), undertakings for occupational retirement provision, credit rating agencies, administrators of critically important benchmarks and crowdfunding service providers.

29 European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA), and European Securities and Markets Authority (ESMA).

30 SIPSr, Regulation on oversight requirements for systemically important payment systems.

31 BIS (2022), *Implementation monitoring of PFMI: Level 2 assessment report for Turkey*, July.

32 SSS, securities settlement systems.

33 See *Guidance on cyber resilience for financial market infrastructures*, 2016. A number of issues emerge based on the findings of the Implementation monitoring of the PFMI: Level 3 assessment on Financial Market Infrastructures' Cyber Resilience report: (i) a major worry concerning a group of entities that have not yet developed solutions in their recovery plans and responses to cyber attacks that would enable them to achieve the two-hour recovery time objective (2hRTO); (ii) several causes for concern over the robustness of the solutions developed to achieve 2hRTO and shortcomings in testing practices in several areas including resilience (integrity of back-up data, penetration testing, etc.), scenarios, and key stakeholder engagement in their development.

Changes in international standards arising from PFMI

The work mainly focused on four topics.

- Margin practices, which were the subject of particular scrutiny over the 2021-23 period (*see Box 4 below*), especially in the wake of the recent turmoil of Covid-19, the war in Ukraine and the energy crisis, which have raised questions over the procyclical impact of margins and liquidity risks on cleared and non-cleared markets.
- The adequacy of CCPs' financial resources to deal with the default and non-default related losses of a clearing member, following on from work carried out in 2016 and 2020. In March 2022, the final report highlighted the risk of insufficient resources in the event of a non-default related loss and recommended carrying out a study on the appropriateness of using alternative resources. This study is currently being finalised.
- Alongside, an initial report on CCP practices for handling non-default related losses was published in August 2023, highlighting the existence of different practices within CCPs and the need to define common guidelines in this area.
- Procedures for direct access to CCPs by non-banking entities, such as insurance companies and funds ("sponsored" access) were also analysed following on from the studies previously conducted of the third-party clearing market. This work, which began in 2019, was completed in 2022 in the form of a report on the benefits and risks associated with this type of model.

1

Reducing risks from systemic UK CCPs

A large proportion of centrally cleared euro-denominated financial flows are handled by two UK-based central counterparties (CCPs): LCH Ltd, which clears 80% of euro-denominated interest rate derivatives (IRDs), and ICEU Ltd, which clears 99% of euro-denominated short-term interest rate futures (STIRs). This high level of market concentration raises financial stability issues, as well as a risk of regulatory and supervisory divergence following Brexit, which took effect on 1 February 2020. Moreover, UK CCPs' clearing activities for euro-denominated products are carried out under the supervision of the Bank of England, whose mandate is not intended to take into account financial stability issues within the European Union and the euro area.

In 2019, to avoid any sudden halt in UK CCP services to EU financial entities post-Brexit, the European Commission granted initial temporary recognition of the United Kingdom's regulatory framework, given its similarity to the EU framework, through June 2022. The European Securities and Markets Authority (ESMA) conducted an assessment of the risks posed by the two systemic UK CCPs, LCH Ltd and ICEU Ltd, resulting in the publication in December 2021 of an opinion qualifying LCH Ltd's SwapClear service in euro and zlotys, and ICEU's credit default swaps (CDS) and euro STIR services as "substantially systemic". Although ESMA did not recommend "de-recognition" due to the excessive short-term costs incurred by European market participants, it did stress the need to reduce risks, notably by deploying regulatory incentives to reduce EU market participants' level of exposure to UK CCPs.

In February 2022, the European Commission extended the period of temporary equivalence of UK law through June 2025. This decision was accompanied by the publication in December 2022 of a legislative package proposing the revision of EMIR ³ and targeted adjustments to other legislation (CRR, CRD, IFD, UCITS)² designed to reinforce (i) the EU's strategic autonomy in the clearing sector market, (ii) the attractiveness and competitiveness of the European clearing sector, and (iii) its resilience. The aim was to create an obligation for European market participants to hold a minimum share of their business in accounts with EU CCPs. In its final version, the revised legislation incorporates an obligation for

EU market participants to hold accounts in the EU, known as "active accounts", recording transactions representative of the portfolio cleared in the United Kingdom. ESMA has also been mandated to submit an assessment of the measure's effectiveness in reducing financial stability risks, and possible proposals for additional measures, such as the creation of a minimum share of business to be held in accounts, within 18 months of the entry into force of EMIR 3.

1 EMIR, European Market Infrastructure Regulation.

2 CRR, Capital Requirements Regulation – Regulation (EU) 575/2013 on prudential requirements for credit institutions and investment firms; CRD, Capital Requirements Directive – Directive (EU) 2013/36 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms; IFD, Investment Firms Directive – Directive (EU) 2019/2034 on the prudential supervision of investment firms; UCITS, Undertakings for Collective Investment in Transferable Securities – Directive (EU) 2009/65 on the coordination of legislation, regulations and administrative provisions relating to certain UCITS.

Tensions on commodity markets

The commodities market brings together a wide range of non-financial and financial players, especially those operating mainly on physical markets (commodities trading) and on the financial markets (banks, investment firms, investment funds, etc.).

The EMIR¹ regulation introduced a clearing obligation for the most standard derivative instruments. The European Securities and Markets Authority (ESMA) regularly updates the list of products covered by the clearing obligation (*see Public Register*,² Section 1), analysing the characteristics of five categories of derivatives: equity, foreign exchange, commodity, interest rate and credit. The clearing obligation does not apply to commodity derivatives, only to interest rate and credit derivatives. However, the exposures of financial and non-financial counterparties to commodity derivatives are taken into account when determining the applicability of the clearing obligation: it is triggered whenever an entity has exposures to commodity derivatives that exceed the notional value threshold of EUR 4 billion. These products may, however, be offset on a voluntary basis (*see Public Register*,² Section 2).

During its first few months, the Russian-Ukrainian conflict created considerable tensions on commodity markets, resulting in a sharp rise in prices and volatility. Commodity price rises observed between 2021 and 2022 generated strong volatility in initial and variation margins for derivatives contracted by traders. These non-bank players often use the services of clearing members. However, under this model, margin calls made by central counterparties (CCPs) are passed on by the clearing members to their customers at a margin equal to or greater than that of the CCP. Consequently, the increase in margin calls proved to be particularly sharp and significant, creating liquidity pressures for non-bank players active in the commodities markets that use derivatives for hedging or speculative purposes.

All in all, banks were able to provide liquidity to their customers to absorb these margin increases, thus enabling them to meet their obligations. In light of the liquidity pressure observed on centrally-cleared commodity markets, the European Commission proposed a number of regulatory changes.

1. On 18 October 2022, following a proposal from ESMA, the Commission adopted an amendment to RTS³ 149/2013 aimed at increasing the clearing threshold applicable to over-the-counter (OTC) commodity derivatives from EUR 3 billion to EUR 4 billion. This came into force on 29 November 2022.
2. Also on 18 October 2022, the Commission extended – on a temporary 12-month basis and subject to conditions – the list of assets eligible as collateral for CCP margin calls, to include public guarantees (for all entities) and non-collateralised bank guarantees (for non-financial entities). This measure came into force on 29 November 2022, and was then made permanent with its incorporation into the EMIR regulation (as part of the EMIR 3 revision).
3. On 22 December 2022, the Commission adopted a regulation introducing a market correction mechanism (MCM) for natural gas derivatives to protect EU citizens against excessively high prices, setting a price limit above which TTF⁴ derivative transactions cannot be concluded. This mechanism, which applies in particular to centrally cleared transactions, has been in operation since 15 February 2023.

1 EMIR, European Market Infrastructure Regulation.

2 ESMA, *Public Register for the Clearing Obligation under EMIR*.

3 RTS, Regulatory Technical Standard.

4 TTF, Title Transfer Facility: gas trading arrangement in the Netherlands market area, which covers the largest commercial volume of gas in Europe.

Pilot regime for market infrastructures

Adapting regulations to the new challenges of innovation (particularly with the emergence of tokenisation) appears to be unavoidable if central banks are to continue to serve the economy, citizens and businesses in a digital world.

On 24 September 2020, as part of its legislative package on digital finance, and in addition to specific measures focusing on crypto-asset markets (MiCA, Markets in Crypto-Assets) and on the digital operational resilience of the financial sector (DORA, Digital Operational Resilience Act), the European Commission proposed the introduction of a pilot regime regulation for market infrastructures using distributed ledger technologies (DLT), including blockchains.

Regulation (EU) 2022/858 on a DLT-based pilot regime for market infrastructures was adopted on 30 May 2022 and came into force on 23 March 2023.

This derogatory regulatory framework aims specifically to foster innovation and experimentation – within a regulatory framework that guarantees investor protection, market integrity and financial stability – for activities relating to the trading and post-trading of financial instruments.

In practice, it enables financial instruments to be issued, registered, transferred and stored using DLT (“tokenised” financial instruments). This allows for the possibility of a digitally-backed financial instrument with related rights to be recorded in a distributed ledger. Transactions involving these assets may be settled in commercial bank money, including tokenised money, and even e-money tokens if central bank money is not available.

To this end, three new categories of “DLT” market infrastructures have been created, each subject to a specific authorisation procedure.

- **DLT multilateral trading facility** (DLT MTF): a trading platform operated by an investment services provider or market undertaking, in addition to any authorised natural person or legal entity.
- **DLT settlement system** (DLT SS): a system for settling transactions in DLT financial instruments against payment or delivery, operated by a central securities depository (CSD).
- **DLT trading and settlement system** (DLT TSS): a market infrastructure that provides both trading and settlement system services, i.e. DLT MTF and DLT SS.

The Banque de France is involved in deploying the pilot regime at the national level alongside other competent authorities, *Autorité des marchés financiers* (AMF – the French Financial Markets Authority) and the *Autorité de contrôle prudentiel et de résolution* (ACPR – the French Prudential Supervision and Resolution Authority). It is involved both in authorising and supervising applicants¹ and in liaising with the Eurosystem to make tokenised central bank money available. Tokenised central bank money would enable market participants to conduct all securities transaction operations using DLT technology, while benefiting from the very safest settlement assets.

¹ AMF, ACPR and Banque de France (2023), “Régime pilote pour les infrastructures de marché DLT”, press release, 7 April.

Challenges related to margin practices

In most financial transactions, collateral is exchanged (by a central counterparty [CCP] or on a decentralised basis) to reduce each counterparty's exposure to the possibility that one of them may default. In the – derivative, repo, equity, and centrally and non-centrally cleared derivative – markets, these payments are known as margins. There are three types.

- Initial margins, which are intended to cover potential future exposure in the event of default by the counterparty.
- Variation margins, which are intended to settle the amount of any changes in the market value of the product being traded (the “winning” party – the buyer of a call option on an underlying that has increased in value, for example – receives a variation margin from the “losing” party).
- Additional margins, to cover specific risks linked to the decisions of the clearing members.

Margins make the financial system more secure by reducing overall counterparty risk. However, in periods of high volatility, margins can increase abruptly, creating a liquidity risk, even for solvent counterparties. This liquidity risk can spread throughout the financial system as many counterparties seek liquidity at the same time by selling rapidly, thereby devaluing the assets concerned. This concern became highly topical once again with the crises linked to Covid-19 in 2020 and the war in Ukraine in 2022, which led to record levels of volatility on the equity and commodities markets. While the financial system demonstrated sound overall resilience during these two crises, certain players, particularly non-banks and clearing member customers, may have been weakened by the rapid increase in margin calls.

Against this backdrop, work conducted in cooperation with the CPMI, IOSCO and BCBS¹ culminated in a report in 2022 on margin practices on cleared and non-cleared markets, and identified six areas requiring further regulatory work:

- improving margin model transparency on centrally cleared derivatives markets;
- strengthening market participants' preparedness and communication in terms of liquidity, in particular by examining the role of intermediaries and the preparations of customers (e.g. investment funds, pension funds, non-financial undertakings);
- identifying data and reporting gaps for supervisors;
- assessing opportunities for improving exchanges of variation margins;
- analysing the procyclicality of initial margin models on centrally cleared markets;
- analysing the procyclicality of initial margin models on non-centrally cleared markets.

At the same time, a study was conducted into the effects of margin calls on commodity markets and their participants during periods of high volatility. The report was published in May 2023² and outlines the specific lessons for the sector and suggests ways of improving the resilience of non-bank intermediaries that can be used in ongoing and future work.

1 CPMI, Committee on Payments and Market Infrastructures; IOSCO, International Organization of Securities Commissions; BCBS, Basel Committee on Banking Supervision.

2 BIS (2023), *Margin dynamics in centrally cleared commodities markets in 2022*, May.

2 REVIEW OF THE OVERSIGHT OF FINANCIAL MARKET INFRASTRUCTURES

2.1 LCH SA

The French central counterparty (CCP), LCH SA, offers clearing services for financial instruments and ensures proper execution of transactions across four business lines:

- Cash products (EquityClear segment): cash equities and convertible bonds listed on Euronext, Turquoise, Equiduct, the Chicago Board Options Exchange (CBOE) or the Luxembourg Stock Exchange;
- Listed derivatives (EquityClear segment): equity and commodity derivatives listed on Euronext markets;
- Outright trades and repos in government securities (RepoClear segment): Italian, French, German, Belgian and Spanish sovereign debt securities. This business line includes €GCPlus, a repo clearing service for which collateral is managed on a triparty basis by Euroclear France;
- OTC-traded euro and USD-denominated credit default swaps (CDS) (CDSClear segment) based on indices or single reference entities.

Recent changes and development projects

In a competitive, shifting environment marked by the Covid-19 crisis and the conflict in Ukraine, numerous developments 2021-23 significantly impacted LCH SA, which has launched a number of initiatives aimed at strengthening its competitiveness and attracting an increasing share of clearing members.

The Banque de France's supervisory teams, together with those of the ACPR and the AMF, were particularly active, both in regularly monitoring the CCP's activities and in inspecting the many projects it launched. All in all, over the period, the supervisory teams vetted over a hundred major

projects involving changes to risk models, the extension of clearing services to new products and modifications to information systems. Every project was examined by the three authorities (Banque de France, ACPR and AMF), voted upon by the CCP's Supervisory Board, and validated by ESMA.

The Covid-19 crisis and the forced extension of teleworking arrangements highlighted a number of areas for improvement in operational resilience, even in the absence of a major incident. This led to specific discussions on LCH SA's information systems, and given LCH SA's increasing number of purely IT and operational projects, the authorities set up an oversight framework dedicated to these matters.

In 2022, LSEG³⁴ acquired the data company, Refinitiv, and sold Borsa Italiana Group, including CC&G, the Italian CCP that has an interoperability arrangement with LCH SA,³⁵ to the Euronext Group. This acquisition led Euronext to reconsider its existing contract with LCH SA for the clearing of listed derivatives and cash equities traded on its markets and, consequently, listed equity and commodity derivatives that do not benefit from market open access will be cleared by Euronext Clearing (formerly CC&G) until the end of summer 2024. Cash equities traded on Euronext markets will be cleared by default by Euronext Clearing, unless LCH SA has been designated as the reference CCP by the clearing member. It is therefore expected that LCH SA's revenues in this segment will decline from 2024 onwards.

³⁴ London Stock Exchange Group.

³⁵ Interoperability is an organisational model for linking market infrastructures. When applied to CCPs, this system can anonymously match the orders of a

member active in one of the two CCPs with those of a member active in the other CCP, without either party needing to be a member of both CCPs at the same time.

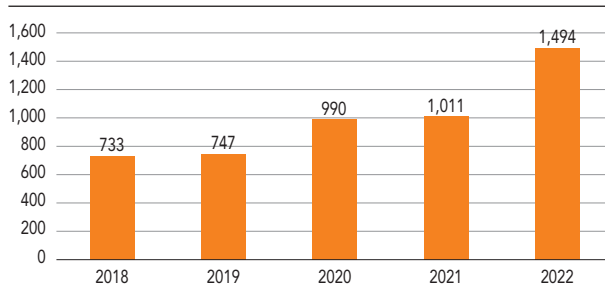
Over the same period, CCP created a new DigitalAssetClear segment, which has been authorised by the authorities, and will offer clearing services for bitcoin futures traded on the United Kingdom's GFO-X platform. There are plans to extend clearing to other crypto-asset derivatives in a second phase.

The CDSClear segment witnessed a sharp increase in activity in the second half of 2023. The influx of transactions cleared by LCH SA was largely driven by the UK CCP, ICEU Ltd, LCH SA's main competitor in euro-denominated CDS, closing down its CDS clearing operations. Customer numbers grew sharply (by around sixty) and volumes cleared rose by between 30% and 90%, depending on the type of product, increasing its market share from 7% to 14%.

LCH SA continued to develop the range of products cleared by CDSClear, adding indices and single-name sovereign derivatives³⁶ to round out its range, and consequently adapting the risk model, mainly to hedge the risk of concomitant default between a government and private entities. These projects have been submitted for regulatory approval to the French, European and US authorities. In particular, CDSClear has adapted its clearing framework (with extended hours) to allow US FCMs³⁷ to connect directly, by authorising segregated accounts on TARGET2 to ensure compliance with US regulations.

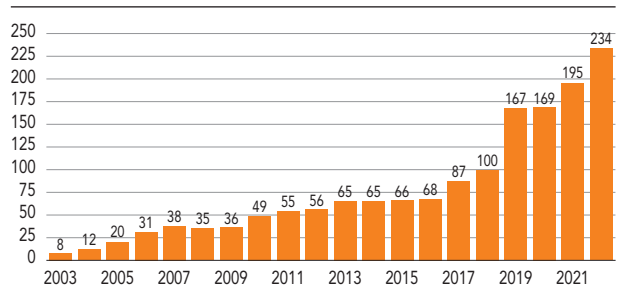
CCP also launched major initiatives in the RepoClear segment. It created a new specific "sponsored" clearing access model for pension funds enabling them to clear their transactions directly with LCH SA thanks to sponsorship of a new type of "agent" clearing member. LCH SA also merged the €GCPlus clearing segment with tripartite collateral management, with the RepoClear segment, providing clearing members with broader exposure and potential gains in terms of risk offsetting and therefore margins. This merger also eliminates the default fund of the former €GC+ segment, without increasing RepoClear's default fund.

C1 CDSClear: Gross notional amount at year end (EUR billions)



Sources: LCH SA, Banque de France calculations.

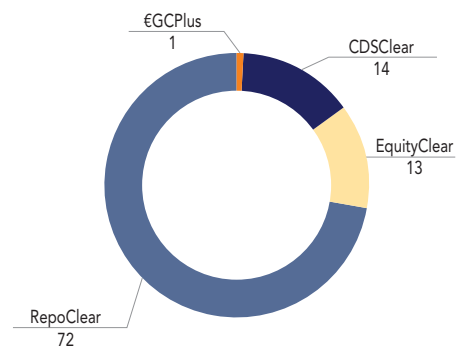
C2 RepoClear: nominal amount cleared annually (EUR trillions)



Sources: LCH SA, Banque de France calculations.

LCH SA also made two significant changes to its margin models for the RepoClear and EquityClear segments, replacing the SPAN parametric model and introducing a VaR Expected Shortfall model, which is the market standard among CCPs. This model provides a more refined understanding of risk and takes more account of directional risk (i.e. risk arising from changes in the price of an asset) while also reducing the risk of overestimating the margins called. These two changes to the model were made alongside a review and adaptation of additional margins.

C3 Breakdown of LCH SA activities: total margins held at end-2022 (%)



Note: €GCPlus, repo clearing service; CDSClear, credit default swaps; EquityClear, cash products (equities, convertible bonds) and equity and commodity derivatives; RepoClear, outright trades and repos in government securities.

Sources: LCH SA, Banque de France calculations.

Assessment

The national authorities responsible for the oversight and supervision of LCH SA are the Banque de France, the ACPR and the AMF, which act jointly under the European EMIR Regulation (see Section 1.1 above). LCH SA also has credit institution status and, as such, is supervised by the ACPR. Because it is classified as a "less significant institution" for SSM purposes, it is supervised indirectly by the European Central Bank.

In order to properly carry out their duties, the competent national authorities perform records-based assessments – for example, reviewing a CCP’s planned proposals/changes –, analyse information and data on activity and risks, and hold regular meetings with representatives of the CCP. They also sometimes perform on-site inspections.

In accordance with the EMIR regulation, the French national competent authorities shall establish, manage and chair the EMIR College, which brings together the various public authorities of European Union Member States that have an interest in the CCP’s proper functioning. In addition to the national competent authorities, these colleges include the supervisors of the main clearing members, trading platforms, CCPs with which interoperability arrangements have been established, central securities depositories and the central banks of issue of the main EU currencies cleared, as well as ESMA, which has no voting rights.

The EMIR College is intended to promote a consistent approach within the EU for the implementation of the EMIR requirements and adequate assessment of CCPs’

risks (taking into account its risk profile and the market segments it clears), while also involving the main relevant authorities of other EU countries. The college of authorities is the appropriate forum for exchanging information about the CCP and assessing significant changes. LCH SA’s EMIR College was set up in January 2014 and brings together 19 authorities (including ESMA) from 9 different EU countries and is chaired by the Banque de France. Its meetings provide an opportunity to exchange information on the prior year oversight report and on future supervision programmes, with the other authorities.

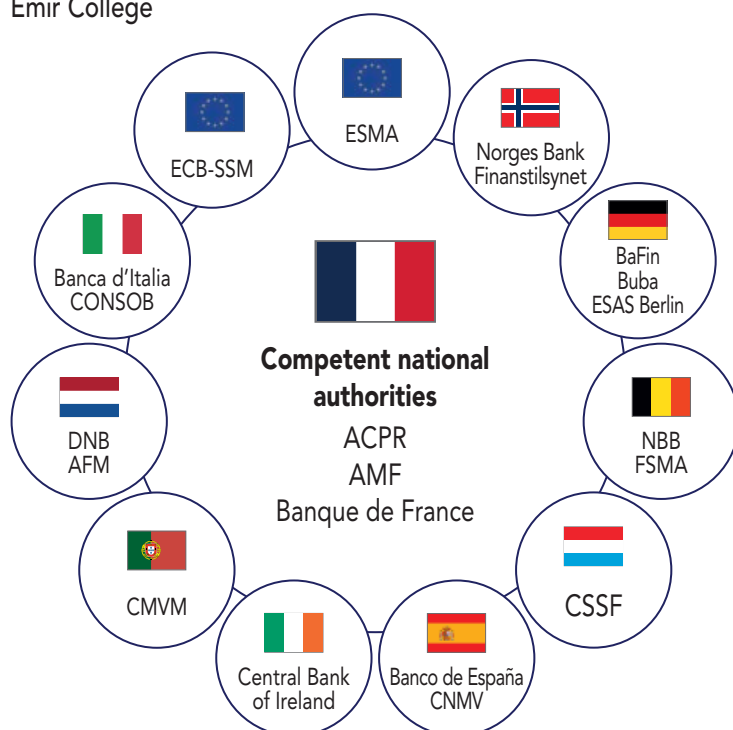
In accordance with the EMIR regulation, the opinion of the College, expressed by a vote, is required when a CCP seeks authorisation, when it proposes to expand its range of services, initiate new business lines or make changes that have a major impact on its risk management framework (such as an amendment to its margin model).

36 Single-name derivatives are associated with one a single reference entity, in this case a state.

37 Futures commission merchants.

Composition of the EMIR College and the Global College of the French CCP, LCH SA

Emir College



Global College: Emir College+...



Notes: EMIR, European Market Infrastructures Regulation on over-the-counter products, central counterparties (CCPs, or clearing houses) and trade repositories; ECB-SSM: European Central Bank-Single Supervisory Mechanism; ESMA: European Securities and Markets Authority; ACPR, the French prudential supervisory authority; and AMF, the French financial markets authority. The Banque de France chairs the EMIR College.

Source: Banque de France.

Following the United Kingdom's withdrawal from the EU on 1 January 2021, the Bank of England also withdrew from LCH SA's EMIR College. Since 2021, it participates along with other third country authorities in LCH SA's Global College, set up by French authorities to promote information-sharing and effective cooperation, and to facilitate the consistent application of international standards.

In 2023, the Banque de France took part in the first meeting of the LCH SA Resolution College, set up under Regulation (EU) 2021/23 on the Recovery and Resolution of CCPs ("CCPRR"). This College is chaired by the ACPR, LCH SA's resolution authority, and comprises various national and European supervisory and resolution authorities. Its role is to structure dialogue on LCH SA's resolution strategy and to adopt the resolution plan drawn up for it by the ACPR.

2.2 Euroclear France and ESES France

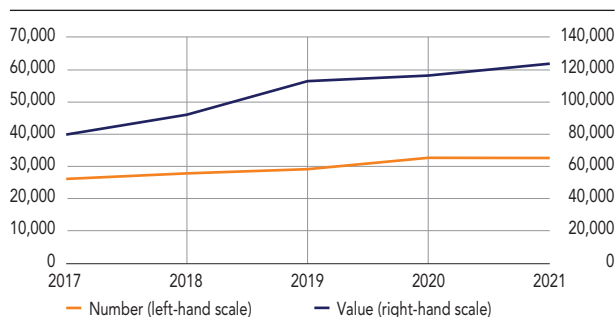
Euroclear France, a central securities depository (CSD), offers the three "core services"³⁸ defined by CSDR (see Section 1.4 above), as well as several "non-bank ancillary services".³⁹

Euroclear France is part of the Euroclear Group, which comprises seven CSDs across Europe. Within the group, Euroclear SA plays a key role for CSDs as both the parent company of the Group's CSDs and as a "support entity"⁴⁰ that provides CSDs with a number of services as part of an intra-group outsourcing arrangement. Euroclear SA therefore plays a decisive role in relation to Euroclear France.

Euroclear France operates the ESES⁴¹ France securities settlement system, which has been connected to the TARGET2-Securities⁴² platform (T2S) since September 2016. Nearly all securities transactions and trades are transited and processed via T2S, to which Euroclear France technically outsources the securities settlement service and of which it is a member. ESES France members have a contractual relationship with Euroclear France only, irrespective of whether they are technically directly connected or indirectly connected T2S parties.

Since 2010, Euroclear Nederland and Euroclear Belgium have outsourced operational management of their securities settlement and delivery business to Euroclear France. ESES France processes about 90% of the securities settled by the three ESES CSDs (Euroclear France, Euroclear Belgium and Euroclear Nederland). Based on the most recent ECSDA⁴³ data, about 11.8% of European securities held in custody are settled by Euroclear France. Securities in custody in 2021 were valued at EUR 8,722 billion (up 19% compared to 2019) and the value of settlement instructions in 2021 totalled EUR 123,481 billion (up 9.8% compared to 2019).

C4 Settlement instructions processed by ESES France
(number in thousands, value in EUR billions)



Source: BIS (BIS Data Portal) and Statistics on payment, clearing and settlement systems in the CPMI countries – Red Book.

Oversight framework

With the implementation of CSDR, the Banque de France is not only the oversight authority for ESES France's securities settlement system (pursuant to the powers conferred upon it by the French Monetary and Financial Code)⁴⁴, but is also the competent national authority for French central securities depositories; a responsibility it shares with the AMF.

The securities settlement systems (SSSs) and the three CSDs, Euroclear France, Euroclear Belgium and Euroclear Nederland, are jointly supervised at ESES level under a cooperation arrangement between the French, Belgian and Dutch authorities. This supervision is part of the broader framework established by the memorandum of agreement entered into in July 2011 between the authorities with jurisdiction over Euroclear SA (ESA)⁴⁵ entities, which defines the procedures for cooperation and exchange of information between the authorities with respect to oversight of settlement transactions. This cooperation mechanism was revised in 2021 in order to incorporate the new CSDR provisions, designed – especially in the case of ESES CSDs – to strengthen cooperation and coordination measures between competent authorities. In its role as supervisor of Belgium-based parent company and service provider Euroclear SA, the National Bank of Belgium has been designated to coordinate cooperation between authorities. However, each ESES competent national authority retains its powers with regard to its national CSD.

Application of the European Regulation, CSDR

Euroclear France, like the other two ESES CSDs, was authorised under CSDR in April 2019. Authorisation was granted by the AMF following consultation with the Banque de France.

In 2020, in accordance with CSDR provisions, Euroclear France underwent an initial annual review and evaluation procedure conducted by the competent authorities. This procedure has been repeated every year, as required by CSDR, but will take place every three years when CSDR Refit comes into force.

The ESES France securities settlement system is eligible for Eurosystem transactions and can therefore be used for monetary policy operations conducted by the Banque de France.⁴⁶

2.3 CORE(FR) and SEPA(EU)

CORE(FR) and SEPA(EU) are two retail payment systems operated by STET SA (*Systèmes technologiques d'échanges et de traitement*).

CORE(FR)

CORE(FR) allows its participants – French banks – to submit their domestic retail payment transactions as pooled remittances for settlement of net balances. CORE(FR) was designated as a systemically important payment system (SIPS) by the ECB Governing Council in August 2014, together with the pan-European systems TARGET2, EURO1 and STEP2-T. CORE(FR) met two of the four SIPS criteria for identifying systemically important payment systems: the daily value of payments processed by the system (over EUR 10 billion) – and its market share of the total volume of euro-denominated payments).⁴⁷ With the amendment of SIPS in 2021, these quantitative criteria were enhanced by a qualitative approach to designate a systemically important payment system, which introduces other criteria, namely its size, complexity, the nature and importance of participants, and substitutability and interdependencies with the financial system as a whole. Following the review of SIPS, the ECB Governing Council once again designated CORE(FR) as a SIPS in April 2022.

The Banque de France was appointed the competent authority for CORE(FR) and as such is currently the only Eurosystem national central bank with oversight authority over a systemically important national payment system. Within the cooperative framework established by SIPS, the Banque de France exchanges information with the ECB and the Eurosystem during the performance of its oversight function.

Historically, CORE(FR) has handled all cashless means of payment in France (cards, cheques, cash withdrawals, SEPA⁴⁸ credit transfers and direct debits) and processes

settlements on a daily basis in order to calculate the net balance of each participant. Multilateral net positions are settled on a daily basis, at approximately 3.00 p.m. in TARGET2-Banque de France.

Activity

In 2022, about 15.7 billion transactions, with a value of nearly EUR 6,562 billion, were cleared in CORE(FR), making it one of the leading retail payment systems in the euro area in terms of volumes processed, alongside STEP2-T, Mastercard and Visa Europe. In 2022, the number of transactions processed by CORE(FR) accounted for almost 12% of euro-denominated transactions in the EU. Between 2019 and 2022, transactions grew in volume by 2.16 billion (an increase of 16%) and in value by EUR 1,450 billion (an increase of 28%). Between January and August 2023, 11 billion transactions with a value of EUR 4,783 billion were cleared.

As a SIPS, CORE(FR) has set up a financial security mechanism due to the large number of transactions it processes each day, in the form of a Common Guarantee Fund (of EUR 1.3 billion), supplemented by individual guarantees to cover the highest net debit positions.

38 A “notary service” for the issuance of securities, a “central maintenance service for securities accounts”, and a “securities settlement service” via the operation of a securities settlement system.

39 Managing securities transactions (payment of coupons and dividends, etc.) or tripartite collateral management. Euroclear France is also the French numbering agency responsible for assigning ISIN codes to newly issued securities.

40 Article 36/26/1, paragraphs 4 and 5 of the Act of 22 February 1998 establishing the organic statute of the National Bank of Belgium.

41 Euroclear Settlement of Euronext-zone Securities.

42 TARGET, Trans-European automated real-time gross settlement express transfer system; in this case for securities.

43 European Central Securities Depositories Association: <https://ecsd.eu/>

44 *Code monétaire et financier*, Article L. 141-4(II): “Pursuant to the duties of the European System of Central Banks, [...] the Banque de France shall ensure the security of clearing houses [...] and of securities settlement systems for financial instruments.”

45 Countries in which Euroclear SA entities operate: Belgium, France, the Netherlands, the United Kingdom, Sweden and Finland.

46 After obtaining CSD authorisation under the new CSDR framework, the ESES France system was formally declared eligible for Eurosystem monetary policy operations in July 2020.

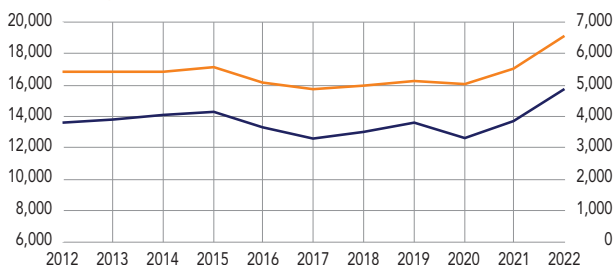
47 The four criteria are: the daily value of payments processed, market share, cross-border activity and services provided to other financial market infrastructures.

48 SEPA, Single Euro Payment Area.

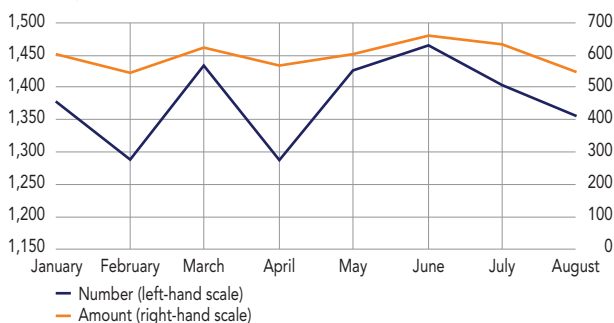
C5 Activity in CORE(FR)

(number of transactions in millions, value in EUR billions)

a) 2012-2022 period



b) First eight months of 2023



Sources: STET, Banque de France calculations.

Since late February 2013, STET has hosted the *Centre d'échange et de compensation* (CEC – Centre for Exchange and Clearing) on the CORE platform for the Belgian community. It acts as a critical service provider for the system, which is managed by CEC and overseen by the National Bank of Belgium. In December 2023, STET and CEC announced the renewal of their agreement through 2029.

Assessment

In 2016, the Banque de France produced a first assessment report on CORE(FR)'s compliance with SIPSr requirements. It was deemed broadly compliant and the implementation of the associated action plan was closely monitored by the Banque de France and reported to the Eurosystem. The closure of the action plan was ratified by the ECB Governing Council in September 2019 after STET had fully implemented all the recommendations issued.

Regulation (EU) 2017/2094 introduced certain amendments to SIPSr and in 2019, a gap assessment was conducted to determine if CORE(FR) was compliant with the new provisions. This included a review based on the cyber resilience oversight expectations (CROE) of December 2018⁴⁹ that were developed by the Eurosystem on the basis of CPMI-IOSCO Guidance on Cyber Resilience for Financial Market Infrastructures published in June 2016.

A comprehensive assessment, including compliance with the CROE framework, was repeated in 2020, covering the measures implemented by the operator in response to the gap assessment's recommendations made in 2019. These two exercises concluded that CORE(FR) was broadly compliant with the revised SIPSr.

A major change assessment was also conducted in 2022, when SEPA Direct Debits (SDD) were repatriated from SEPA(EU) – see below – to CORE(FR). This change was not found to have affected the compliance of the system.

SEPA(EU)

At the end of 2016, STET launched a second retail payment system, SEPA(EU). It initially processed the settlement of direct debits (SDD) and instant payments but now handles only instant payments (SEPA Instant Credit Transfers, SCT Inst). Although CORE(FR) and SEPA(EU) are legally two separate systems, they nevertheless have common features: they have the same operator, STET, and the same governance structure.

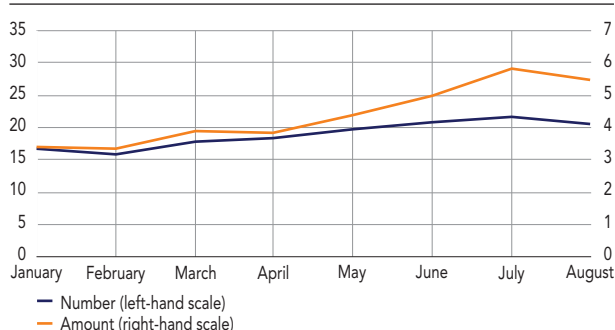
Given that SEPA(EU) annually settles, payment volumes on an annual basis that account for less than 25% of the market for national payments, it falls into the category of "Other Retail Payment Systems" (ORPS), according to the Eurosystem classification methodology.⁵⁰ This category of payment system is assessed on the basis of its compliance with the nine CPMI-IOSCO principles for financial market infrastructures (PFMI).⁵¹

Activity

In the first seven months of 2023, around 152 million transactions were settled in SEPA(EU) with a total value of EUR 73 billion, exceeding the 2022 figures (of 127 million transactions, worth EUR 65 billion). The number of monthly transactions processed in 2023 varied between 15.9 million and 21.7 million, for monthly approximate values of between EUR 7.9 billion and EUR 10.5 billion.

Since November 2017, STET launched an instant payment offer for the French and Belgian banking communities based on CSM Instant Payment.⁵² The offer for the French community is processed through the SEPA(EU) system. Instant Payment CSM is an instant credit transfer settlement service that complies with the "SCT Inst" scheme developed by the European Payments Council (EPC).⁵³ Its ceiling, which was initially set at EUR 15,000 at the interbank level in France and is reviewed annually by the EPC, was raised to EUR 100,000 in July 2020.

C6 Activity in SEPA in the European Union over the first eight months of 2023 (number of transactions in millions, value in EUR billions)



This offer was enhanced in February 2020 with a single window for instant payments (SWIP) solution that enables participants to manage their instant payments via a single access point, including when they use the interconnection offered by TIPS or RT1 (instant payment systems operated by the Eurosystem and EBA Clearing, respectively), thus making it possible to reach both pan-European systems.

Assessment

In response to the SEPA(EU) launch assessment carried out in July 2017, STET proposed remedial measures and implemented an action plan to address the oversight recommendations.

In February 2019, the Banque de France updated the SEPA(EU) assessment report in light of the PFMI requirements applicable to other retail payment systems (ORPS) in connection with the launch of the instant payment functionality. SEPA(EU) was deemed compliant with the nine principles applicable to it.

A minor change assessment was conducted in August 2020, following the launch of the SWIP functionality, and a major change assessment was conducted in 2022, when SEPA Direct Debits (SDD) were repatriated from SEPA(EU) to CORE(FR). Neither of these changes was found to have affected the compliance of the system.

2.4 Cooperative oversight

The Banque de France also contributes to the cooperative oversight of various market infrastructures and critical service providers established in other countries, or with a pan-European or international scope.

T2-RTGS

Since 2008, the TARGET2 real time gross settlement (RTGS) system, has been owned and operated by the Eurosystem. In 2023, the system included 24 national central banks (and the ECB) and their national user communities. The participating central banks are the 20 euro area central banks and the central banks of 4 other EU countries that are not members of the euro area (Bulgaria, Denmark, Poland and Romania).

Like the French CORE(FR) system, TARGET2 was identified as a systemically important payment system by decision of the Governing Council in August 2014 and is therefore subject to SIPS requirements. The ECB coordinates the oversight of TARGET2 with the cooperation of the national central banks that participate in the system.

TARGET2 was subject to a gap assessment *vis-à-vis* SIPS in 2020 and an operational resilience assessment⁵⁴ between 2020 and 2021, under the direction of the ECB and in conjunction with the central banks of the euro area that volunteered to contribute to the oversight. A comprehensive evaluation of TARGET2 (which became T2-RTGS in March 2023) is planned for 2024.

49 ECB (2018), *Cyber resilience oversight expectations for financial market infrastructures*, December.

50 ECB (2016), *Revised oversight framework for retail payment systems*, February.

51 The relevant nine principles are legal basis (principle 1), governance (principle 2), framework for the comprehensive management of risks (principle 3), settlement finality (principle 8), participant-default rules and procedures (principle 13), operational risk (principle 17), access and participation requirements (principle 18), efficiency and effectiveness (principle 21) and disclosure of rules, key procedures and market data (principle 23).

52 Clearing and settlement mechanism.

53 EPC SCT Inst is a pan-European scheme based on SEPA credit transfers. This set of rules and procedures is intended to prevent the fragmentation of the European retail payment market. The SCT Inst scheme requires transactions to be processed in less than 10 seconds, 24 hours a day, 7 days a week and 365 days a year.

54 This assessment was carried out in accordance with Article 15.4(a) of the SIPS Regulation.

On 20 March 2023, the TARGET2 system became the consolidated TARGET Services platform's RTGS service. The consolidation of TARGET2 RTGS and the TARGET2-Securities (T2S) settlement platform is intended to streamline operating costs while boosting efficiency thanks to leading-edge technologies (such as the ISO 20022 payment standard) and improving liquidity management through a centralised liquidity management mechanism between all TARGET Services components (T2, T2S, TIPS [TARGET Instant Payment Settlement] and the future ECMS system).⁵⁵

To encourage pan-European development of instant transfers, in November 2018 the Eurosystem launched an instant payment settlement solution, with the creation of TIPS as a new service within TARGET2. TIPS directly processes instant payments between two of its participants, using a real-time payment procedure.

As a TARGET2 service, TIPS is continually monitored by the Eurosystem. The forthcoming inclusion of new non-euro currencies in TIPS has led to an expansion of its oversight arrangements and the creation of the TIPS Currencies Oversight Group. In addition to the Eurosystem, this group will include the central banks of issue of the currencies that are traded in TIPS, primarily the Swedish krona.

TARGET2-Securities (T2S)

Although T2S does not meet the definition of a securities settlement "system" within the meaning of the Directive on settlement finality and securities settlements systems and therefore is not supervised as such, the Eurosystem nevertheless adopts an oversight procedure similar to that applied to securities settlement systems because as a pan-European securities settlement platform it is systemically important. Oversight is primarily the responsibility of the ECB, with the active participation of 25 national central banks, some of which do not belong to the euro area (the central banks of Sweden, Denmark, Hungary, Romania and Bulgaria), which validate its approach and conclusions. In 2022, T2S settled 181 million transactions, for a total value of EUR 184.19 trillion (compared with EUR 282.064 trillion in 2019).

Moreover, T2S is overseen jointly by the central banks and financial market authorities of the various jurisdictions in which at least one CSD has technically contracted to outsource its settlement and delivery service to T2S. This cooperative group oversight body is co-chaired by the ECB and ESMA.

On 11 September 2023, five CSDs – Euroclear Finland (FI), Euroclear Bank (BE), SKDD (HR), CDAD (BG) and BNBGSSS (BG) – joined the T2S platform, bringing the number of participating CSDs to 24.

In addition to ESMA and the ECB, the T2S Cooperative arrangement now comprises 24 central banks and 24 national market authorities from the European Union and the European Economic Area.

EURO1 and STEP2-T

The Banque de France, under the aegis of the ECB and as the competent authority, participates in the cooperative oversight of the pan-European payment systems operated by EBA Clearing: EURO1 (high-value payment system), STEP2-T (retail payment system for processing SCT credit transfers and SDD direct debits), and RT1 (retail payment system for processing SCT Inst instant credit transfers).

The Banque de France has contributed to various ECB assessments, in particular with respect to EURO1 and STEP2-T's compliance with the Regulation on oversight requirements for systemically important payment systems (SIPSR, *see Section 1.3 above*) and cyber resilience expectations (*see Section 1.5*), as well as the oversight of action plans, including the action plan developed in connection with the evaluation of RT1, EBA Clearing's pan-European instant payment system.

SWIFT

SWIFT (Society for Worldwide Interbank Financial Telecommunication) is the leading global provider of standardised interbank transfer messaging services, particularly in the areas of payments and securities. Due to its international dimension and its key role in financial exchanges, which involve nearly all players in the global financial sector, SWIFT is subject to cooperative supervision governed by an agreement between the Group of Ten (G10) central banks. The National Bank of Belgium, as lead overseer, coordinates, while the Banque de France plays an active role.

In 2016, SWIFT launched the Customer Security Programme (SWIFT CSP). It has helped to improve the cyber resilience of infrastructures connected to SWIFT and of financial entities that use its services through requirements focusing especially on cyber security governance, prevention, detection and incident response. The CSP also includes a solution for exchanging information on shifting threats and attack techniques, as well as a response mechanism that can be mobilised in the event of an incident.

Oversight work for the 2021-23 period focused in particular on the gradual strengthening of the security requirements of the CSP's security requirements, the measures implemented by SWIFT to ensure its customers' compliance with those requirements, the ISO 20022⁵⁶ migration programme, and the measures taken to ensure the continuity and operational security of transactions during the crisis prompted by the war in Ukraine.

CLS

The Continuous Link Settlement (CLS) system provides payment versus payment (PvP) instructions for spot transactions in the foreign exchange market, certain listed currency derivatives and currency swaps. Each system participant holds a multi-currency account with CLS Bank International – a US banking entity with Edge corporation⁵⁷ status, supervised by the FRBNY⁵⁸ – with positions in each currency settled by the system. CLS Bank International holds accounts with the various central banks of issue of the relevant currencies. The CLS system began its settlement business in September 2002, and managed 18 eligible currencies, including the euro, at the end of 2023.

Due to its international scope, involving numerous currencies, the CLS system is subject to cooperative oversight under an agreement (the "Protocol") between the G10 central banks and the central banks whose currencies are processed by CLS. The US Federal Reserve acts as lead overseer. The aim of this cooperative arrangement is to enable the central banks concerned to participate in the oversight of the system to ensure its security and efficiency. Under this framework, the central banks check that the CLS system complies with the standards applicable to payment systems and market infrastructures, and review any changes the operator proposes in order to assess potential impacts on the system's operating rules and conditions, particularly on its risk profile. The Oversight Committee, under the aegis of the FRBNY and with the participation of the signatory central banks, including the Banque de France, ensures this cooperation.

CCPs established in other EU countries or in third countries

In accordance with the EMIR regulation, the Banque de France is a member of the supervisory colleges of several European CCPs. Over the 2021-23 period, it participated in the college meetings of the Italian CCP, Euronext Clearing (with which the French CCP has an interoperability arrangement), the German CCP, Eurex Clearing AG, and the Dutch CCP, CBOE Clear. Outside Europe, the Banque de France, along with the ACPR and the AMF, also participated

in the crisis management group (CMG) of the US CCP, Chicago Mercantile Exchange (CME), and in the Global College of the UK CCP, LCH Ltd.

EMIR 2.2 also established a Supervisory Committee within ESMA, comprising all the national competent authorities and the European central banks of issue, and tasked with improving convergence in supervisory practices. In particular, the committee reviews all significant changes to risk models and extensions of CCPs' activity, coordinates regular CCP stress testing exercises, and ensures the exchange of information during crisis events and discussion on relevant developments of CCPs subject to EMIR (including non-European CCPs deemed critical for the EU). This Committee, in which the Banque de France participates along with the ACPR and the AMF, submits its opinions to ESMA Board of Supervisors for final approval.

55 ECMS (Eurosystème collateral management system) will enable collateral eligible for monetary policy operations to be managed in a harmonised way across the euro area. The system is due to be launched at the end of 2024.

56 ISO 20022 is an ISO standard governing electronic data interchange between financial institutions that is mainly used in the areas of payments and securities.

57 Financial institution authorised under US law to conduct international business.

58 Federal Reserve Bank of New York.

GLOSSARY

BCBS	Basel Committee on Banking Supervision
CCP	Central counterparty, also known as a clearing house
CCP RRR	Central Counterparties Recovery and Resolution Regulation
CDS	Credit default swap
CFONB	<i>Comité français d'organisation et de normalisation bancaires</i> (French Banking Organisation and Standardisation Committee)
CLS	Continuous linked Settlement – US foreign exchange settlement system
CORE(FR)	<i>Compensation retail</i> (French private retail payment system)
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems (now the CPMI)
CRD	Capital Requirement Directive
CRR	Capital Requirement Regulation
CSD	Central securities depository
CSDR	Central Securities Depositories Regulation – European regulation on improving securities settlement in the European Union and on central securities depositories
CSM	Clearing and settlement mechanism
DLT	Distributed ledger technology
EBA	European Banking Authority
ECMS	Eurosystem collateral management system
ECSDA	European Central Securities Depositories Association
EMIR	European Market Infrastructure Regulation – European regulation on over-the-counter derivatives, central counterparties and trade repositories
EPC	European Payments Council

ESCB-CESR	European System of Central Banks and Committee of European Securities Regulators
ESES	Euroclear settlement of Euronext-zone securities – a securities settlement and delivery platform shared by three central securities depositories: Euroclear France, Euroclear Belgium and Euroclear Nederland
ESMA	European Securities and Markets Authority
EURO1	A high-value private payment system
FCM	Futures commission merchant
FSB	Financial Stability Board
IFD	Investment Firms Directive
IOSCO	International Organization of Securities Commissions
IRD	Interest rate derivative
IRS	Interest rate swap (derivative)
ITS	Implementing technical standard
LSI	Less significant institution
LCH	Historically, London Clearing House – a central counterparty
ORPS	Other retail payment system
PFMI	Principles for Financial Market Infrastructures
RT1	A real-time private retail payment system
RTGS	Real-time gross settlement system (RTGS), owned and managed by the Eurosystem (T2, which succeeded TARGET2 in March 2023)
RTS	Regulatory technical standard
SEPA(EU)	Single Euro Payment Area, an (instant) private retail payment system
SIPS	Systemically important payment system
SSM	Single Supervisory Mechanism
SSS	Securities settlement system
STEP2-T	An (instant) private retail payment system
STIR	Short term interest rate (derivative)
SWIFT	Society for Worldwide Interbank Financial Telecommunication, the world's leading provider of standardised messaging services for interbank transfers
UCITS	Undertakings for Collective Investment in Transferable Securities

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Head of Publication

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Contact

Innovation and Financial Market
Infrastructure Directorate
Payment Systems and Market Infrastructures
Oversight Division
Internal postcode: S2B-1074
31 rue Croix-des-Petits-Champs
75049 Paris Cedex 01

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