Bank of England

The Bank of England's supervision of financial market infrastructures Annual Report

16 December 2023–17 December 2024

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Presented to Parliament pursuant to Section 203B of the Banking Act 2009; paragraph 33 of Schedule 17A to the Financial Services and Markets Act 2000 (FSMA); Regulation 25 of the Central Counterparties (Amendment, etc., and Transitional Provision) (EU Exit) Regulations 2018; and paragraph 32(2)(a) of Schedule 7 of the European Union (Withdrawal) Act 2018.

18 December 2024

1. Please note, references to '2023/24' in this Report should be taken as referring to this reporting period.

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Foreword

Sarah Breeden
Deputy Governor, Financial Stability

Financial market infrastructure firms (FMIs) are a key part of the financial system and the public rely everyday upon their smooth and safe operation, in normal times and in stress. The Bank supervises three categories of FMIs: central counterparties (CCPs), central securities depositories (CSDs) and recognised payment system operators (RPSOs). CCPs simplify and risk-manage complex networks of counterparty exposures in financial markets, CSDs ensure the safe transfer of securities after trading, and RPSOs enable funds to be transferred daily between businesses and individuals. As an international financial centre, UK FMIs support the safe operation of financial markets globally.

FMIs are therefore critical to financial stability. This critical role means that their operational and financial resilience is essential. As such, our supervision of FMIs is aimed at ensuring that they are prepared for, and resilient to, the wide range of risks that they could face. We re-issued our statement of how and why we supervise to help the firms we regulate understand our expectations of them.

Over the past year, the Bank's supervision of FMIs has continued to contribute to its statutory objective to protect and enhance UK financial stability. Market volatility and events such as the CrowdStrike incident have underlined the importance of resilient FMIs that support financial stability both in the UK and abroad. UK CCPs were judged to have adequate financial resilience against the scenarios tested in the third CCP Supervisory Stress Test published in November. The policy and rules for critical third parties which were published on 12 November 2024 will further strengthen the operational resilience of UK FMIs.

This year has seen a significant milestone for the Bank following the new rule-making powers for CCPs and CSDs granted by the Financial Services and Markets Act 2023 (FSMA 2023). This is our first Annual Report on our use of those powers. We have established robust safeguards – including a new statutory FMI Committee and engagement with the Cost Benefit Analysis Panel – to ensure that we apply our powers across all FMIs in a transparent and accountable manner. Our aim is to ensure that FMI regulation remains consistent with international standards, evolves as necessary and supports our supervisory approach. Our consultation on Fundamental Rules for all FMIs is a key first step towards that and makes clear our core expectations of FMIs and their Boards.

FSMA 2023 introduced a new secondary objective for the Bank to facilitate innovation in the provision of CCP and CSD services. We have been actively embedding the objective, building on existing work, through our policy development and external engagement. The successful launch of the Digital Securities Sandbox (DSS) with the Financial Conduct Authority (FCA) and our work on a regulatory regime for systemic payment systems using stablecoins are examples of how the Bank can facilitate safe innovation.

In recognition of the international importance of the services that UK FMIs provide, FSMA 2023 requires that the Bank, in exercising its FMI functions, has regard to financial stability in countries where UK FMIs provide services. This new statutory requirement builds on the Bank's long-standing commitment to working with other international regulators on policy and supervision. Domestically, we continue to work closely with the FCA and the Payment Systems Regulator (PSR) to facilitate effective supervision and policymaking.

Looking ahead, our aim is to ensure that FMIs proactively consider how their actions impact the broader financial system and so financial stability. This is particularly important as FMIs continue to grow in systemic importance and as the heightened risk of operational incidents, including from cyber-related threats, persists.

This Report sets out how the Bank has continued to deliver effective supervision of UK FMIs in line with our statutory objectives. Such rigorous, risk-based and forward-looking FMI supervision is critical to ensuring financial stability and supporting economic growth, now and in the future.

Sarah Breeden
18th December 2024

1: Why does the Bank supervise financial market infrastructure firms?

Financial market infrastructure firms (FMIs) are a key part of the financial system and the public relies upon the functions that they perform.

The Bank supervises three broad categories of FMIs: central counterparties (CCPs), central securities depositories (CSDs) and recognised payment system operators (RPSOs).[2] These firms all provide different services to support the financial system: CCPs act as central counterparty for financial market transactions, CSDs ensure the transfer of securities and payments after trading and RPSOs enable funds to be transferred between businesses and individuals daily. In the UK, CCPs clear trillions of pounds worth of notional outstanding of financial contracts, CSDs settle around £800 billion of securities transactions per day, and RPSOs and their service providers facilitate payments of over £400 billion daily.[3]

FMIs are key to maintaining financial stability because of the way in which they are interconnected with the wider financial system and it is crucial that they are resilient.

FMI members and participants include financial institutions and businesses and consequently FMIs are significantly interconnected with the wider financial system both within the UK and internationally. FMIs contribute to financial stability by making financial transactions more efficient and secure and by simplifying complex networks of counterparty exposures. They play a central role in the financial system which means that maintaining their operational and financial resilience is essential for maintaining financial stability. They provide critical services that allow individuals, businesses and financial institutions to transact with each other. Disruptions to these systems can have consequences that affect the entire financial system. As such, the Bank's supervision of FMIs is aimed at ensuring that FMIs are prepared for, and resilient to, the wide range of risks that they could face, so that they are able to absorb rather than amplify shocks and serve UK households and businesses, thus supporting stability and growth in the UK economy.

2. The Bank also supervises certain service providers to recognised payment systems that are 'specified' by His Majesty's Treasury (HMT), for example where the RPSO has outsourced critical parts of its operations to the service provider and the ability of the recognised payment system to deliver its responsibilities depends on the functioning of the service provider. This is separate to, and distinct from, the Bank, Prudential Regulation Authority and Financial Conduct Authority's responsibility for supervising certain critical third parties which does not fall within the remit of this document. The Bank's FMI supervisory area continues to supervise CHAPS (a non-recognised payment system) to the same standard as other recognised payment systems. CHAPS was formally de-recognised by HMT in December 2017, when responsibility for managing the system was transferred to the Bank.
3. The £400 billion figure for RPSOs comprises average daily figures for CHAPS, Bacs, Faster Payment, Link, Mastercard Europe and Visa Europe. Note that CHAPS is not a RPSO but is supervised to equivalent standards by the Bank.

The Bank supervises FMIs as part of its primary objective to protect and enhance financial stability.

The Bank has a primary objective to protect and enhance the stability of the financial system of the UK. To help achieve this objective, the Bank has legal powers to supervise FMIs, including with respect to their safety and resilience to risks, both financial and operational, which could lead to financial instability. The Bank's approach has an international as well as a domestic focus, recognising the importance of some Bank-regulated FMIs in other jurisdictions, and that disruptions to their services may impact monetary and financial stability in the UK and abroad.

FSMA 2023 introduced a new secondary objective for the Bank, so that in exercising its FMI functions in a way that advances its financial stability objective, the Bank must, so far as reasonably possible, facilitate innovation in the provision of CCP and CSD services with a view to improving the quality, efficiency and economy of the services.

The Bank has been actively embedding the secondary innovation objective (SIO), building on its existing work through engagement with a range of external and internal experts in innovation, and the development of our policy as well as internal training (see Box A). The Bank expects and encourages all FMIs to innovate and believes that innovation can actively support FMIs' resilience and financial stability more broadly.

The Bank's objectives for its supervision aim to ensure that the FMIs it regulates reduce systemic risk.

Reflecting its statutory objectives the Bank helps to ensure that the FMIs it regulates reduce systemic risk by focusing on the following aims:

- Avoiding disruption to the vital payment, settlement, and clearing services they provide to the financial system and real economy.
- Avoiding actions that have an adverse impact on the safety and soundness of their members, subject to preserving the resilience of the FMI.
- Contributing to identifying and mitigating risks in the end-to-end process of making payments, clearing and settling securities transactions, and clearing derivatives trades. The Bank considers this to be the FMI's ecosystem and expects FMIs to seek to manage their ecosystems in line with the Bank's financial stability objectives.

To deliver against these objectives the Financial Market Infrastructure Committee (FMIC) has established the following business aims, each with a number of outcomes:

Financial resilience: ensure financial stability through financially resilient FMIs:

- FMIs maintain appropriate financial resources to maintain financial stability considering quality, quantum, procyclicality and transparency.
- FMIs can recover from stress and be resolved if necessary.
- High standards of governance and risk management are maintained across the FMIs the Bank supervises as a key foundation to ensuring FMIs' financial resilience.
- FMIs and the Bank can effectively monitor and assess market stresses and understand the impact of disruption on financial stability.

Operational resilience: ensure FMI services are operationally resilient and not a major financial stability risk in the event of disruption:

- FMIs deliver the required outcomes of the Operational resilience and Outsourcing and third-party risk management policies.
- FMIs' change programmes increase resilience and are safely executed.
- The impact of operational incidents at FMIs are understood and can be managed effectively to minimise the impact on financial stability.
- High standards of governance and risk management are maintained across the FMIs the Bank supervises as a key foundation to ensuring FMIs' operational resilience.

Innovation: enable safe and resilient innovation in payments, settlements and clearing:

- New and emerging risks from innovation relating to FMIs operating in the UK are identified and understood.
- Innovation at new and existing UK FMIs is facilitated, in the context of maintaining financial stability.

New responsibilities: implement and embed our new responsibilities in a proportionate and robust way (as detailed in Box B):

- Transparency and understanding of how and why we supervise FMIs is enhanced and delivery is risk-based and proportionate.
- We have a suitable, accountable and proportionate regulatory framework across FMI types, and the Bank and the FMIs we regulate take account of the impact disruption may have on financial stability.
- Risks from cross-border FMIs are monitored and managed where appropriate.

Our aim is for an FMI sector that recognises the critical role it plays in the financial system. This means that FMIs are self-aware as to how their actions impact the broader financial system and are able to manage the financial and operational shocks that are likely to occur in a way that does not impact the vital services they provide to households and businesses. This is particularly important as FMIs are likely to continue to grow in systemic importance and shocks, including from cyber-related threats, are likely to remain frequent.

We will ensure the Bank keeps pace with a changing world by being equipped and ready to identify and manage these challenges. Our new statutory powers will enable us to respond more quickly to ensure we have the right rules and supervisory tools to address emerging risks. We will continue to develop our use of data and technology to enhance our analytical capabilities. These enhancements will ensure that the Bank is well placed to manage the impact of an FMI failing to manage a financial or operational shock so that we can mitigate the impact that this would have on financial stability.

Table A: The UK FMIs and specified service providers supervised by the Bank and a non-exhaustive selection of the functions that they perform

Central counterparties	Central securities depositories	Payment systems	Specified service providers
ICE Clear Europe Ltd (exchange-traded derivatives)	Euroclear UK & International (EUI) (securities transactions)	Bacs (paying bills, receiving benefits/ pensions/salaries)	Vocalink (technology service provider to Bacs, FPS and LINK payment systems)
LCH Ltd (repos, foreign exchange (FX), exchange traded and over-the-counter (OTC) derivatives and securities)		CHAPS[a] (high-value sterling payments, cross-border sterling payments, house purchases)	
LME Clear Ltd (listed metals contracts)		Faster Payment System (FPS) (internet, mobile and telephone banking payments)	
		LINK (withdrawing cash)	
		Sterling Fnality Payment System (high-value sterling payments)	
		Visa Europe (paying for goods and services)	

(a) The Bank's FMI Directorate continues to supervise CHAPS (a non-recognised payment system) to the same standard as recognised payment systems. CHAPS was formally derecognised by His Majesty's Treasury in December 2017, when responsibility for managing the system was transferred to the Bank.

Table B: The incoming non-UK FMIs recognised by the Bank and a non-exhaustive selection of the functions that they perform

Central counterparties	Central securities depositories	Payment systems
CBOE Clear Europe N.V. (OTC and exchange-traded equities, equity derivatives and securities financing transactions)	Euroclear Bank SA/NV (securities transactions)	CLS (high-value FX transactions)
Chicago Mercantile Exchange Inc. (exchange-traded futures and options including on interest rates, equity indexes, FX, energy, metals, agricultural, and commodities products)		Mastercard Europe (paying for goods/services)
Clearing Corporation of India (OTC debt/equity securities, derivatives and repos)		
Eurex Clearing AG (OTC and exchange traded securities and derivatives including equities, debt, interest rate, FX, and OTC repo transactions)		
LCH SA (OTC and listed repo, credit default swaps and crypto-derivatives)		

Box A: Secondary innovation objective

This year FSMA 2023 introduced new powers and responsibilities for the Bank as FMI regulator. As part of these, when making rules for CCPs and CSDs in a way that advances the financial stability objective the Bank is now required to consider a new secondary objective to, so far as reasonably possible, facilitate innovation in the provision of CCP and CSD services with a view to improving the quality, efficiency and economy of the services.

We expect and encourage all FMIs to innovate and believe that innovation can actively support financial stability. The Bank considers that innovation can be wholesale or incremental improvements to a technology, process or organisational change, with the critical point being the outcome or goal that it is trying to achieve.

An FMI sector that does not innovate may lead to innovation taking place outside the regulatory perimeter. Our role is to facilitate safe innovation to support its beneficial application and apply a proportionate regulatory regime to FMIs that is outcome-focused and technology-neutral, so that our financial stability objective is able to be achieved in different ways if needed. Innovation is not new to the Bank' regulation of FMIs. For example, the recent launch of the DSS and work to design the regime for systemic payment systems using stablecoins.

How we have implemented the secondary innovation objective in 2024

The Bank has been actively embedding the SIO, through engagement with a range of external and internal experts in innovation, internal training, the development and publication of policy and starting to build a framework to assess the impact of policy on innovation. Highlights have included:

- **Hosting an in-person workshop,**[4] **in which we gained valuable insights from experts on the relationship between innovation, regulation and financial stability.** We will continue targeted engagement with stakeholders and innovators across industry, academia and other regulators to help inform our work on the SIO and provide opportunities for dialogue with those closest to emerging innovations in FMI services.

4. Workshop on the secondary innovation objective.

- **Rolling out SIO specific development and training of policy leads.** As we develop our approach to the SIO, we will build on and catalyse our existing work, as well as work on innovation across the Bank, to drive a broader cultural shift to allow us to establish a regulatory framework that facilitates innovation.

- **Starting work to consider how best to measure the impact of our policies on innovation at FMIs.** Though it will take time to understand how our policies feed through, we are engaging with key stakeholders, including a plan to use structured feedback through surveys to understand how our policies can best facilitate innovation, while supporting our primary objective to enhance financial stability.

2: How does the Bank approach the supervision of FMIs?

This has been a year of change for how the Bank supervises FMIs following the new powers introduced by FSMA 2023.

The legal framework surrounding the Bank's supervision of CCPs and CSDs changed through the introduction of the FSMA 2023 'framework' that came into effect at the start of 2024, as detailed further in Box B and elsewhere in this report. A key change FSMA 2023 introduced was the ability for the Bank to set rules for CCPs and CSDs.

Reflecting these new powers there has been a clear focus on meeting our statutory requirements for transparency and accountability to explain how we are using these new powers and Box B explains how we have delivered that accountability this year. The framework for payment system supervision remains the Banking Act but where appropriate we have applied similar learnings to our approach to the payments sector.

The exercise of powers in relation to FMIs is undertaken by the FMIC.

FMIC was established on 1 January 2024 replacing the existing non-statutory Financial Market Infrastructure Board. The move to a statutory committee reflected the additional responsibilities being granted to the Bank and to support the Bank in exercising these new powers in a transparent and accountable manner.

FMIC plays a vital role in overseeing the Bank's FMI policy and supervision and, through this, helps support the Bank's statutory objective to protect and enhance UK financial stability.

In addition to senior executives from across the Bank, including the Executive Director for Financial Market Infrastructure, FMIC includes at least three independent members, to provide challenge, appointed by Court. The independent members in 2024 are Julia Black (who was also on the Prudential Regulation Committee until November 2024), Martin Pluves, and Randall Kroszner (who is also on the Financial Policy Committee).

Decision-making authority is vested with the Committee itself (rather than any individual) and Committee decisions are reached by consensus where possible (or otherwise by majority vote).

FMIC has published its terms of reference and shared details of its membership.[5]

5. **Financial Market Infrastructure Committee terms of reference**.

The design and implementation of FMI policy and supervision is undertaken by the Financial Market Infrastructure Directorate (FMID).

The Bank is organised in a set of Deputy Governorships tasked with different responsibilities. FMID sits under Sarah Breeden, the Deputy Governor for Financial Stability.

FMID is led by Sasha Mills (Executive Director) and Simon Morley (Director). The directorate works with colleagues across the Bank drawing on expertise in risk management; PRA policy and supervision; markets intelligence; banking operations; and resolution.

Financial Market Infrastructure Committee

Members as at 17 December 2024

Andrew Bailey
Governor

David Bailey
Executive Director, Prudential Policy

Julia Black
External member
Term: 1 January 2024 – 31 December 2026

Sarah Breeden
Deputy Governor, Financial Stability

Randall Kroszner
External Member
Term: 1 January 2024 – 31 December 2026

Sasha Mills
Executive Director, Financial Market Infrastructure

Martin Pluves
External Member
Term: 1 January 2024 – 31 December 2026

David Rule
PRA Senior Advisor

Victoria Saporta
Executive Director, Markets

To provide firms and external stakeholders with a clear understanding of our approach and expectations the Bank has issued a series of documents.

The Bank published 'The Bank of England's approach to financial market infrastructure supervision' on 19 November 2024.[6] The published supervisory approach serves two purposes. First, it enables regulated FMIs, firms considering undertaking regulated activity, the wider financial system and relevant stakeholders in other countries to understand the Bank's supervisory approach. Second, it aids the Bank's accountability to the public and Parliament by describing what the Bank seeks to achieve and how it intends to achieve it. The supervisory approach document sits alongside the Bank's requirements and expectations as published in the Bank's policy publications as well as the rules, standards and codes of practice that FMIs are subject to.

The document acts as a standing reference, which the Bank intends to update as necessary to ensure it remains current. It may be revised and reissued in response to significant legislative and other developments that result in changes to our supervisory approach.

The Bank has also updated its approach to enforcement across all its regulatory responsibilities. In 2023, the Bank consulted on its approach to enforcement policies to provide greater clarity on the scope of its powers and processes. The changes were designed to provide greater clarity for ease of use and introduce options for speedier investigatory outcomes, including through the creation of a new route for early co-operation for subjects of an investigation and enhanced settlement discount of up to 50% for early admissions.[7]

The Bank has also reissued its fee policy for FMIs that explains how it uses its powers to fund its work.[8]

The Bank co-operates closely with other domestic regulators in supervision and policymaking.

The Bank co-operates with the FCA and the Payment Systems Regulator (PSR) regarding market infrastructure and payment systems respectively. This facilitates effective supervision and policymaking by ensuring that information is shared appropriately and promotes efficiency by minimising duplication. The Bank also works closely with His Majesty's Treasury (HMT) on shaping the UK's financial stability policy agenda.

6. **The Bank of England's approach to financial market infrastructure supervision**.
7. **The Bank's approach to enforcement: statutory statements of policy and procedure** was issued in January 2024 and then a further consultation issued in March on changes to the procedures to reflect FSMA 2023. That consultation closed and the final policy was issued in November.
8. **The Bank of England's fees regime for UK financial market infrastructures**.

The frameworks for co-operation with the FCA and PSR are set out in Memoranda of Understanding (MoUs) which are reviewed annually with the findings published.[9] The Bank and FCA have also agreed a new targeted framework for co-operation in relation to DSS entities. The DSS is jointly run by the Bank and FCA and requires close collaboration between the two authorities as the regulators for FMIs and trading venues respectively.

The Bank and FCA are currently revising the FMI MoU to reflect new statutory powers and this is expected to be published later this year. The authorities have also committed to revise the payment system MoU to reflect the National Payments Vision.

International co-operation is a fundamental component of the Bank's supervisory approach.

Some FMIs that provide critical services in the UK and globally are based in the UK, similarly some FMIs also provide services from outside into the UK. The Bank recognises the importance of taking a consistent and international approach to supervising FMIs, both where the Bank of England is the 'home authority' for FMIs systemically important in other jurisdictions and as a 'host authority' for non-UK FMIs providing critical services in the UK. In both cases, the Bank seeks close co-operation with domestic and international regulators and aims to rely on the supervision of a home authority where possible for non-UK FMIs.

To ensure that appropriate arrangements are in place for cross-border supervisory co-ordination, the Bank has supervisory colleges for each of our UK CCPs and for Visa and the colleges met in person over the course of the year. The Bank actively participates in international oversight forums for other systemically important FMIs.

The Bank's approach to supervising non-UK FMIs is underpinned by a desire to co-operate with the non-UK FMI's home regulator and the concept of deference, where the Bank will defer to the respective home supervisory authorities wherever it is appropriate to do so. This is aligned with the Bank's preference for strong and effective cross-border supervisory co-operation, avoiding 'too many hands on the steering wheel'. The Bank follows the same general approach to all non-UK FMIs, although this approach is implemented via different frameworks because of the different regulatory regimes in place for different FMIs. In order to place reliance on a home regulator, the FMI's home jurisdiction regulatory and supervisory framework must deliver broadly similar outcomes to that of the UK, and the Bank must be satisfied that there are sufficient co-operation arrangements in place and engagement to rely on the home authority.

9. **Payments systems Memorandum of Understanding**; **Bank of England and Financial Conduct Authority – Memorandum of Understanding on the supervision of Financial Market Infrastructures**; and **Memorandum of Understanding between the Financial Conduct Authority and the Bank of England (including the Prudential Regulation Authority)**.

The level of co-operation and information sharing the Bank expects from the home authority will depend on our assessment of the systemic importance of the non-UK FMI to UK financial stability. Where the Bank concludes that the co-operation and information sharing arrangements are sufficient for the Bank to defer to the firm's home authority, the Bank advances its objectives primarily through engagement with the home authority. This may include structured and regular engagement with the home authority to exchange views and information, and participation in multilateral fora or reviews led by the home authority to gain comfort on how supervision is delivered.

The Bank's FMI supervisory and policy teams also contribute to international FMI-related committees and working groups, such as those hosted by the G20, Financial Stability Board (FSB), and the Bank for International Settlements (BIS), including the Committee on Payments and Market Infrastructures (CPMI).

Box B: Our application of the FSMA 2023 framework

Alongside the power for the Bank to make rules in respect of CCPs and CSDs, FSMA 2023 introduced a number of new obligations and accountabilities for the Bank in its role as the UK's regulator for CCPs and CSDs which the Bank has been embedding since they were commenced on 1 January 2024. These include:

A new FMI Committee

In line with the additional responsibilities being granted to the Bank, and to support the Bank in exercising these powers in a transparent and accountable manner, FSMA 2023 established the Financial Market Infrastructure Committee (FMIC). This replaced the existing non-statutory Financial Market Infrastructure Board. More information on the FMIC and its members is set out in Section 2.

A clear objective and new secondary innovation objective

The framework introduced by FSMA 2023 maintains that the Bank's primary objective for its CCP and CSD functions is to protect and enhance the stability of the financial system of the United Kingdom. When advancing its financial stability objective, the Bank must, where appropriate, also act in a way which facilitates innovation in the provision of FMI services with a view to improving the quality, efficiency and economy of those services. Section 1 provides more information on how we're approaching these objectives and below we explain the have regards to consider international effects.

Requirement to carry out cost benefit analysis (CBA), publish a framework for conducting CBA, and establish an independent CBA Panel

FSMA 2023 introduced a requirement to carry out CBA when exercising the new rule-making power, to publish our approach to conducting CBA, and established an independent CBA Panel. The CBA Panel was established in July 2024 by the Prudential Regulation Authority (PRA) in accordance with section 138JA of FSMA. Since 1 August 2024, the PRA and the Bank have been required to consult the CBA Panel on all relevant CBAs.

The panel is composed of external experts to provide advice in relation to CBA both to the Bank in its responsibilities in respect of supervising FMIs and to the PRA.[10]

10. **PRA Cost Benefit Analysis Panel – Terms of Reference**.

Conducting CBA enhances transparency and scrutiny of the Bank's policymaking and provides a structured way to communicate the type and scale of the costs and the benefits its policies are expected to generate.

The Bank, as FMI regulator, published its statement of policy (SoP) on its approach to conducting CBA in December 2024. The SoP explains why and how the Bank does CBA for FMIs, how we use CBA in our policymaking process, and how we communicate CBA. The SoP also covers our arrangements for considering feedback from the CBA Panel in relation to how we are performing generally in meeting our statutory CBA obligations. The Bank consulted the CBA Panel on its approach and developed its approach to conducting CBA in conjunction with the PRA, which also published its SoP on conducting CBA in December 2024.

Since its formation, the Bank has consulted the CBA Panel this year on:

- the Bank's SoP on its approach to cost benefit analysis;
- the CBA in relation to the proposed Fundamental Rules for FMIs; and
- the CBA in relation to the proposed Operational incident and outsourcing and third-party reporting requirements for FMIs.

The Bank has welcomed the CBA Panel's advice, both on its SoP on its approach to CBA and on specific policy CBAs. The Bank has incorporated Panel comments on policy CBAs, for instance on the consultation paper on Fundamental Rules for FMIs, the Bank incorporated Panel comments on highlighting more strongly a significant benefit of fundamental rules in preventing regulatory underlap, and further clarity on the costs associated with the proposals.

Both rule-making for FMIs and conducting CBA on these rules is new for the Bank, hence the methodology for conducting CBAs will evolve as we build our expertise. As part of this, the Bank welcomes the CBA Panel's expertise and looks forward to continuing engagement.

Matters for the Bank to have regard to in its role as the UK regulator of CCPs and CSDs

FSMA 2023 introduced the requirement that when exercising its FMI functions (as defined in statute) in a way that advances the financial stability objective (and subject to that), the Bank must have regard to: (1) specified regulatory principles; (2) the effect generally that the Bank's regulation will or may have on the financial stability of other countries or territories in which CCPs and CSDs are established or provide services;

and (3) the desirability of regulating CCPs and CSDs in a way that is not determined by whether the users of their services are located in the UK or elsewhere.

The specified regulatory principles are similar to those applicable to the PRA and Financial Conduct Authority (FCA) and include principles such as proportionality, transparency and the desirability of sustainable growth in the UK economy. Our consultations have included an explanation of how we've considered these matters.

Further accountability mechanisms and policy measures

The Bank's accountability mechanisms for CCP and CSD regulation are now closely aligned with those of the FCA and PRA, with changes to the way the Bank interacts with Parliament, the government, and the public. This includes greater oversight by Parliamentary committees, namely the Treasury Select Committee and the Financial Services Regulation Committee, with whom we have shared all consultations this year, and greater transparency over responses to consultations. Andrew Bailey, the Governor and Sarah Breeden, the Deputy Governor for Financial Stability, have appeared before Parliament this year, including appearing before the Treasury Select Committee on the Financial Stability Report.

We are obliged to report on our engagement with non-FMI stakeholders. This has included meetings with trade associations, presenting at conferences, engagement with applicant FMIs and workshops. For example, in April 2024 the Bank hosted an in-person workshop, in which we gained valuable insights from experts on the relationship innovation has with both regulation and financial stability. The Bank has engaged in industry roundtables, for example, as part of our consultation on the DSS which included engagement with non-FMI stakeholders. Embedding the joint Bank/FCA EMIR Reporting Industry Engagement Group has provided an ongoing, two-way feedback mechanism which over the course of the year contributed to the smooth implementation of the reforms to EMIR Trade Repository reporting.

Looking forward, we will continue targeted and impactful engagement with stakeholders across industry, academia and other regulators to help inform our policymaking, as well as support our work on the SIO through dialogue with those closest to emerging innovations in FMI services.

3: What have been the Bank's areas of supervisory and policy focus over the reporting period?

This has been a year of significant change in the regime that the Bank operates under and the work to embed and roll out the new powers has been a significant part of our work. We have maintained our focus on day-to-day supervision and a clear policy agenda to ensure financially and operationally resilient FMIs and have supported safe and resilient innovation in payments, settlement and clearing. Over the past year, the Bank's supervision of FMIs has continued to contribute significantly to the delivery of its objective to protect and enhance UK financial stability. This chapter sets out the extent to which the Bank's financial stability objective under section 2A of the Bank of England Act 1988 and the secondary innovation objective under section 30D (2) have been met.

The market environment has continued to test FMIs.

The market environment has remained challenging for FMIs and they have proved resilient, supporting financial stability. During periods of market stress, both financial and operational resilience are key to maintaining confidence in the financial system.

The Bank's Financial Stability Report highlights various challenges that FMIs (as well as other market participants) continue to manage. The global outlook has evolved along a path of greater policy uncertainty, geopolitical tensions, and downside risks to financial stability. In particular, events in the Middle East, Russia's continued war in Ukraine, and US-China relations remain sources of material geopolitical risk. Geopolitical risks can affect the financial system in a number of ways, such as through increased global fragmentation or cyber attacks.

The Bank is ready to respond to the challenges faced in its supervision of FMIs.

The Bank works with FMIs to promote high standards of operational and financial resilience so that risks of disruption are reduced and FMIs can respond effectively to operational incidents and market events should they occur. The Bank also works to maintain its own readiness to respond effectively and rapidly to incidents and market events impacting FMIs. This includes through testing and exercising, as well as reflecting on lessons learned from previous events. Changes in technology eg through the use of distributed ledger technology (DLT) and cloud have increased the challenges for the Bank in delivering supervision as well as creating opportunities for efficiencies. We continue to develop our understanding and work with experts from both across and outside the Bank to ensure we keep pace with market developments.

3.1: Ensure financial stability through financially resilient FMIs

Financial resilience is important for all FMIs, but it is particularly important for those FMIs that take counterparty credit risk – most notably CCPs. Ensuring UK CCPs and indeed global cleared markets are resilient to shocks is a key part of our supervision and policymaking. This is achieved through high standards for the level of coverage and financial resources of CCPs, complemented by transparent disclosure of the risks of clearing and how the CCPs mitigate those risks.

FMIs maintain appropriate financial resources to maintain financial stability in terms of quantum, procyclicality and transparency.

FSMA 2023 introduced a power for the Bank to temporarily restrict or prohibit discretionary payments to shareholders and/or employees of UK CCPs in severe circumstances, with the aim of mitigating risks to financial stability by ensuring the continuity of critical clearing services. Following a period of consultation, which closed in November 2023, the Bank published its final SoP on the approach to using this power in February 2024.

The Bank carried out its third CCP Supervisory Stress Test (SST) this year as well as working closely with international colleagues on their stress tests. Supervisory stress tests are an important tool for reviewing CCPs' financial resilience (see Box C).

The Bank has contributed to CPMI-IOSCO's work on non-default losses, which are losses which arise from events other than member default, such as investment losses, legal risks or cyber attacks. This includes contributing to an assessment of FMIs' implementation of the general business risk principle (Principle 15) of the Principles for Financial Market Infrastructures (PFMI). This will lead to the publication of a consultative document on further guidance or recommendations in the near term.

Reflecting the importance of CCP margining, the Financial Policy Committee (FPC) and FMIC held a joint meeting to discuss the trade-offs inherent in setting margin. The Bank has also continued to contribute to international work on margining practices in centrally cleared markets (see Box D).

FMIs can recover from stress and be resolved if necessary.

FSMA 2023 provides the Bank with the power to direct a CCP to address impediments to effective exercise of the stabilisation powers in support of any actions by the Bank as resolution authority to resolve a CCP. In July 2024, the Bank published a consultation[11] to

11. The Bank of England's power to direct a central counterparty to address impediments to resolvability.

describe the context of the new power and to consult on the Bank's proposed process for the giving of directions, the types of impediments to which the power may apply and the Bank's approach to the use of the power in the context of its statutory stabilisation objectives.

In July 2024, the Bank also published a second consultation[12] setting out the background and context in which a statutory tear up in a CCP resolution may be performed under FSMA 2023 and the Bank's proposed approach to determining the commercially reasonable value of contracts subject to this stabilisation option.

Both consultations closed in October 2024. The Bank has reviewed responses to the consultations and expects to publish final policy statements shortly.

Internationally, the Bank also contributed to the development of the FSB's final report on Financial Resources and Tools for Central Counterparty Resolution which was published earlier this year.[13] This presented a 'toolbox approach' for resolution resources and tools. The Bank will continue to engage with this important work as discussions on implementation continue. The Bank considers that the UK's enhanced CCP resolution regime, which came into force on 31 December 2023, is consistent with this new standard.

High standards of governance and risk management are maintained across the FMIs the Bank supervises as a key foundation to ensuring FMIs' financial resilience.

The Bank undertook a range of supervisory reviews across the year looking at the adequacy of FMI models and risk management. As a core component of our supervisory approach we assess the governance arrangements of FMIs, including when significant changes are made, to ensure that they are appropriate. We collaborate with overseas regulators on supervisory reviews of UK CCPs and have provided our input and expertise to reviews run by other FMI supervisors internationally.

The Bank has continued to be an active participant in policy development at international standard setting bodies relating to the resilience of FMIs. This includes through contributions to workstreams on FMI risk management at CPMI-IOSCO.

FMIs and the Bank can effectively monitor and assess market stresses, and understand the impact of disruption on financial stability.

While the Bank assesses all FMIs to ensure that they are operationally and financially resilient to continue to provide their important business services under a range of adverse scenarios, this cannot be expected to avoid all instances of FMI failure or service disruption.

12. The Bank of England's approach to determining commercially reasonable payments for contracts subject to a statutory tear up in CCP resolution.
13. Financial Resources and Tools for Central Counterparty Resolution.

Given the systemic importance of FMIs, we consider it important to prepare to mitigate any financial stability impacts in an eventuality that an FMI is not able to continue to provide their important business services. The importance of this 'preparedness for disruption' is reflected in its inclusion as a risk element within the Bank's supervisory FMI risk model. The risk element will assess the extent to which the FMI has taken appropriate actions to support the Bank in being adequately prepared to mitigate impacts on financial stability in the event of the FMI being unable to recover from a financial or operational failure. The Bank will work closely with firms and may consult on further policy and/or guidance over the coming years setting out its expectations of firms, and further details on our approach to assessing firms' preparedness for disruption.

The Fundamental Rules consultation paper,[14] published on 19 November 2024, outlines a set of rules which further encourage FMIs to recognise their systemic importance in the financial system. In particular, fundamental rule 10 requires FMIs to use their position to identify, assess and manage risks that might materialise through their operations. This rule aims to ensure that FMIs have a knowledge and understanding of, and ability to deal with, risks that their operations may pose to the stability of the financial system. It reflects the central role that FMIs play in managing counterparty credit risk and settlement risk, and in ensuring that payments are made safely and securely. The rule aims to prevent risks that could permeate through the financial system via the operations and interactions of FMIs with financial market participants. For this reason, it emphasises the need for FMIs to consider the impact of their operations beyond their immediate participants to the broader market. In doing this, FMIs will support both broader financial stability and their own resilience.[15]

An important aspect of our policymaking and supervision is that it is evidence based. To support this, we collect and use a range of data including FMIs' own financial metrics, and transactional data collections on the markets our FMIs operate in.

This year has seen the implementation of amendments to the UK European Market Infrastructure Regulation (UK EMIR) derivative reporting regime on 30 September 2024. This work, undertaken jointly with the FCA, aligns the UK framework with CPMI-IOSCO guidance, where appropriate, to ensure a more globally consistent data set. The improvements in data quality and increased granularity of reporting enables us better to use these data to inform our supervision of, and policy development for, CCPs, as well as supporting the Bank's broader financial and monetary stability objectives.

14. **Fundamental Rules for financial market infrastructures**.
15. The importance of this system wide thinking was highlighted in a recent speech by Deputy Governor, Sarah Breeden, who said that 'we need to understand how different sources of risk could ripple through the financial system and quantify their potential impact on the vital services that the system provides, particularly for those common risks that can affect the system as a whole and not just a corner of it.', **Financial stability at your service − speech by Sarah Breeden**.

Box C: CCP Supervisory Stress Test

In November 2024, the Bank published the results of its third public CCP SST.[16] This exercise focused on the credit resilience of the three UK CCPs, under a hypothetical stress scenario equivalent in severity to previous worst case experiences, combining a global economic downturn with negative supply shocks in commodities markets. The Bank also extended the analysis to consider the impact of a wider range of idiosyncratic shocks using desk-based stress testing, in order to identify any potential pockets of risk to explore further with CCPs.

As in previous years, the CCP SST is not a pass-fail exercise, but the Bank will use the findings from the 2024 CCP SST to engage with CCPs and inform its supervision and regulation of UK CCPs at both a domestic and international level.

Overall, we find that UK CCPs have sufficient pre-funded resources to absorb the impact of a severe stress scenario and default of the Cover-2 population. And our desktop stress test indicates that they are generally resilient to a wider range of 'decorrelated scenarios', including many that go well beyond regulatory requirements. But this analysis has enabled us to identify potential areas of vulnerability that we will explore with CCPs. When we include the cost of liquidating highly concentrated positions this results in a greater depletion of resources, in particular at LME. We are probing the results with LME to test the adequacy of their methodology.

This year's SST did not consider the liquidity resilience of CCPs or the impact of their actions on members, clients and the wider financial system since these wider dynamics were explored by the Bank as part of its system-wide exploratory scenario (SWES).[17] This work found that CCPs' initial margin calls were not a primary driver of liquidity demands in that scenario, although consistent with the findings of the Basel Committee on Banking Supervision (BCBS) International Organization of Securities Commissions (IOSCO) work on margin transparency, market participants struggled to estimate margin calls.

16. **2024 CCP Supervisory Stress Test: results report**.
17. **The Bank of England's system-wide exploratory scenario exercise final report**.

Box D: Margin and haircut practices, and liquidity preparedness, in cleared and bilateral markets

Domestic and international work is currently underway to enhance margin and haircut practices in cleared and bilateral markets, and improve market participants' liquidity preparedness.

Margin in derivatives markets and haircuts in repo markets play a key role in managing counterparty credit risk in both cleared and bilateral transactions. Reforms following the global financial crisis have increased the levels of margin and clearing, particularly in derivative markets. However, recent market stresses have highlighted potential challenges that margin and haircut practices pose across different market segments. The key challenges include: (i) the potential procyclicality and lack of predictability of cleared initial margin; and (ii) low haircuts and excessive leverage in bilateral repo markets.

> **Previous market stress episodes have highlighted the challenges that can arise from a combination of low haircuts, leverage and procyclical margin practices across different market segments.**

Unexpected, procyclical increases in initial margin requirements have previously contributed to funding and market liquidity stress in periods of high volatility. This was the case in the March 2020 'dash for cash', where large increases in initial margin requirements driven by increased volatility contributed to some market participants facing liquidity needs materially greater than anticipated – potentially exacerbating liquidity strains for participants. The FPC has highlighted, most recently in June 2024, the need for further policy work to address risks arising from procyclicality in margin requirements.[18]

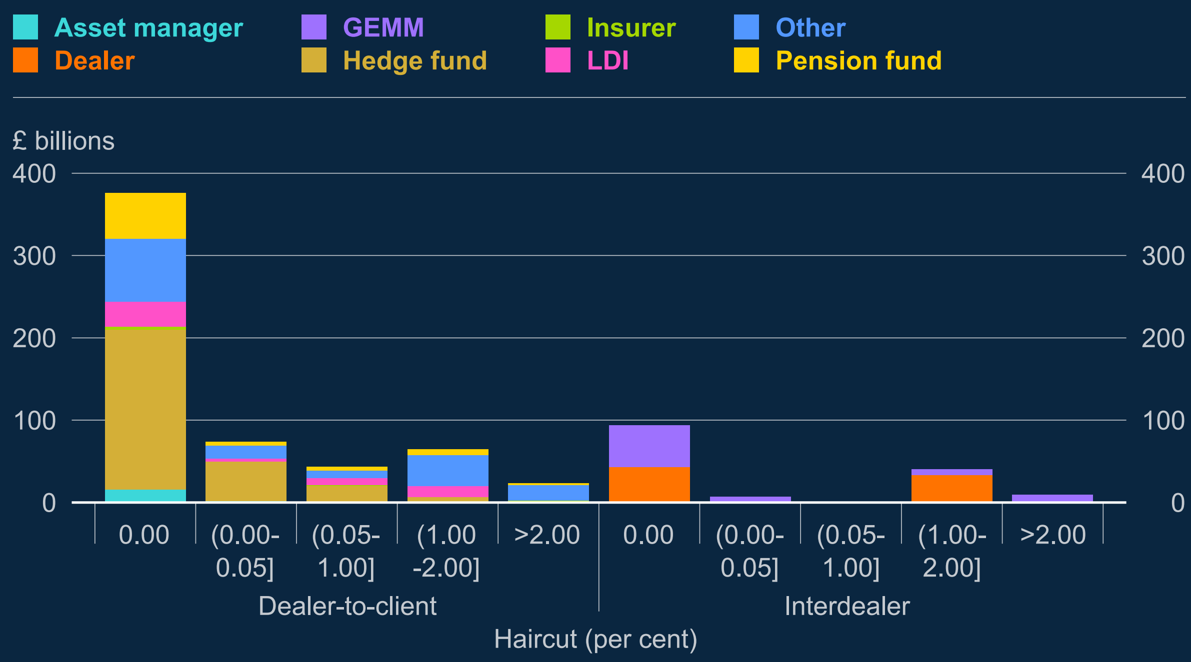
Further, unexpected changes in margin requirements and haircuts can contribute to destabilising fire sales or procyclical reduction in leverage. For example, in September 2022, liability-driven investment (LDI) funds came under significant stress from margin and collateral calls following a spike in long-term gilt yields. LDI funds' leverage was facilitated primarily through repo financing provided by banks, often at very low haircuts. The rapid rise in gilt yields generated significant losses for LDI funds' leveraged positions and triggered calls for additional collateral. Inadequate liquidity preparedness to meet these collateral calls forced LDI funds to deleverage, generating severe market dysfunction.

18. Financial Stability Report - June 2024.

More generally, low haircuts in the bilateral gilt repo market allow leveraged investors to take positions without using their capital, facilitating the build-up of leverage in the financial system. In the event of a large shock, leverage amplifies losses and increases the likelihood of position liquidations and counterparty defaults, with adverse implications for market functioning. Bank analysis suggests that more than half of the outstanding stock in the uncleared bilateral dealer-to-client segment of the gilt repo market has zero haircuts, potentially resulting in under-collateralisation and procyclical increases in margins (Chart A).

Chart A: Haircuts in the bilateral gilt repo market are very low

Outstanding stock in the uncleared bilateral segment of the gilt repo market(a)



Sources: Securities Financing Transaction Regulation (SFTR) data and Bank calculations.

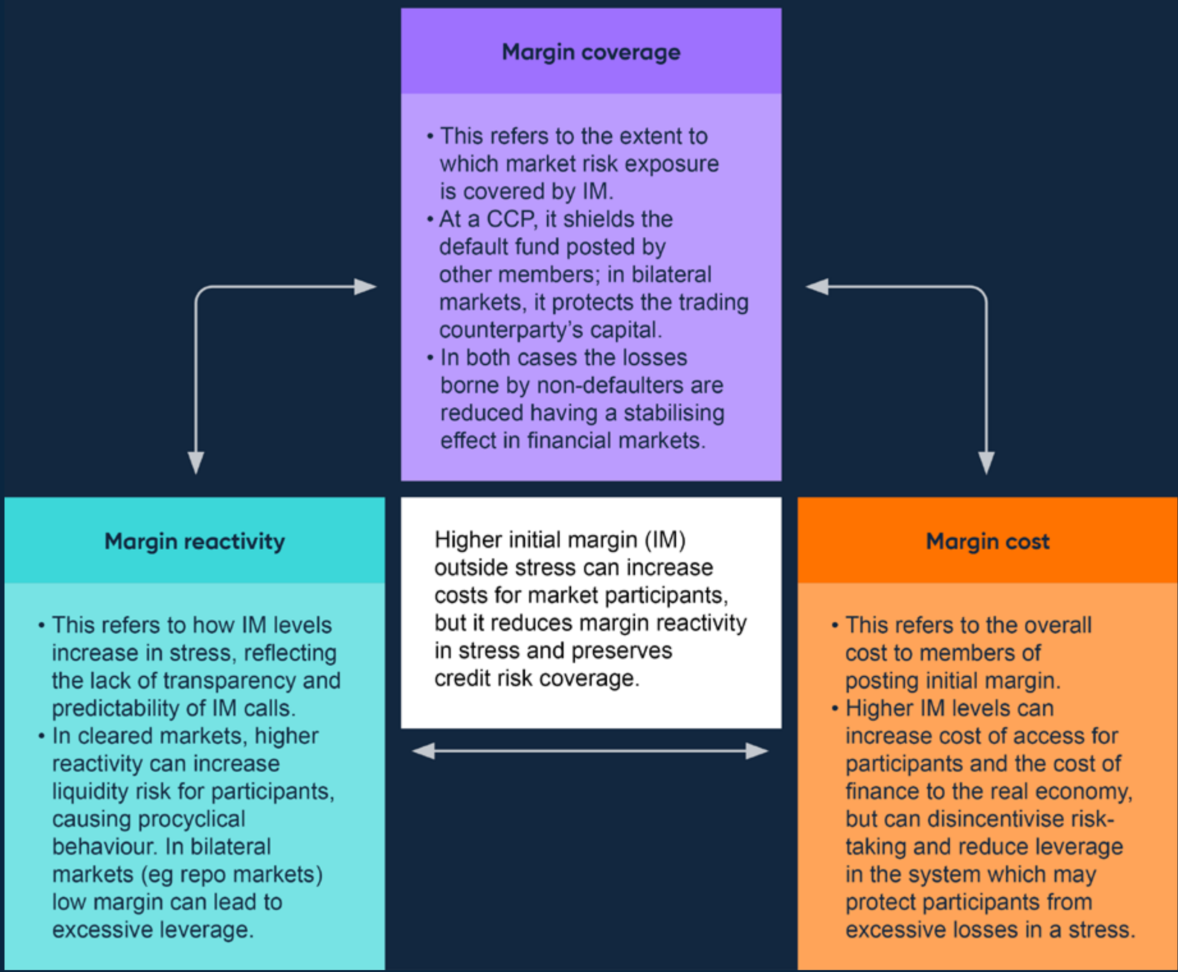
(a) Data as of 14 November 2024.

There is an inherent trade-off between margin coverage, cost and procyclicality in setting initial margin requirements.

A key step towards addressing the challenges posed by initial margin is understanding the trade-off – or 'trilemma' – between coverage of credit risk, average margin cost, and margin reactivity (or procyclicality) (see Figure A). Margin reactivity refers to how initial margin levels can increase in a stress. The reactivity of initial margin to market volatility can push up liquidity demands on market participants and the financial system more widely in a stress, and may lead to procyclical actions, eg liquidating assets or rapidly deleveraging, amplifying the stress. The margin trilemma implies that, for example, CCPs could reduce the reactivity of initial margin in a stress and preserve coverage of credit risk by keeping initial margin higher outside of a stress, but that would increase the cost of margin for market participants. In some bilateral markets – notably repo markets – low margin requirements or haircuts can lead to excessive leverage.

Figure A: Illustration of the margin trilemma between coverage, cost and reactivity

The inherent trade-off between margin coverage, reactivity and cost



There are several factors that will influence the optimal balance between margin coverage, reactivity and cost – eg market participants' liquidity preparedness to meet margin calls and changes in haircuts (since, if participants are well prepared, the risks from reactivity are lower) and the underlying volatility of the products traded (since initial margin is designed to cover potential future price moves). Together, these factors will influence the dynamics of margin calls and changes in haircuts in different markets and the extent to which margin reactivity represents a risk to financial stability. CCPs are required to adhere to a minimum coverage requirement in order to ensure adequate reduction of counterparty credit risk, and therefore face a trade-off between margin cost and reactivity. The International Swaps and Derivatives Association (ISDA) standard initial margin model (SIMM) for bilateral derivative markets is designed to yield conservative outcomes on reactivity, using a stressed calibration yielding more conservative margins in good times. Bilateral repo markets do not yield similarly conservative outcomes on coverage, featuring low haircuts and allowing for highly leveraged positions by reducing margin cost.

Domestic and international work is underway to reduce the risks posed by under-margining, low haircuts and margin procyclicality in some core markets.

Domestic and international work is underway to reduce the risks posed by these dynamics. In cleared markets, international proposals to improve margin transparency and promote market participant preparedness can alleviate the trilemma. Reflecting its commitment to robust international standards, the Bank has continued to take a leading role in driving forward international work on cleared margining and haircut practices as part of the FSB's wider programme on non-bank financial intermediation. Notably, the Bank has continued to co-chair the BCBS-CPMI-IOSCO Margin Group responsible for work to improve transparency and evaluate the responsiveness of initial margin practices in centrally cleared markets. The Margin Group is due to publish its final set of policy proposals early next year, which are expected to culminate in updates to international standards and guidance in 2025 (such as the further guidance to the PFMI or the Public Quantitative Disclosures). The policy proposals, which the Margin Group consulted on earlier this year,[19] target improvements to CCP and clearing members transparency and governance on margining practices in centrally cleared markets such as enhanced disclosures and improvements to risk management processes. The Bank will look to implement these proposals domestically by enhancing its CCP margin framework as part of creating the Bank's FMI rulebook.

In parallel, the FSB is developing recommendations to enhance authorities' ability to identify, monitor and mitigate the risks associated with non-bank leverage. This policy work directly addresses many of the vulnerabilities that have amplified the shocks which occurred in the past few years in capital markets. It is expected that a consultation paper on policy proposals will be published by the FSB in 2025.

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19. **Consultative report: Transparency and responsiveness of initial margin in centrally cleared markets – review and policy proposals**.

3.2: Ensure FMI services are operationally resilient and not a major financial stability risk in the event of disruption

The Bank works with FMIs to promote high standards of operational resilience, to reduce the impact caused by major disruption. FMIs continue to invest and build resilience capabilities to ensure they can detect, prevent, adapt, respond and recover effectively to operational incidents should they occur.

Given the complexity and interconnectedness of the financial system, the resilience of individual FMIs alone may not be sufficient to ensure system-wide resilience. In our role protecting financial stability, the Bank is focused on promoting the operational resilience of the broader financial system, working closely with industry and the PRA.

In 2024 Q3, the FPC Record noted the importance of engagement with other firms, FMIs and the wider market to understand the impact of disruption and resilience actions that could support our objective. The Bank maintains its own readiness to respond effectively and rapidly to incidents and market events impacting FMIs. This includes through testing and exercising, as well as reflecting on lessons learned from previous events.

> **FMIs deliver the required outcomes for Operational resilience and Outsourcing and third-party risk management policies.**

FMIs have continued their preparations to ensure that they are ready to meet the standards set by the 2021 Operational resilience policy, which require that by no later than 31 March 2025 FMIs have taken all reasonable actions to remain within their impact tolerances in the event of extreme-but-plausible disruptions to operations. In 2024 Q2, the Bank published a financial stability in focus publication on the FPC's macroprudential approach to operational resilience, which set out its approach to assessing financial stability risks from potential operational incidents and where operational resilience might need to be improved in the financial system. In April 2024, Sasha Mills, Executive Director of the Financial Markets Infrastructure Directorate gave a speech,[20] where she outlined the steps FMIs should be taking to meet the March 2025 policy deadline.

The Bank has reviewed FMIs' annual self-assessments that attest to their operational resilience capabilities. Through these reviews, the Bank has identified that FMIs are making progress in building their operational resilience frameworks including the articulation of important business services, impact tolerances, and the calibration of extreme-but-plausible scenarios. Further work is required to increase the sophistication of scenarios and build testing plans that apply a range of sufficiently robust methodologies to evidence resilience

20. **Building operational resilience at the heart of the financial system − speech by Sasha Mills**.

capabilities. The Bank continues to work with FMIs to ensure adequate strategic investment is undertaken to address vulnerabilities and build operational resilience capabilities. Alongside this work the Bank continues to focus on FMI's cyber resilience capabilities through delivering the CBEST programme and engage with FMIs on the maturity of cyber resilience capabilities based on the findings of last year's cyber resilience thematic review.

FMIs were expected to meet the requirements of the Outsourcing and third-party risk management policies by February 2024. These policies set out requirements and expectations in relation to Outsourcing and third-party risk management and complement the Bank's existing policies relating to FMI operational resilience.

The Bank, alongside the FCA and PRA, has finalised its rules and approach for critical third parties (CTPs) (see Box E). Consistent with its aim to ensure the operational resilience of FMIs and with a view to addressing FPC concerns about risks posed by certain third-party providers of services to financial firms and FMIs, the Bank, in concert with the PRA and FCA, published rules for CTPs in November.

CTPs can include Cloud service providers, data analytics providers, or other IT service providers which have become critical to the smooth functioning of FMI operations, meaning any outages of these services could pose a risk to UK financial stability. These services can improve the offering of FMIs to their clients through greater speed of delivery and cost savings and as such their adoption can contribute to FMI innovation.

FSMA 2023 provides HMT with powers to designate certain third parties as 'critical', enabling the supervisory authorities to develop regulation for, gather information from, and take enforcement action against these CTPs with respect to the services they provide firms, including FMIs. These powers facilitate FMIs' adoption of the services provided by CTPs by strengthening their operational resilience.

The Bank, alongside the PRA and FCA recently consulted on separate proposals to set requirements in rules and expectations for firms to report operational incidents and their material third-party arrangements, known as IOREP.

The Bank's proposals take the form of rules for CCPs and CSDs, and a code of practice for payments systems and specified service providers, supported by supervisory statements to guide firms' implementation. The purpose is to support FMIs' operational resilience, through providing timely, accurate and consistent reporting of operational incidents, and notification and a systematic understanding of third-party interdependencies. The proposals are consistent with the FSB's 'FIRE' (Format for Incident Reporting Exchange), which are intended to set a common global framework for incident reporting.

The Bank invited feedback on the proposals set out in this consultation. This consultation will close in March 2025 after which the Bank will consider responses and publish the final requirements.

FMIs change programmes increase resilience and are safely executed.

We have monitored innovations within FMIs to ensure continued resilience against potential risk. A range of FMIs are considering changes to their operations and processes, with a number embarking on large-scale infrastructure transformation projects. The Bank continues to evolve its supervisory and regulatory framework to ensure these innovations and changes are completed effectively, efficiently and with robust standards to ensure UK financial stability.

Following the government's announcement of the National Payments Vision which led to Pay.UK pausing the New Payments Architecture programme, the Bank has worked closely with Pay.UK to identify next steps to ensure the ongoing resilience of the Faster Payment and Bacs systems.

The impact of operational incidents at FMIs are understood and can be managed effectively to minimise the impact on financial stability.

Overall, FMIs have displayed resilience over the year, managing operational outages that have materialised and learning from incidents that have taken place (see Box F which highlights learnings from the CrowdStrike incident).

High standards of governance and risk management are maintained across the FMIs the Bank supervises as a key foundation to ensuring FMIs' operational resilience.

The Bank undertook a number of reviews of firms to assess their operational resilience, including use of specialists for technical reviews. Ongoing work around cyber resilience included our delivery of the CBEST programme for FMIs.

Over 2024 the Bank has continued to support international work on FMI resilience through playing an active role within the CPMI-IOSCO Operational Resilience Group (ORG). This covers workstreams on third-party and cyber operational resilience, including the management of risks associated with third-party service providers and outsourcing. The ORG seeks to explore ways of strengthening the operational resilience of FMIs in light of these topics.

This Bank has also contributed to work at CPMI-IOSCO to look at climate-related risks at FMIs. As part of this, CPMI-IOSCO hosted two virtual workshops in March and April 2024 with industry and other authorities to better understand how they are currently incorporating these operational and financial risks such as how severe future asset price volatility might be.

The Bank has continuously worked to promote industry engagement for operational resilience. The Operational Resilience Collaboration Group is a sub-group of the Cross-Market Operational Resilience Group which facilitates collaboration between financial institutions in the UK that have a common interest in operational resilience.

Through the Operational Resilience Collaboration Group, the Bank has encouraged FMIs to collaborate and share knowledge on extreme-but-plausible scenarios and testing response and recovery plans.

The Bank continuously emphasises during individual feedback meetings and letters the importance of engagement and collaboration of FMIs, their participants, and third parties while developing scenarios and during testing exercises.

In addition to this, our work reviewing FMI's self-assessed operational resilience frameworks, includes an articulation of their impact tolerances which sets out the impact of operational outages through the lens of our financial stability objective.

Box E: Critical third parties regime

Using powers contained in FSMA 2023, HMT may designate as a CTP, a third party that provides services to one or more authorised persons, relevant service providers and/or FMI. A third party may only be designated if, in the opinion of HMT, a failure in, or disruption to, its services (whether individually or, where more than one service is provided, taken together) would pose a risk to the stability of, or confidence in, the UK financial system. HMT must consult the Bank and FCA before designating a third party as a CTP. HMT generally expects to make designations of CTPs on the basis of recommendations from the Bank, the PRA and the FCA.

Irrespective of the CTP regime, FMIs and other regulated firms remain responsible and accountable for managing risks to their resilience arising from their arrangements with third parties, including those designated as CTPs.

Some of the key features of the CTP regime are:

- CTPs must meet a set of high-level fundamental rules, which collectively reflect the regulators' objective of managing risks to the stability of, or confidence in, the UK financial system posed by CTPs.
- CTPs are subject to eight operational risk and resilience requirements that apply to CTPs' systemic third-party services to firms and FMIs, and cover areas such as governance, supply chain risk management, technology and cyber resilience, change management and incident management.
- CTPs must meet a range of information-gathering and regular testing requirements, including the submission of an annual self-assessment and regular scenario testing. The regulators also have the power to commission Skilled Person reviews. CTPs are also required to notify regulators and CTPs' FMI and regulated firm customers of certain incidents.

The oversight of CTPs will be provided by the regulators as set out in the oversight approach document.[21] The approach to CTP oversight shares several of the same key principles as the supervisory approach for FMIs: judgement-based and evidence led, forward looking, proportionate, and focused on key risks.

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21. **Approach to the oversight of critical third parties**.

Box F: CrowdStrike incident

On 19 July, a cyber security software company CrowdStrike released an automatic update, with an undetected error, for clients using its CrowdStrike Falcon security software. Due to the error, the update caused disruption to Microsoft Windows computers that implemented the update. CrowdStrike are a leading global company in the cyber security space and used across many industries. The incident caused widespread disruption across industries and received heightened media attention globally.

FMID received updates from the UK FMIs, that FMID supervise, during the incident. Across the UK FMIs, there was minimal impact to FMIs' core important business services, bar some minor delays to important business services for a small subset of UK FMIs. FMID also liaised with international authorities to share updates on cross-border and international FMIs.

The incident highlighted the need for FMIs to have a robust understanding of their dependencies and software across their entire IT estate, and in particular, an understanding of where software has the potential to disrupt their important business services. FMIs should have a clear mapping of the relationship and dependencies between software providers and their important business services. Where software has caused disruption, FMIs must also have recovery plans in place to recover their important business services within impact tolerances.

The incident also underlined the importance for FMIs to provide prompt incident notification to regulators, participants, and other institutions reliant on their services, and to provide clear communication of impact and expected response time for recovery of important business services.

3.3: Enable safe and resilient innovation in payments, settlement and clearing

Under FSMA 2023 for CCPs and CSDs the Bank has a secondary objective to facilitate innovation in the pursuit of our primary financial stability objective. Section 1 gave an overview of how we see this secondary objective being applied and the importance of viewing this objective widely. This includes reflecting the importance of innovation in payments in how the Bank implements its regulatory and supervisory frameworks. Our aim is to foster an environment where innovation across FMIs thrives but always with safety and resilience at the forefront.

New and emerging risks from innovation relating to FMIs operating in the UK are identified and understood.

In July 2024, the Bank published a discussion paper setting out its approach to innovation in money and payments.[22] Innovation has continued to increase in money and payments which present risks and opportunities for central banks' monetary and financial stability objectives. As such, central banks must be quick to engage with them and prepare for their implications. To date, we have undertaken a range of initiatives in response to FMI innovations in the payments and settlement landscape. Some examples of these are:

- We set out our proposed approach to new forms of private digital money, including issuing a discussion paper in November 2023 proposing a regulatory regime for the use of stablecoins in systemic payment systems.
- We are ensuring a 'safe innovation' regulatory environment for the development of tokenised assets. In particular, in September 2024 we launched a DSS with the FCA, enabling market participants to innovate by issuing and trading digital securities in a safe regulatory environment (see Box G).

Innovation at new and existing UK firms is facilitated in the context of maintaining financial stability.

The Bank has worked with the FCA to implement the DSS which opened for applications in September 2024. The DSS explores how developing technologies such as DLT could be used by firms to undertake the activities of notary, maintenance and settlement for financial securities, either alone, or together with the operation of a trading venue.

In addition to exploring the potential benefits of adopting such technology, the DSS allows the Bank to observe whether new risks are created in the wider financial system from the adoption of these technologies and to design a regulatory approach which mitigates these

22. **The Bank of England's approach to innovation in money and payments**.

risks while allowing any benefits to be exploited. More information is in Box G. The DSS not only supports safe FMI innovation but is also a more innovative form of policymaking for the Bank. This is the first time that the Bank has designed regulation in a sandbox.

Our international engagement complements our domestic strategy for innovation in payments, settlement and clearing. Over the past year, we have continued our significant contributions to international work supporting innovation and promoting the effective implementation of a co-ordinated, comprehensive policy response to address the risks of digital assets, including stablecoins.

This has included work on:

- the potential opportunities and challenges associated with tokenisation in the context of money and other assets, and its implications for the roles of central banks in payments, monetary policy and financial stability. In October 2024, the CPMI published its report to the G20 'Tokenisation in the context of money and other assets: concepts and implications for central banks';[23]
- the risks and challenges associated with the adoption of FSB High-Level Recommendations for Global Stablecoin Arrangements – in particular in emerging market and developing economies (EMDEs). In July 2024, the FSB published relevant findings and considerations in its report on 'Cross-border Regulatory and Supervisory Issues of Global Stablecoin Arrangements in EMDEs';[24]
- ensuring global stablecoin arrangements provide a robust legal claim to all users, that issued stablecoins have an effective stabilisation mechanism, and are subject to appropriate prudential requirements; and
- broader initiatives by the FSB and international standard setting bodies to implement the global policy framework and wider efforts to enhance international co-operation and co-ordination due to the cross-border nature of cryptoassets, including stablecoins.

The Bank also contributed to CPMI work on governance and oversight of fast payment systems interlinking arrangements. In October 2024, the CPMI published a report to the G20 which discusses design choices and the risk implications of these arrangements, sets out the key decisions for governance and outlines recommendations for their oversight.[25]

As part of innovation we encourage and work with new applicants to support their applications including those with new business models.

23. **Tokenisation in the context of money and other assets: concepts and implications for central banks**.
24. **Cross-border Regulatory and Supervisory Issues of Global Stablecoin Arrangements in EMDEs**.
25. **CPMI reports to G20 on fast payment system interlinking and APIs provide insights and recommendations to enhance cross-border payments**.

Box G: Digital Securities Sandbox

What is the Digital Securities Sandbox?

The DSS is a regulated 'live environment' where innovative FMIs can apply new technologies such as distributed ledgers to record, settle and trade real securities such as shares and bonds in sterling and other currencies.

Consultation with industry suggested that the current legislative framework for settlement activity had not been designed with the use of distributed ledger technology in mind.[26] Therefore, DSS entrants will operate under a temporarily modified set of rules designed to remove barriers to the application of the technology.

The DSS provides a unique chance to test and adapt the regulatory framework as we learn from innovators testing different business models in the Sandbox. This approach is a first for the Bank and supports our secondary objective on innovation in relation to FMIs.[27] The DSS is a joint initiative with the FCA.

The approach

The DSS is structured in stages (see Table A) and the Bank has set limits on the amount of securities that can be issued or held inside the DSS in established key sterling asset classes. Firms will be required to pass 'gates' to access stages by demonstrating their ability to meet higher regulatory standards to supervisors. At the 'Go-live' stage, the permitted stock of digital securities that can be issued by any Digital Securities Depository (DSD) will be low, then this limit will loosen at the 'Scaling stage' if firms meet higher standards of resilience.

Such proportionate regulations will be applied to facilitate activity and enable the Bank to make reactive adjustments as we learn more to support the safe development and implementation of technologies. This glidepath means that it is possible to shape a new permanent regulatory regime that's innovation friendly and fit for purpose, without compromising financial stability.

26. **Consultation on the Digital Securities Sandbox**.
27. **Digital Securities Sandbox (DSS)**.

Table A: Stages and gates of the DSS

Stage	Purpose	Legal designation
Initial application	Identify firms eligible to join the DSS	None
Gate 1		
Testing stage	Testing stage and engagement with regulators to operate a trading venue or to be a DSD	Sandbox entrant
Gate 2		
Go-live stage	Ability to carry out live business under initial limits	DSD/authorised operator of trading venue
Gate 3		
Scaling stage	Scaling the business, with a glidepath to full authorisation for DSDs	DSD/authorised operator of trading venue
Gate 4		
Possible new permanent regime	Full authorisation to operate outside the DSS for DSDs	CSD/new category of FMI

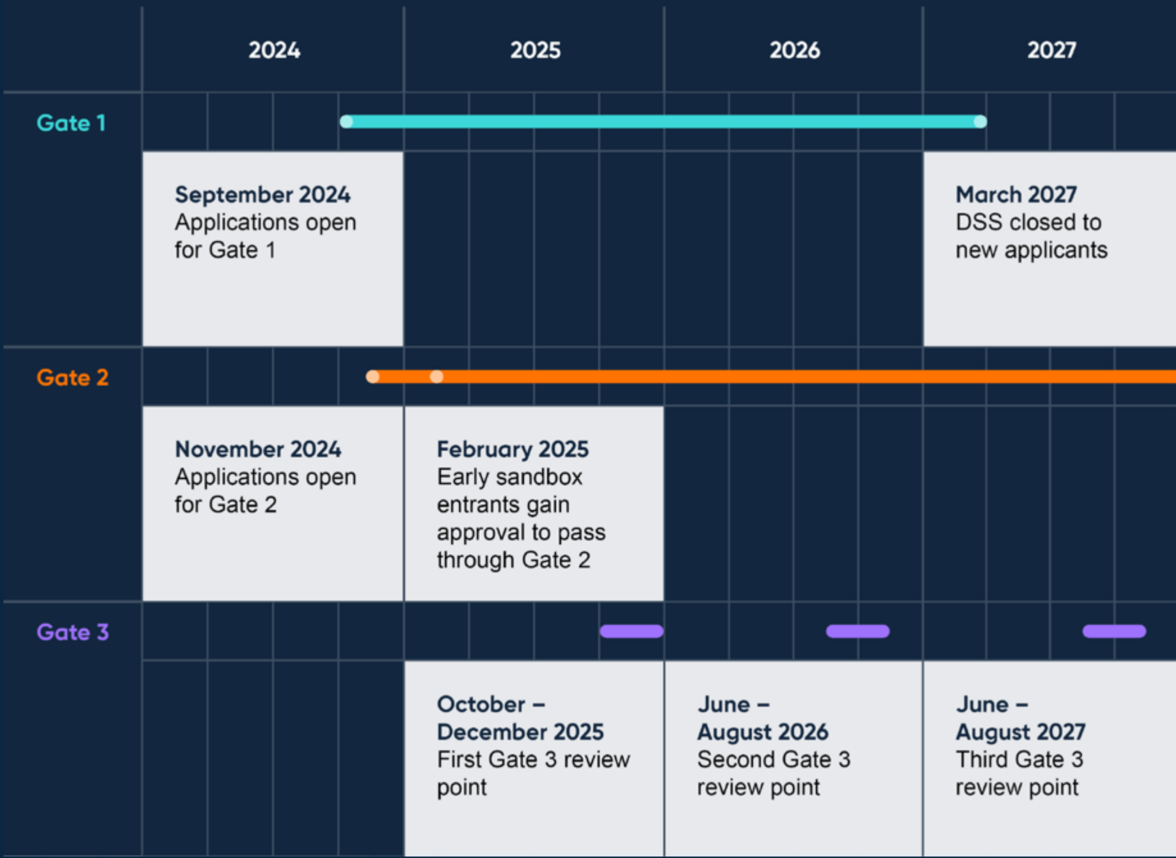
Next steps

Figure A gives an indication of the timeline for the DSS over the coming years. Activity in DSS will enable HMT, working with the Bank and the FCA, to determine how UK legislation may be permanently amended in the future to accommodate developing technology by adapting legislation from observing activity.

Applications opened on 30 September 2024 and the DSS is set to last until January 2029.[28] Firms of all sizes and at any stage of maturity, including new entrants to the market, are eligible to apply.

28. **Digital Securities Sandbox (DSS)**.

Figure A: Indicative timeline for the DSS



3.4: Implement and embed our new responsibilities in a proportionate and robust way

This has been a significant year in starting to create an FMI rulebook using the new powers set out in FSMA 2023. The Bank has completed the foundations of a rule-making regime (eg CBA) as well as started the work to create the new framework of Bank rules with a consultation on fundamental rules and continued work with HMT to repeal and replace the EMIR CCP regime. Box B in Section 2 highlights how the Bank has been delivering the work on the CBA and FSMA 2023 framework that underpins our rule-making.

> **Transparency and understanding of how and why we supervise FMIs and being risk based and proportionate in our delivery.**

A key step this year to improve our transparency has been the publication of our supervisory approach document as set out in Section 2. The document sets out how we carry out our role in respect of supervision of FMIs; it is designed to help regulated firms and the wider market understand how we supervise FMI, and to aid accountability to the public and Parliament.

While the legal obligations that underpin this Annual Report have not substantively changed, the Bank recognises that the report is a key tool for improving transparency and understanding of our FMI-related work which has increased importance following the launch of the statutory FMI Committee and our new responsibilities. Under the terms of reference, FMIC is responsible for approving the FMID Annual Report. Going forwards, we will be publishing the Annual Report in the summer to align better with the timeline for the PRA and Bank annual reports.

Section 2 also provides an overview of how the key accountability measures in FSMA have been delivered – including engagement with stakeholders and Parliament.

> **We have a suitable, accountable and proportionate regulatory framework across FMI types, ensuring the Bank and the firms we regulate take account of the systemic impact disruption may have on UK financial stability.**

In November the Bank published a consultation paper[29] proposing the introduction of fundamental rules for FMIs. This consultation outlines a set of 10 rules, aimed at ensuring that the outcomes the Bank aims to achieve through its regulation of FMIs are clearly communicated. The rules are complementary to the existing requirements for FMIs, for instance in UK EMIR, UK Central Securities Depositories Regulation (CSDR), and Bank codes of practice. These rules would, if implemented, be the first use of the Bank's new rule-making power over CCPs and CSDs, in addition the rules would apply to service providers and RPSOs through a code of practice.

In developing the fundamental rules the Bank has considered how these rules would impact the Bank's secondary innovation objective in relation to CCPs and CSDs. The consultation also sets out our assessment of the costs and benefits of the proposed rules, on which the Bank consulted the CBA Panel. This consultation closes on 19 February 2025, before which we welcome any comments and feedback.

Another priority for the Bank in developing its policy framework is the 'repeal and replace' of UK EMIR from primary legislation into Bank rules. HMT intends to repeal the majority of requirements that apply directly to CCPs in assimilated law (previously EU retained law) and the Bank intends to replace those provisions with rules, subject to changes as appropriate.

29. **Fundamental Rules for financial market infrastructures**.

As part of that process, the Bank aims to consult in 2025 on a set of limited policy changes and publish the updated rules as soon as practicable. The proposed changes will be targeted to enhance the resilience of UK CCPs and the overall regulatory framework will remain largely unchanged. Transferring rules from primary legislation into the Bank rulebook allows the Bank to be flexible in adapting its regulatory framework as needed and respond to innovations in the market. The Bank will continue to uphold robust regulation in line with international standards and, in exercising the new rule-making function, the Bank will have regard to regulatory principles set out in FSMA 2023, such as the effects of new rules on the financial stability of other countries where UK CCPs provide services.

The Bank has also been progressing work on how it will use the new powers established in FSMA 2023. In December 2023, the Bank published a consultation paper on the notification aspects of its new requirements powers. The new powers, granted to the Bank through FSMA 2023, came into effect on 1 January 2024 and allow the Bank to require a UK CCP and CSD (and a systemic non-UK CCP) to take specified actions or refrain from taking specified actions. These powers are similar to that already used by the PRA and FCA and are in addition to the Bank's existing powers of direction which also extends to payment systems.

In line with the supportive feedback received, the Bank published a policy statement in May 2024 setting out its SoP on the notification aspects of its new requirements powers, alongside consideration of the consultation responses.[30] The new powers support the Bank's pursuit of its financial stability objective by enhancing the Bank's supervisory toolkit and allowing the Bank to act in a more agile way to carry out robust, risk-based supervision of FMIs.

Risks from cross-border FMIs are monitored and managed where appropriate.

The Bank continues to implement its new responsibilities for incoming CCPs and CSDs, underpinned by our model of informed reliance. Following the UK's withdrawal from the European Union (EU), the Bank has responsibility for recognising and supervising: non-UK central counterparties ('incoming CCPs') who provide clearing services to clearing members or trading venues established in the UK; and non-UK central securities depositories ('incoming CSDs') who provide settlement services for securities issued under UK law. The Bank has now recognised five incoming CCPs and one incoming CSD, as set out in Annex 1 and in Table B in Section 2, which involved agreeing co-operation arrangements with the home authorities. The Bank is also responsible for providing information or advice in

30. **The Bank of England's approach to statutory notice decisions for use of its requirements powers - May 2024**.

support of HMT’s equivalence assessments of jurisdictions in which CCPs are seeking UK recognition.

The Bank recognises that supervising globally systemic FMIs requires deep co-operation between authorities across multiple jurisdictions. Building on the extensive and successful co-operation that already takes place in the context of UK FMI activities around the globe, the Bank’s framework for non-UK FMIs, which offer services in the UK, is similarly underpinned by principles of proportionality and deference. In 2024, the Bank has further strengthened its relationships with international regulators and commitment to close collaboration.

This includes the newly established MoU with the French Authorities, which enables the Bank to place reliance on the French authorities for the supervision of the France-domiciled CCP, LCH SA. As such, the Bank has recognised LCH SA under its framework for incoming CCPs. Importantly, the MoU includes reciprocal arrangements which provide for co-operation and information sharing in relation to matters that affect both LCH SA and the UK CCP, LCH Ltd., as sister entities.

In May, the Bank recognised the US-domiciled Chicago Mercantile Exchange (CME). CME is supervised by the Commodity Futures Trading Commission (CFTC) in its home jurisdiction. The Bank’s arrangements with CFTC, as set out in the 2020 MoU and detailed practices thereunder, builds on our longstanding relationship of co-operation and mutual understanding with respect to the supervision and oversight of cross-border CCPs, and provides for the Bank to defer to the home authority.[31]

The Bank serves as a host supervisor of systemically important foreign financial market infrastructures, including Swift and CLS. These entities play a critical role in the UK’s financial system, facilitating global payment flows and reducing foreign exchange settlement risk. As a host supervisor, our focus is to ensure these FMIs maintain robust risk management practices that contribute to the UK’s financial stability and resilience. This role is particularly important given the cross-border nature of their operations and the potential impact on global financial stability.

In performing the role, we work closely with the home regulators, including the National Bank of Belgium for Swift and the US Federal Reserve for CLS. While we defer to these institutions as lead supervisors, we do so only when confident that their regulatory frameworks deliver supervisory outcomes broadly equivalent to our own standards. Our participation in international co-operative oversight arrangements – such as the Swift Oversight Group (led by the National Bank of Belgium and comprising the G10 central banks) and the CLS

31. **The Bank of England and the Commodity Futures Trading Commission announce joint statement on the supervision of cross-border central counterparties**.

Oversight Committee (led by the US Federal Reserve and including a broad group of central banks) – enables us to engage in regular discussions, information exchanges, and collaborative supervisory reviews. These collaborative efforts help us align on priorities and ensure consistent oversight outcomes that support global financial stability objectives.

This year, progress has been made in revising the oversight framework for Swift, with a legislative framework being developed under Belgian law in response to evolving regulatory expectations. The aim of this framework is to strengthen and broaden the scope of the central banks' oversight of Swift, aligning expectations with the CPMI-IOSCO PFMIs. As Swift is a co-operative company under Belgian law, a legislative proposal will be presented to the federal Parliament once consensus on its content is reached within the Oversight Group. The Bank will continue to work closely with the National Bank of Belgium and Oversight Group to support this more resilient and responsive oversight framework for Swift.

4: What are the Bank's future priorities?

Our objectives for the coming year will reflect the work to establish the rulebook alongside continued emphasis on robust supervision and effective international co-operation.

We will continue to:
- ensure UK financial stability through financially resilient FMIs;
- ensure FMI services are operationally resilient and are not a major financial stability risk in the event of disruption;
- enable safe and resilient innovation in payments, settlement and clearing; and
- implement and embed our new responsibilities in a proportionate and robust way.

4.1: Ensure financial stability through financially resilient FMIs

The Bank will continue to monitor risks to financial resilience. This will include undertaking a range of supervisory reviews, technical risk reviews, stress tests and third-party reviews, across the FMI population. We will further enhance our use of data to support identification of risks to FMIs.

The CCP SST will continue to play a role in our approach to supervision and will take place on a regular basis. The Bank will continue to develop its stress-testing capabilities and explore opportunities to collaborate and share best practices with other CCP regulators internationally.

The Bank will continue to contribute to international FMI-related committees and working groups to ensure that consistent levels of resilience are maintained globally.

The Bank will support the efforts of the standard-setting bodies to implement the BCBS-CPMI-IOSCO proposals to improve transparency and evaluate the responsiveness of initial margin practices in centrally cleared markets. The Bank will also continue to support CPMI-IOSCO's work to identify areas where further guidance or recommendations may be useful for FMIs' practices relating to non-default losses.

4.2: Ensure FMI services are operationally resilient and not a major financial stability risk in the event of disruption

The Bank will continue to promote high standards of operational resilience across UK FMIs. This will include undertaking a range of supervisory reviews, technical risk reviews, and third-party reviews, across the FMI population, responding to any outages and incidents that occur and continuing the follow-up and lessons learned on earlier incidents.

The Bank will continue to work with FMIs to ensure that by 31 March 2025, they have taken all reasonable action to ensure that their important business services remain within impact tolerances under extreme but plausible scenarios. Section 3 set out the assessment of progress to date and this will be an area of continued focus in 2025 as operational resilience is key to maintaining confidence and stability in the financial system.

We will work with FMIs undertaking internal transformation programmes to ensure that changes are completed effectively and efficiently and with robust standards to ensure UK financial stability.

The Bank will continue to work with other regulators to roll out and embed the oversight of CTPs as set out in the CTP oversight approach document once HMT designate the first CTPs. Following consultation, the Bank will consider responses and publish its final policy statement and requirements for FMIs to report operational incidents and their material third-party arrangements.

The Bank will support international work on issues relating to FMI operational resilience, including in relation to CPMI-IOSCO work on cyber and operational resilience, and emerging issues in FMI risk management, such as climate-related risks for FMIs.

4.3: Enable safe and resilient innovation in payments, settlement and clearing

Innovation within the sector continues at pace and we will continue to develop the Bank's broader approach to innovation in money and payments (see Box H).

We will continue to work with HMT to take forward the government's ambitions for the UK payments landscape as a whole, including delivering on the outcomes identified in the HMT National Payments Vision. The National Payments Vision is in response to the 2023 Future of Payments Review which provided recommendations to the government on how to successfully deliver world-leading payments in the UK, it was published on the 14 November 2024. The National Payments Vision established a Payments Delivery Committee of which, the Bank, PSR, FCA and HMT all have senior representatives.

The National Payments Vision sets out a clear vision for a thriving payments sector in the UK and seeks to ameliorate some of the issues highlighted in the Future of Payments Review. The newly established Payments Vision Delivery Committee will assess longer-term requirements for the future of the Faster Payment System and the appropriate funding and governance arrangements needed to deliver this including proposals to reform Pay.UK. The committee will seek input from industry through the Vision Engagement Group.

The Bank and the FCA have opened the DSS for applications and will continue to work together to process applications. The DSS is designed to allow firms which provide securities trading and/or settlement services to test and adopt new technologies that are not supported under current legislation.

Through our international engagement through the FSB and the standard setting bodies the Bank intends to help strengthen international co-operation and co-ordination to facilitate safe and resilient innovation in payments and settlement. The global regulatory framework for digital assets, including stablecoins,[32] as well as emerging global experiences with regards to its implementation will continue actively to inform the Bank's development of the UK regulatory framework.

We will implement international standards within a domestic regime for systemic payment systems using stablecoins. We plan to publish a consultation paper on our final proposals for the regulatory framework. In doing this we will work closely with the FCA which has been working in parallel to develop a regulatory framework for non-systemic stablecoins, and for conduct purposes for systemic payment systems using stablecoins. These proposals build on the November 2023 discussion paper[33] on the proposed regulatory regime for systemic payment systems using stablecoins and related service providers. Over the course of 2024 we have been engaging with the industry and analysing the responses received. The Bank will continue to monitor developments in stablecoins closely to identify any stablecoin or proposed stablecoin which is likely to become systemic in the UK.

Many jurisdictions around the globe are working on shortening the time needed to settle financial market transactions such as settling sales of shares or bonds. Such moves to reduce the settlement cycle timelines are desirable as they reduce counterparty risk, while buyers and sellers of securities receive their cash or security faster. As the counterparty risk is reduced, some margin held at CCPs can be released back to clearing members and used for other productive purposes.

Some jurisdictions, notably the US, have already shortened the settlement cycle for securities from trade date plus two days ('T+2') to trade date plus one day ('T+1'). In the UK, work is ongoing to shorten the settlement cycle to T+1. This work is led by industry through the Accelerated Settlement Taskforce. Its report came out at the end of March, supporting an

32. FSB Global Regulatory Framework for Crypto-asset Activities, consisting of the **High-level Recommendations for the Regulation, Supervision and Oversight of Crypto-Asset Activities and Markets**; and the **High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements**; and CPMI-IOSCO guidance on **Application of the Principles for Financial Market Infrastructures to stablecoin arrangements**.
33. **Regulatory regime for systemic payment systems using stablecoins and related service providers**.

eventual move to T+1 by end-2027 and recommending that the UK and other European jurisdictions should collaborate closely to see if a co-ordinated move to T+1 is possible.

The Bank welcomes the report, and the work of the technical group which was set up to assess the practical implementation of the UK market's move to T+1 settlement. The technical group published a draft report in September 2024.

The Bank continues to engage with the technical group as an observer as it focuses on the operational and technical challenges of the move to T+1. As some of the changes outlined in the group's draft report would require legislative/regulatory change, we continue to work with HMT and the FCA to establish what form these changes would take and a viable timetable for them.

Box H: The Bank's proposed approach to innovations in money and payments

In our July discussion paper,[34] we set out the proposed approach to innovations in the payments landscape going forward. Understanding these innovations, preparing for them, and supporting their adoption in a safe manner, are core to our monetary and financial stability objectives.

Some elements of our proposed approach are directly relevant to the supervision and regulation of FMIs. We set out that we have a low-risk appetite for a significant shift away from settlement in central bank money towards private settlement assets, given the role of central bank money as an anchor for confidence in the financial system:

- At its September 2024 meeting the FPC reiterated this stance.
- The FPC noted that there were potential benefits of wholesale use of systemic stablecoins. However, stablecoins presented risks to the singleness of money, whereby all different forms of money referencing the same unit of account must be exchangeable with each other at par value at all times. Even if stablecoins were backed with central bank deposits, there remained risks to the stability of the value of the stablecoin. If the value of stablecoins were to deviate from par, this would compromise their acceptance as a settlement asset and could have broader consequences for trust in money. These risks were particularly acute in wholesale markets given their systemic nature and could have financial stability implications.
- The FPC noted that further technological solutions, business and risk management practices or regulation might mitigate these financial stability risks in future. The FPC supported their exploration given the potential benefits of wholesale use of stablecoins. The FPC also supported exploring how the benefits of innovation in money and payments could be harnessed, including central bank money alternatives that were compatible with distributed ledger technology.

Our proposed strategy also includes outcomes that we seek in the retail payments landscape to deliver trust and confidence in money. We seek a payments landscape which maintains the singleness of money and promotes sustained innovation, with infrastructure and a wider ecosystem that is resilient and has sustainable governance and funding models.

34. **The Bank of England's approach to innovation in money and payments**.

These outcomes will require clear and renewed leadership by the UK authorities in this space. As such, we will work closely with HMT, the PSR, the FCA and industry to deliver them.

More broadly, the Bank's future strategy as set out in the discussion paper also includes continuing to explore innovations in central bank money. In particular, our discussion paper proposes a programme of experiments to test the use cases, functionalities and prospective designs for wholesale central bank digital currency (CBDC) technology.

As we move forward domestically, we will also engage with international partners to consider how our respective payments landscapes can interoperate in a way that reduces frictions to cross-border payments, while managing the potential risks from this to international monetary and financial stability.

4.4: Implement and embed our new responsibilities in a proportionate and robust way

FSMA 2023 provides the Bank with a rule-making power that it can use to replace relevant repealed parts of retained EU legislation with Bank rules. The Bank will develop and implement the rulebook in an open and transparent way, consistent with its statutory obligations, and with a view to delivering a nimble, effective, and forward-looking regulatory regime.

The first priority will be the repeal and replacement of EMIR for CCPs. We expect to consult on the first phase of this new rulebook in 2025. Industry engagement has shaped the approach to EMIR Repeal and Replace – highlighting potential areas for revision.

Following consultation on a set of fundamental rules for FMIs in November 2024, in 2025 the Bank will consider any feedback received and publish final rules and accompanying guidance. These rules will ensure that the outcomes the Bank aims to achieve through its regulation of FMIs are clearly communicated and will ensure no underlap in the regulatory regimes for FMIs.

FSMA 2023 gave the Bank the powers to make rules to exempt trades conducted as part of post-trade risk reduction (PTRR) services from the clearing obligation if the Bank considers it necessary or expedient for the purpose of advancing its objectives. The FCA has consulted on their equivalent powers in relation to PTRR exemption from the derivatives trading obligation earlier this year. We are planning to consult on the exemption of PTRR trades from the clearing obligation and will work with the FCA during the development of the proposal.

FSMA 2023 gave the Bank the power to modify or waive rules for individual firms (the 'permissions power'). Before the Bank can consult on its approach to using the permissions power, the scope of the power will be set by HMT. We expect this to be set in 2025, at which point the Bank will consult on its approach to using the permissions power. The permissions power is an important tool in achieving the full potential of the Bank's new rule-making powers, allowing them to be applied flexibly where necessary, including in support of innovation where appropriate.

We will operate our new rule-making powers within an enhanced accountability framework introduced as part of FSMA 2023 that will ensure that the Bank's new powers are supported by high levels of transparency and accountability. In practice, this will enable the Bank to ensure that the regulation of CCPs and CSDs remains consistent with the highest international standards, evolves in response to current events and supports our supervisory approach.

In 2025, the Bank will continue to develop its approach to various accountability measures brought in under FSMA 2023:

- Following publication of our SoP on the Bank's approach to CBA, the Bank will continue to develop its methodological approach to conducting CBA. This will develop as we conduct more CBA on a greater range of policy proposals and will also include consideration of any feedback received on its SoP, as well as interaction with the CBA Panel.
- The Bank will continue to refine and embed its approach to the SIO. This will include continued engagement with a broad range of stakeholders, and consideration of the SIO in the upcoming work to repeal and replace EMIR.
- FSMA 2023 also brought in a requirement for the Bank to publish its approach to its review of rules. The Bank plans to publish this consultation in 2025.
- Under FSMA 2023 HMT is required to send written recommendations for FMIC to have regard to at least once in each Parliament. This requirement will commence from February 2025.
- Going forward, the Bank will transition the FMI Annual Report to a summer annual publication date from 2025 onwards to align better with the wider Bank and PRA. This will enable the Bank to include more forward-looking material within the report to drive accountability and provide useful information to stakeholders.

We will continue to recognise incoming CCPs and CSDs. The Bank will continue to process applications from non-UK CCPs and CSDs for recognition where the relevant requirements are met. These recognition requirements include a decision by HMT that the incoming FMI's home jurisdiction's regulatory framework is equivalent and appropriate, and proportionate supervisory co-operation and information sharing arrangements have been agreed between the Bank and the incoming FMI's home authority.

The Bank will also work with HMT to provide advice supporting HMT's assessments of overseas jurisdictions for equivalence. The Bank is also in contact with overseas authorities on necessary co-operation and information sharing arrangements to support recognition assessments. The Bank will continue to provide such advice, pursue co-operation arrangements and complete recognition decisions in the coming period where the necessary requirements are met. In the meantime, non-UK CCPs and CSDs in the temporary regimes may continue to offer clearing and settlement services in the UK.

Annex 1: FMIs and specified service providers supervised by the Bank and the key supervisory legislation to which they are subject

UK CCPs are regulated under FSMA 2000 as recognised clearing houses (RCH) and under UK EMIR. The embedded payment systems of LCH Ltd and ICE Clear Europe are also both recognised payment systems under the Banking Act 2009.

CCP	Description
ICE Clear Europe Limited	Clears a range of exchange-traded derivatives.
LCH Limited	Clears a range of securities, exchange-traded derivatives, interest rate swaps, inflation swaps, non-deliverable foreign exchange forwards, foreign exchange (FX) options, bonds and repurchase agreements.
LME Clear Limited	Clears a range of metal derivatives traded on the London Metal Exchange.

Payment systems meeting defined criteria may be recognised by HMT. Recognised payment systems are supervised by the Bank under the Banking Act 2009.

Payment system	Description
Bacs[(a)]	Operated by Pay.UK, processes higher-volume and lower-value payments, such as salary, benefit, Direct Credit and Direct Debit payments.
CHAPS[(b)]	Operated by the Bank of England, the CHAPS system is the UK's high-value payment system, providing real-time gross settlement of sterling transfers between participants.
CLS	Operates the world's largest multi-currency cash settlement system for foreign exchange transactions in 18 currencies, including sterling.
Faster Payment System (FPS)[(a)]	Operated by Pay.UK, processes standing orders and electronic retail transactions, including transactions generated in internet, mobile and telephone banking.
LINK	LINK is a network of card issuers and ATM deployers which allows cardholders to use their cards to withdraw cash at any ATM connected to LINK where the ATM deployer is not the same institution as the cardholder's issuing bank.
Mastercard Europe	Mastercard Europe is a four-party card scheme and cards payments processor operating in the UK, European Economic Area (EEA), and non-EEA, offering debit, credit, deferred debit and prepaid card products.

Payment system	Description
Sterling Fnality Payment System(c)	Once launched, the Fnality system intends to be the UK's first wholesale settlement system that uses DLT through the Bank's Real-Time Gross Settlement (RTGS) Omnibus Account.
Visa Europe	Visa Europe is a four-party card scheme and cards payments processor operating in the UK, EEA, Israel, Turkey, and Switzerland, offering debit, credit, deferred debit and prepaid card products.

(a) Bacs and FPS are owned and operated by Pay.UK, which is the entity that the Bank supervises.
(b) The Bank's FMI Directorate continues to supervise CHAPS (a non-recognised payment system) to the same standard as recognised payment systems. CHAPS was formally derecognised by HMT in December 2017, when responsibility for managing the system was transferred to the Bank.
(c) DLT-based sterling payment system Fnality (£FnPS) entered a test phase of its digital representation of funds at a central bank on 27 November 2023. Progressing to the next stage of scaling its operations will be subject to £FnPS meeting the Bank's operational and supervisory expectations.

Specified providers may be specified by HMT where their service(s) are determined to form part of the arrangements constituting a recognised payment system. Specified service providers are supervised by the Bank under the Banking Act 2009.

Specified provider	Description
Vocalink	Vocalink is a technology company that designs, builds and operates the IT infrastructure for the Bacs, Faster Payment and LINK payment systems.

Recognised UK CSDs are regulated under FSMA and UK CSDR. Euroclear UK & International operates the CREST system, which is also a recognised payment system under the Banking Act 2009 and is also subject to the Uncertified Securities Regulations 2001.

Recognised CSD	Description
Euroclear UK & International	EUI operates the CREST system – a securities settlement system for a range of securities including UK gilts and money market instruments, as well as UK equities – which settles on a delivery-versus-payment basis.

Incoming (non-UK) CCPs recognised by the Bank as a Tier 1 or Tier 2 incoming CCP under UK EMIR Article 25.

CCP	Description
CBOE Clear Europe N.V.	Clears a range of cash equities, depository receipts, exchange-traded funds and equity derivatives (single stock options, index futures and options) and securities financing transactions.
Chicago Mercantile Exchange Inc.	Clears a range of exchange-traded futures and options including on interest rates, equity indexes, FX, energy, metals, agricultural and commodities products.
Clearing Corporation of India	Clears a range of OTC debt/equity securities, derivatives and repos).
Eurex Clearing AG	Clears a range of OTC and exchange-traded securities and derivatives including equities, debt, interest rate, FX and OTC repo transactions.
LCH SA	Clears a range of OTC and listed repo, credit default swaps and crypto-derivatives.

Incoming (non-UK) CSDs recognised under Article 25 of UK CSDR.

CSD	Description
Euroclear Bank SA/NV	Euroclear Bank (EB) operates the Euroclear System for securities settlement and provides banking type ancillary services. EB’s participant settle a range of internationally traded securities including debt instruments, equities and funds.

Annex 2: Data on FMIs

CCPs (by default waterfall) – average of daily figures over the period

		Total initial margin requirement (£ equivalent, millions)[(a)]			Default fund (£ equivalent, millions)[(b)]			Number of clearing members		Operational availability of core systems		Products cleared
		2024 H1	2023	2022	2024 H1	2023	2022	2024 H1	2023	2024 H1	2023	2024 H1 and 2023
ICE Clear Europe[(c)]	Credit default swap	n.a.	3,822	7,990	n.a.	1,236	1,052	n.a.	n.a.	n.a.	100.00%	Credit Default Swap clearing ended at ICE Clear Europe on 27 October 2023
	Futures and options	59,982	73,865	121,190	2,299	2,458	2,607	73	73	100%	100.00%	Futures and options: exchange-traded energy markets (including ICE Index, ICE Futures Europe, ICEU Futures Abu Dhabi, and ICE Futures US) and the financials and softs futures and options contracts traded on ICE Futures Europe.
LCH Ltd	EquityClear	3,031	3,509	3,954	150	150	150	30	31	99.99%	100%	Clears a range of OTC and exchange-traded interest rate derivatives, FX derivatives, cash equities, cash bonds and repos.
	ForexClear	6,076	5,417	6,113	1,616	1,386	1,832	38	38	99.93%	99.96%	
	RepoClear	6,199	9,942	11,632	591	519	1,311	99	99	99.92%	100%	
	SwapClear[(d)]	174,813	173,805	157,302	5,646	5,620	5,406	125	127	99.50%	99.88%	
LME Clear	LME Base	9,771	10,320	9,092	1,155	1,289	1,358	41	40	100%	99.90%	Clears a range of base metal derivatives traded on the London Metal Exchange.
	LMEprecious	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(a) The end of day total margin requirement per default waterfall, averaged over all business days in the period.
(b) The size of the clearing member prefunded default fund, averaged over all business days in the period.
(c) ICE default fund is average of requirement amount rather than deposit value.
(d) The SwapClear line covers the SwapClear and Listed Rates services.

Recognised payment systems and securities settlement systems[a]

		Volume			Value (£ millions)			Number of settlement bank members		Operational availability[b]		Important payment types
		2024 H1	2023	2022	2024 H1	2023	2022	Jun 2024	Dec 2023	2024 H1	2023	2024 H1 and 2023
Bacs		26,866,810	27,015,249	26,750,310	23,128	22,445	21,340	31	31	100%	99.99%	Direct debit/direct credit
CHAPS[c]		206,717	203,759	203,538	343,372	364,444	394,572	38	38	99.95%	99.78	Financial markets and corporate treasury, cross border, other wholesale, interbank, government, property completions and mortgages.
CLS	All currencies	1,218,000	1,153,000	1,157,701	7,030,000	6,600,000	3,993,855	74	75	100%	100%	CLS settles FX payment instructions including those related to deliverable foreign exchange spot and forward transactions, deliverable foreign exchange swap transactions, deliverable cross-currency swap transactions, exercised deliverable foreign exchange option transactions and certain credit derivative transactions.
	Sterling	79,170	74,945	83,415	527,250	495,000	438,078					

		Volume			Value (£ millions)			Number of settlement bank members		Operational availability(b)		Important payment types
		2024 H1	2023	2022	2024 H1	2023	2022	Jun 2024	Dec 2023	2024 H1	2023	2024 H1 and 2023
CREST	Sterling	213,107	199,558	214,793	889,319	801,787	893,710					Settlement of gilts, equities, and money market instruments (including in respect of the Bank's open market operations and repo markets transactions more generally).
	US dollar	6,508	5,730	6,703	1,540	1,249	1,673					
	Euro	1,002	888	1,018	997	685	510					
	Total CREST	220,616	206,176	222,514	891,856	803,721	895,894	24	24	100%	99.90%	
Faster Payment System(d)		19,507,621	17,925,718	15,742,662	16,133	14,913	12,971	41	40	100%	100%	Single immediate payments, Standing Order payments, Forward dated payments, Direct Corporate Access.
Link(e)		3,822,896	4,088,107	4,347,206	216	223	227	32 (23 Banks)	32 (23 Banks)	100%	100%	Withdrawing cash from ATMs deployed by entities other than the withdrawer's card issuer.
Visa Europe	All currencies	162,028,175	152,814,230	136,987,615	5,463	5,230	4,697	353	356	100%	100%	Card and digital payments.
Mastercard Europe	All currencies	158,103,925	146,978,186	129,311,875	4,946	4,766	4,260	828	813	100%	99.99%	Card and digital payments.

(a) All value and volume data represent daily average unless otherwise stated.
(b) The data on operational availability is not comparable between firms because each firm uses its own definition.
(c) Number of settlement bank members includes non-bank payment service participants and does not include suspended participants.
(d) Number shown in the above table are directly connected settling Participants.
(e) Number of settlement bank members may vary as not all LINK Members have their own RTGS account and will settle using other LINK Members' RTGS accounts.

Annex 3: Glossary of terms and abbreviations

Terms

Credit risk – the risk of loss due to the failure of a counterparty to perform on a contractual obligation on time and in full. Credit risk arises whenever future cash flows are due from parties who may not provide them.

Digital Securities Sandbox – designed to allow firms which provide securities trading and/or settlement services to test and adopt new technologies that are not supported under current legislation.

Initial margin – collateral which is posted at the beginning of a transaction by a member to a CCP to cover potential future adverse changes in the market value of the contract and is recalculated on a regular basis.

Liquidity risk – the risk that a party does not have sufficient funds to meet an obligation when it becomes due or can only obtain those funds at an unexpectedly high cost.

Operational risk – the risk that deficiencies in information systems or internal processes, human errors, management failures, or disruptions from external events will result in the reduction, deterioration, or breakdown of services provided by an FMI.

Securities settlement system – an entity enabling securities to be transferred and settled by book entry according to a set of predetermined multilateral rules. Such systems allow transfers of securities either free of payment or against payment.

Stablecoin – stablecoins are a new form of privately issued digital asset that aims to maintain a stable value against fiat currency(ies) and can be used to make payments and/or settle financial transactions.

Systemic risk – the risk that the inability of one or more participants to perform as expected will cause other participants to be unable to meet their obligations when due.

Abbreviations

BCBS – Basel Committee on Banking Supervision.

BIS – Bank for International Settlements.

CBA – cost benefit analysis.

CBDC – central bank digital currency.

CCPs – central counterparties.

CFTC – Commodity Futures Trading Commission.

CME – Chicago Mercantile Exchange.

CPMI – Committee on Payments and Market Infrastructures.

CSDR – Central Securities Depositories Regulation.

CSDs – central securities depositories.

CTPs – critical third parties.

DLT – distributed ledger technology.

DSD – Digital Securities Depository.
DSS – Digital Securities Sandbox.
EB – Euroclear Bank.
EEA – European Economic Area.
EMDEs – emerging market and developing economies.
EU – European Union.
EUI – Euroclear UK & International.
FCA – Financial Conduct Authority.
FIRE – Format for Incident Reporting Exchange.
FMI – financial market infrastructure.
FMIC – Financial Market Infrastructure Committee.
FMID – Financial Market Infrastructure Directorate.
FMIs – financial market infrastructure firms.
FPC – Financial Policy Committee.
FPS – Faster Payment System.
FSB – Financial Stability Board.
FSMA 2023 – Financial Services and Markets Act 2023.
FX – foreign exchange.
HMT – His Majesty's Treasury.
IM – initial margin.
IOSCO – International Organization of Securities Commissions.
ISDA – International Swaps and Derivatives Association.
LDI – liability-driven investment.
MoUs – Memoranda of Understanding.
ORG – Operational Resilience Group.
OTC – over the counter.
PFMI – Principles for Financial Market Infrastructures.
PSR – Payment Systems Regulator.
PTRR – post-trade risk reduction.
RCH – recognised clearing houses.
RPSOs – recognised payment system operators.
RTGS – Real-Time Gross Settlement.
SFTR – Securities Financing Transaction Regulation.
SIMM – standard initial margin model.
SIO – secondary innovation objective.
SoP – statement of policy.
SWES – System-Wide Exploratory Scenario.

Annex 4: Report on the exercise of relevant sub-delegated powers for the period ending 17 December 2024

Presented to Parliament pursuant to paragraph 32(2)(a) of Sch. 7 of the European Union (Withdrawal) Act 2018.

The European Union (Withdrawal) Act 2018 ('The Act') requires the Bank of England to report to Parliament annually if we exercise relevant sub-delegated powers.

There has been no exercise of sub-delegated powers by the Bank in our supervision of FMIs in the reporting period ending 17 December 2024. The previous report was issued on 18 December 2023.[35]

35. **The Bank of England's supervision of financial market infrastructures - Annual Report 2023**.

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