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The roles of central banks and central bank money in the evolving payment system

CPMI Report

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Foreword

Every payment rests on a simple but demanding promise: that funds, once sent, will arrive safely, promptly and irrevocably. Whether that promise is kept depends on the rules, procedures and underlying infrastructures of the payment system – and, ultimately, on the money used to settle payments. Confidence in payments and trust in money are inseparable. This is where the role of central banks begins.

The payments landscape is undergoing profound transformation. This report addresses two fundamental questions: what is changing in the payments ecosystem, and what must be preserved? What is changing is the demand for faster, always-on, digital and cross-border payments; the actors involved; and the technology used to issue, record, transfer and settle monetary claims. What must be preserved are the foundations of trust in money and payments: the singleness of money, convertibility at par and settlement finality, along with the liquidity, operational resilience and safeguards that ensure safety and efficiency.

Innovation reduces certain risks, creates new ones and relocates others across the financial system. As payment functions are increasingly unbundled across issuers, platforms and service providers, the allocation of risks and responsibilities becomes more complex. Liquidity risk may emerge more often outside traditional financial intermediaries, where established safeguards and access to central bank liquidity are not always available. Meanwhile, cyber threats, operational vulnerabilities and reliance on third-party technology providers are becoming more consequential. The policy response should therefore be risk- and function-based, not technology-based: what matters is how risks arise, who bears them, how they are managed and how they spread through the financial system.

Payments are now at the frontier of finance. It is in the payments space that new technologies are first deployed, new business models take shape and new risks surface. Central banks cannot watch this frontier from a distance. As issuers of money, payment system operators, overseers and catalysts, they must understand change as it happens and, where necessary, help shape its course.

This requires a broader perspective on central banking. In the payment system of tomorrow, the soundness of technology will matter as much as the soundness of balance sheets. Central banks will need to devote as much attention to technology, data, operational resilience and cybersecurity as to financial markets and new forms of intermediation. This calls for greater technological expertise, alongside economic and legal knowledge, and for closer integration across disciplines. Central banks will also need to strengthen their capacity to anticipate vulnerabilities. And because payments – and their risks – increasingly cross borders, international cooperation and engagement with the private sector will be essential. The Committee on Payments and Market Infrastructures is well placed to support this effort.

As central banks' responsibilities evolve, the fundamental role of central bank money remains unchanged. It continues to anchor trust in the monetary and payment system. Central bank money need not be used in every transaction or on every platform, but it must be at the core. It should remain the settlement asset in systemically important payment systems and other financial market infrastructures, where practical and available. It should underpin the convertibility at par of other forms of money. Public and private money play complementary roles: their coexistence supports innovation, competition and efficiency, provided that new arrangements do not undermine interoperability, resilience or the singleness of money.

The future of payments will be shaped by technologies and institutions we cannot fully anticipate today. But the foundations of trust in money must endure. The challenge for central banks is not to preserve the payment systems of the past, but to ensure that the payment systems of the future preserve what makes money trustworthy.

Fabio Panetta

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Executive summary

A safe and efficient payment system is essential for every economy. Technological innovation, changing user demand and the emergence of new types of entities and designs of infrastructures have led to a profound evolution of payment systems. These changes could affect payment system safety, efficiency and trust in money. Maintaining the trust in money and fostering the safety and efficiency of the payment system are core responsibilities of central banks. This report examines the implications for central banks and outlines the policy tools, considerations and trade-offs, as they face increasingly diverse and complex payment systems.

The evolving payments landscape: greater diversity and complexity

The payments landscape is changing in three notable ways. First, structural changes in payment demand have followed from developments in the real economy and the financial system. Second, a broader and more diverse set of entities play growing roles in the payment system. This includes non-bank payment service providers, such as e-money issuers and stablecoin providers. Third, new technologies, particularly tokenisation, are changing the configuration of payment systems. Tokenisation enables the separation of issuance, recording and transfer functions, as well as facilitates the coexistence of multiple asset types and functions on a single platform. Overall, these changes have made the structure of payment systems increasingly diverse and complex.

Characteristics: network effects, concentration-fragmentation dynamics and trust in money

The recent developments do not change the characteristics that have long shaped payment systems. In particular, individual payment systems remain subject to network effects. The more participants in a payment system, the more useful it becomes for each participant. This enhances efficiency but also creates coordination challenges. Network effects also tend to drive payment systems towards concentration, which may lower costs through economies of scale. On the other hand, concentration may reduce competition and innovation as well as resilience in the payment system overall. These concentration dynamics may drive actors to specialise in profitable areas, potentially hindering interoperability and fragmenting liquidity. More fundamentally, payment systems require trust in money as a cornerstone. Central bank money plays a fundamental role in supporting this trust. It serves as a settlement asset in systemically important systems and as the foundation for convertibility at par between means of payment in an economy. The singleness of money, where different forms of money are exchanged at par and regarded by economic actors as interchangeable, requires and reinforces such trust.

Payment systems: central bank money at the core and complementary private-sector roles

These characteristics of payment systems have given rise to a tiered structure within the payment system of an economy: central bank money serves as the settlement asset at the apex, with direct participants (traditionally commercial banks) settling obligations among themselves and with connected financial market infrastructures (FMIs). These direct participants in turn provide accounts and payment services to their customers, which may include other banks, non-bank payment service providers, businesses and households.

Central banks and the private sector play complementary roles in this tiered structure. Central banks act as issuer, operator, overseer and catalyst. The private sector issues payment instruments, drives innovation and fosters competition in payment services, leading to improved user experiences and broader access to financial services.

A safe and efficient payment system combines central bank money with private means of payment and settlement assets, in which their risks are appropriately managed and different forms of money remain reliably convertible at par. Central bank money is the safest and most liquid settlement

asset in a jurisdiction and should be used as the settlement asset in systemically important payment systems and other FMIs where practical and available. While the specific balance will differ across jurisdictions and may change over time, outcomes where either the central bank or private sector entities provide all the money in the economy would not be sufficiently stable or efficient.

The changing payment system: new opportunities, risks and policy challenges

The evolution in the payments landscape creates opportunities for enhanced efficiency, competition and innovation. These developments also generate new interdependencies and may introduce risks across the system – including credit, liquidity, operational and cyber risks.

As the variety of available settlement assets and means of payment grows, questions emerge about how risks arise and spread through the payment system and the wider financial system. Greater reliance on digital technology adds further risks, such as risks associated with cyber threats, quantum computing and artificial intelligence.

The separation of issuance, recording and transfer functions creates new opportunities and incentives for private-sector issuers and platform operators. By lowering barriers to entry, it may improve accessibility and foster innovation. At the same time, it raises questions about accountability and governance for identifying and managing potential risks from reliance on external platforms, particularly in relation to operational and cyber resilience. Some emerging payment system configurations enable the coexistence of multiple asset types and financial functions on a shared programmable platform. This may offer efficiency gains but may also influence the way risks are created, accumulated or transmitted.

The changes in the payment system may also reshape the demand, supply and distribution of liquidity within a jurisdiction's payment system as the use of prefunding arrangements or gross settlement becomes more prevalent. Further, tokenisation may lead to liquidity fragmentation where tokenised arrangements are not effectively connected.

Competitive dynamics are expanding end-user choice and encouraging innovation. At the same time, non-bank payment service providers may depend on competing commercial banks for access to settlement accounts in interbank payment systems. This creates questions about neutrality and a level playing field in competition but may also reflect broader policy considerations related to safety, efficiency and financial stability.

The emergence of new means of payment and settlement assets also raises questions about their convertibility. Mechanisms supporting convertibility between means of payment issued by different types of entities are not uniform. Convertibility of commercial bank money into central bank money at par is supported by robust institutional features, including prudential regulation and supervision, deposit insurance, and access to central bank accounts, liquidity and interbank payment systems. To date, non-bank payment service providers typically lack comparable convertibility mechanisms, which may in part reflect business models of non-bank issuers.

These implications are interconnected. They affect payment systems through multiple channels and create a complex set of policy trade-offs for central banks. Navigating them will require a coherent and holistic approach.

Preserving efficiency, safety and trust: key policy tools and considerations for central banks

The evolution in the payments landscape leads central banks to reflect on how best to support central bank money's role as the anchor of trust. It underscores the importance of continually evaluating the practicality and availability of central bank money for entities or transaction types for which its use is deemed important.

Central banks can draw on a range of complementary tools to foster the safety and efficiency of the payment system. These tools reflect their roles as issuer, operator, overseer and catalyst, and central

bank actions in one area may affect outcomes in another. As a result, central banks may review their policy choices holistically rather than in isolation, to determine the most effective combination of measures.

As issuers, central banks may consider which entities have access to their accounts, for which services and on which terms. These decisions involve a range of objectives and trade-offs, such as those related to systemic risk, competition and concentration within a jurisdiction's payment system. Policies therefore vary by risk profiles, entity types and jurisdictional circumstances. To keep pace with the evolving payments landscape, some central banks are reviewing access policies to consider factors related to systemic importance and the diversity of prospective account holders.

As payment system operators, central banks have several tools available, including modernising existing infrastructure and building new platforms. In doing so, they may weigh incremental improvements against transformative changes, the risks of acting (too) early against those of acting (too) late, and the benefits of providing public services against those of enabling private-sector solutions. Different policy tools are not mutually exclusive but often combined. A further consideration in some jurisdictions, relevant to both the operator and issuer roles, is whether central bank money should be available as a settlement asset on programmable platforms. This raises questions about the technical form of central bank money, its interaction with tokenised assets, the number of platforms involved, and the ownership and governance of those platforms.

As overseers, central banks may assess whether emerging arrangements such as stablecoin or other tokenised arrangements fulfil functions typically performed by FMIs, and if so, meet criteria of systemic importance and fall within their oversight scope. Consistent with their authorities, central banks may oversee new arrangements directly, require regulated FMIs or intermediaries to manage risks arising from their reliance on such arrangements, or use a combination of both approaches. Where necessary, oversight tools and internal and diverse expertise may also need to be enhanced to address emerging risks. To address the increasing cross-border activity and interdependencies, central banks may also focus on promoting international cooperation and fostering greater consensus on oversight approaches.

As catalysts, central banks act where coordination challenges create barriers to welfare-improving market outcomes. This role recognises the private sector's ability to identify market needs and develop solutions. Central banks may nevertheless help overcome collective action problems by convening stakeholders, supporting the development of market solutions, and fostering the adoption of industry standards and common practices.

Looking ahead: preserving the foundations with adaptability and international cooperation

Innovation will continue at pace, with implications for the composition of means of payment and settlement infrastructures. Central banks will continue to evaluate developments in payment systems and take proportionate and timely action as needed. They will assess how new arrangements affect safety and efficiency, liquidity and resilience, and convertibility. They will also consider the implications for interoperability, competition and the concentration or distribution of risks. The rapid developments in technology and innovations also require central banks to reflect on whether they have the appropriate expertise and skills to address the emerging issues.

Innovation may change the form of money and the infrastructure of settlement. However, it does not change the foundational features of payment systems. Central bank money remains the cornerstone of trust, safety and efficiency in the payment system, with central banks and private sector entities playing complementary roles. Through a holistic and forward-looking approach, coupled with sustained and robust international cooperation, central banks can support payment systems that continue to serve as a reliable foundation for economic activity and growth in an increasingly digital and interconnected world.

1 Introduction

1.1 Motivation

In 2003 the (then) Committee on Payment and Settlement Systems (CPSS) published a report on "The role of central bank money in payment systems" (CPSS (2003)). The 2003 report examined the role that central bank money plays in a jurisdiction's payment system and developed an analytical framework to enhance understanding of how central banks formulate policy in this area. It highlighted the tiered structure of modern payment systems. It underscored the centrality and pivotal role of central bank money, both as a settlement asset in systemically important systems and as the backbone of the payment system more broadly, providing the foundation for par convertibility for other types of money within a single currency.[1]

Since the publication of the 2003 report, the payments landscape has undergone profound changes. First, there has been a fundamental change in payment demand. Consumers, businesses and financial intermediaries increasingly expect payments to be instant, always accessible, offered in various forms and usable across borders. Second, the number and nature of actors involved in payment service provision has broadened. While commercial banks continue to be integral to payment systems and payment service provision, non-bank payment service providers (PSPs), e-money issuers, large digital platforms and stablecoin issuers are providing material payment services and performing functions that were once concentrated in banks. This change can affect the structure of payment flows to and through financial market infrastructures (FMIs).[2] Third, technological advances are enabling new ways to organise and execute payment functions. This includes tokenisation,[3] which could enable issuers of means of payment and settlement assets including banks and non-bank PSPs to outsource the functions related to recording and transfer to programmable platforms (BIS-CPMI (2024)). Tokenisation could enable the combination of those functions with other functions such as trading.

These structural changes and the evolution in the payments landscape could affect payment system safety, efficiency and trust in money. Maintaining trust in money and fostering the safety and efficiency of the payment system are core responsibilities of central banks. This has motivated the BIS Committee on Payments and Market Infrastructures (CPMI) – the successor to the CPSS – to examine the roles of central banks and central bank money in the evolving payments landscape. This report considers how central bank money serves as the anchor of trust and how central banks can achieve their objectives of payment system safety and efficiency as payment systems become more diverse and technologically complex, and discusses central bank policy tools and associated considerations and trade-offs.

1.2 Scope and focus of the report

This report uses two perspectives throughout. The broad perspective considers the concept of "the" payment system of an economy (ie a jurisdiction's payment system as a whole), which encompasses the full set of payment configurations through which payment transactions are processed. The narrow perspective examines "an" individual payment system (ie a specific FMI). An individual payment system is defined as a set of instruments, procedures and rules for the transfer of funds between its participants. In

[1] For the purposes of this report, the terms "settlement" and "settlement asset" are used in the context of discharging the obligations of an FMI or its participants, and "transfer" and "means of payment" are used for payment activity more broadly, and without implying finality or lack thereof.

[2] An FMI is defined as a multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling or recording payments, securities, derivatives or other financial transactions.

[3] Tokenisation is defined as the process of generating and recording a digital representation of traditional assets on a programmable platform. The main opportunities (eg automatic reconciliations, atomic settlement and composability) and risks of tokenisation have been described elsewhere. See BIS-CPMI (2024).

these systems, participants typically establish balances at a settlement institution, and payments between participants are made by exchanging the liabilities of this settlement institution ("settlement assets").[4] The report moves between these two perspectives as needed.

Consistent with the 2003 report, when discussing key changes in payments and settlement and their implications for central bank policies, this report encompasses not only centralised systems (eg real-time gross settlement (RTGS) systems), but also other configurations for transferring funds between various economic actors (eg a network of correspondent banking relationships). It includes analysis of funds settlement related to securities settlement, whether those settlements are conducted within a single payment system or otherwise.

This report builds on many CPMI and other publications over recent decades, which cover more specific topics such as the role of non-banks in retail payments, distributed ledger technology (DLT), digital currencies, tokenisation and policy questions such as those related to payment system access and central bank oversight.[5] It complements these by providing a holistic analytical perspective combined with an updated overview of central bank policies related to payments and payment systems based on a CPMI member survey (as of September 2026). Real-world examples are included to provide concrete context, whereas the underlying analytical framework is intended to be robust to accommodate future market evolution.

Many of the topics addressed in this report have broader implications, including those for other core central bank responsibilities such as monetary policy and financial stability. This report draws attention to such implications, but further analysis is beyond its scope.

The remainder of the report is structured as follows: Section 2 discusses foundational features that are expected to remain stable over time, such as the economic characteristics of payment systems and the roles of central banks and the private sector in the payment system. Section 3 lays out the main areas of change in the payments landscape over the past two decades. Section 4 shows how these have affected the configurations of the payment system. Section 5 discusses how these changes to the configurations of the payment system may affect the safety and efficiency of individual payment systems and the system as a whole. Section 6 discusses policy options and considerations for central banks to achieve their common objectives amid those changes. Section 7 concludes. Annex 1 provides a summary of the CPMI member survey on central bank policies related to payments and payment systems.

2 Foundational features of payment systems

Payment systems facilitate economic activity by providing finality in the settlement of financial obligations and reducing the costs and risks associated with transactions. By doing so, they contribute to financial stability and support the wider economy. This section describes the key characteristics of payment systems, which have given rise to a tiered structure in which the central bank and the private sector play complementary roles.

2.1 Characteristics of payment systems

Three characteristics shape how payment systems function and the challenges they face. First, payment systems are subject to strong network effects, as the utility of the network increases with the number of its participants. This creates efficiency gains, but individual participants may not fully account for how their actions affect system-wide safety and efficiency, potentially creating misaligned incentives and

[4] Settlement of payment obligations in or of an FMI does not always require the transfer of monies. In some cases, an offsetting process can discharge obligations.

[5] See the CPSS and CPMI studies in the list of references.

coordination challenges. Cyber resilience in payment systems is one such example. The negative network externalities associated with a cyber incident may not be fully internalised by each payment system participant, potentially creating vulnerabilities within the network. Gridlock is another example: it occurs when participants delay sending payments and wait for incoming ones, preventing settlement despite sufficient aggregate liquidity in the system.[6] Inertia in industry-wide migrations to new technical standards is a further example of the potential coordination challenges that can arise in payment systems.

Second, in the payment system, concentration and fragmentation often occur at the same time, albeit at different levels. Payment systems naturally tend towards concentration. This derives not only from the network effects described above but also from the high fixed investment costs required to build and operate payment systems. Concentration can lower costs through economies of scale but comes at the cost of reduced competition and incentives to improve services. In addition, the absence of substitutes may increase the broader impacts of an operational or financial failure of concentrated entities. These challenges arising from concentration can drive actors to fragment by specialising in profitable areas and services. However, such fragmentation across multiple payment systems and services can create interoperability challenges and fragment liquidity. This, in turn, may create an incentive for consolidation within the industry.

Third, payment systems require trust in money as their cornerstone. Money works as a means of payment when it is generally and consistently accepted. People accept money when they trust that it will retain its value and remain usable for future transactions. They must be able to rely on the value and availability of money without continuously monitoring and managing credit, liquidity and operational risks. The 2003 report highlighted the concept of the singleness of money – where different forms of money in a jurisdiction's payment system are exchanged at par and regarded by economic actors as interchangeable – as resulting from and a demonstration of this trust. This trust is equally essential in individual payment systems, in which participants must trust the settlement asset used. The more systemically important a given system is, the more significant the consequences would be if that trust were to break down. Payment systems that remain strong, reliable and available even during times of market stress can serve as a source of stability rather than creating or amplifying instability (CPSS (2005a)).

2.2 The central bank's role in the payment system

Central banks generally fulfil four key roles in the payment system to achieve their objectives.[7] First, as issuers, central banks provide central bank money through the provision of accounts and related services to eligible institutions and in the form of cash to the general public. Central bank money is the safest and most liquid settlement asset in its jurisdiction. It plays a pivotal role to support safe and efficient payments and settlements, and serves as the anchor for convertibility at par between means of payment in an economy.

Second, as operators, most central banks design, develop and run payment systems. They often operate jurisdictions' most critical and liquidity-intensive payment systems – RTGS systems for large-value settlement among financial intermediaries which settle in central bank money with finality.[8] This facilitates use of central bank money as the settlement asset in these critical systems and allows central banks to set high standards for the safety and efficiency of these systems. Additionally, central banks can supply central bank money elastically to payment system participants through their role as issuers, which complements

[6] Coordination devices such as system rules, timing protocols and off-setting mechanisms may address these challenges. See CPSS (2005b).

[7] In addition to the four roles, and depending on the jurisdiction-specific institutional framework, central banks may also play a role as regulator in payment systems to pursue other objectives, including (but not limited to) those related to fair access, competition, risk management, consumer protection and technical interoperability.

[8] CPSS (2003) elaborates on the term "ultimate settlement", highlighting that it combines two distinct concepts: finality and the nature of the settlement asset used to achieve finality in payment systems. According to this clarification, settlement in a central bank payment system can be regarded as "ultimate settlement" where central bank money is free of credit and liquidity risks, and settlement finality is achieved within the system.

their role as operators. Concentration of payment flows in central bank-operated systems generates network effects for participants and provides central banks with real-time information about the liquidity needs of participants, which central banks may also supervise. While liquidity provision by central banks supports payment system safety and efficiency, providing liquidity potentially exposes the central bank to credit risk. Central banks therefore generally require collateral, set limits and/or charge fees. Entities allowed to obtain liquidity are generally subject to strict criteria, credit assessments and supervision.

Third, as overseers, central banks set standards, monitor, assess payment systems and induce necessary changes to enhance their safety and efficiency. Central banks typically oversee systemically important payment systems. They may oversee payment systems more broadly, other systemically important FMIs and, where relevant, critical service providers, possibly in conjunction with additional authorities through close coordination and a clear division of responsibilities.

Fourth, as catalysts, central banks convene stakeholders to address coordination challenges. Central banks act as catalysts when these challenges create barriers to welfare-improving market solutions.

2.3 The private sector's role in the payment system

Private entities provide a diversity of services tailored to various customer segments, innovate to meet market needs and contribute to system diversity and resilience through complementarity. The commercial interests of private sector entities, together with relevant central bank policies and applicable regulatory and supervisory measures, shape their business models and roles, which in turn influence the evolution of the payment system.

Commercial banks perform multiple functions for their customers: providing deposit accounts, cash and other payment services; extending credit; and engaging in maturity transformation. They create, ie issue, commercial bank money by increasing their liabilities when they extend credit to other financial institutions, businesses and households.[9] Commercial bank money serves as the dominant means of payment in retail payments, reliably convertible at par with central bank money and with other banks' deposits. This consistent par convertibility relies on multiple factors such as regulation, supervision, deposit insurance and banks' access to central bank accounts, liquidity and interbank payment system(s). Through their cash-related and other payment services, banks connect end users indirectly to central bank payment systems.

Non-bank PSPs typically offer specialised payment services, often focusing on particular use cases such as cross-border payments,[10] peer-to-peer payments and payments for platform-based commerce. These entities typically connect to central bank payment services indirectly through banks, while some types of non-bank entities may have direct access. Non-bank PSPs have heterogeneous business models and risk characteristics. Regulatory treatment varies considerably across types and jurisdictions and has evolved significantly over the past two decades. Some non-bank PSPs also issue liabilities but they do not create money in the same way that banks do. To date, in most jurisdictions, par convertibility of their liabilities to central bank money is not supported by the same mechanisms as commercial bank money.

2.4 Tiered payment systems

The characteristics and roles of private sector entities and the central bank have given rise to a tiered structure for payment systems (Figure 1). In this stylised model, the central bank generally (but not always) acts as the settlement institution. Central bank money typically sits at the apex, serving as the settlement asset for discharging obligations between direct participants of the payment system and providing the

[9] They can also create commercial bank money when they receive cash (eg banknotes) as customers' deposits or buy assets (eg bonds), increasing their liabilities (ie deposits) to pay for purchased assets. See Borio et al (2026).

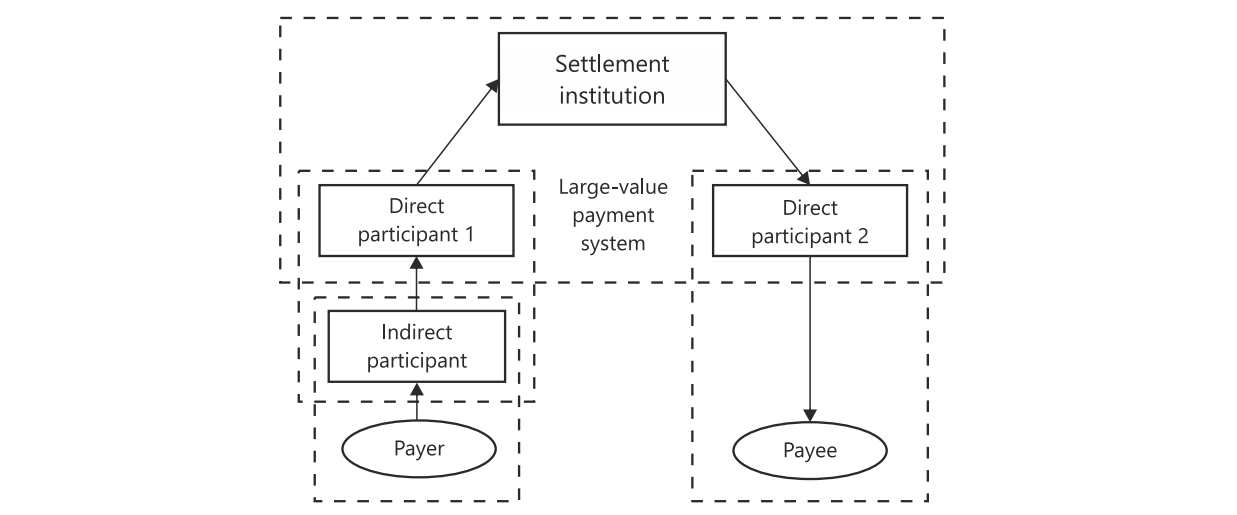
[10] Cross-border payments are fund transfers from one jurisdiction to another. They usually entail currency conversion from the currency of a payer's jurisdiction to that of a payee's jurisdiction.

foundation for par convertibility for other types of money. In addition to commercial banks, other entities with direct access may include certain types of non-bank financial institutions (eg broker dealers), FMIs or governments. The direct participants, in turn, provide accounts and payment services to their customers. These include certain types of non-bank financial institutions (eg institutional investors, hedge funds), businesses and households as well as indirect participants (eg other banks and non-bank PSPs) that provide payment services to their own customers, creating multiple layers.

This tiered structure enables specialisation and a division of roles: central banks uphold the trust, safety and systemic stability, while private sector entities compete to serve diverse customer needs. While the specific balance will differ across jurisdictions and may change over time, outcomes in which the central bank acts as the sole issuer of money or in which private sector entities provide all the money required by the economy would not be sufficiently stable or efficient to endure.

A stylised model of a tiered payment system

Figure 1



Ovals represent holdings by payer and payee. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

Sources: CPMI based on CPSS (2003); authors' elaboration.

Cash circulates through similar tiered arrangements, but cash payments are not structured in the same way. Cash is generally issued by the central bank, distributed to commercial banks (with their central bank accounts debited) and further distributed by commercial banks to the general public (with their commercial bank accounts debited). Banks subsequently accept cash from customers and either recirculate it or return it to the central bank. Cash payments differ from those in the account-based systems discussed above. Unlike account-based transactions, payment with cash is made directly to the payee by physical delivery, and its ownership is determined by physical possession rather than by registration or identification of the owner through book-keeping. Cash payments themselves do not involve an account-based record of the parties involved or the transfer. Its simplicity and anonymity are among the reasons it is widely used, especially for peer-to-peer transactions and small amounts.[11]

[11] Across jurisdictions, different reasons may explain why certain consumers prefer cash as a means of payment. For example, they may value the privacy, use it as a budget control device or for immediate peer-to-peer final settlement and delivery versus payment (DvP) against goods and services at the point of sale.

3 The evolving payments landscape

Over the past two decades, the payments landscape has undergone profound structural changes, and it continues to evolve. This section highlights three main areas of change: (i) changes in payment demand; (ii) changes in the set of actors in payment systems; and (iii) changes in the design and organisation of payment systems. While these changes are analytically distinct, they can occur concurrently and their impacts may be cumulative in practice. As in the past, these shifts have been influenced or accelerated by broader forces within the economy and financial industry, including technological innovation, globalisation, regulation, consolidation and the entry of new providers.

3.1 Structural changes in payment demand

The demand for digital retail payments has grown steadily. The expansion of internet and mobile connectivity has transformed day-to-day commerce, and end users increasingly expect payments to be immediate, always available and seamlessly integrated into daily-use applications. As more users become digitally connected, these expectations have become more widespread. New or complementary payment methods and channels enabled by innovation (eg fast payments, contactless payments, quick response (QR) codes, mobile phone apps) are enhancing the retail payment experience and creating further demand. In parallel, end users face higher digital fraud or cyber risks and are more sensitive to issues of security, integrity and service continuity. They continue to value offline payment solutions such as cash for a range of reasons, including its reliability during disruptions to digital payment services.

The demand for efficient cross-border payments has risen as cross-border flows of goods, services and capital expand. Many aspects of cross-border payments have generally lagged behind both the pace of globalisation of economic and financial activities and improvements in domestic payments. Faster, cheaper, more transparent and accessible cross-border payments have become a policy priority, as reflected in the 2020 G20 Roadmap for enhancing cross-border payments (CPMI (2020)).

Similar changes are evident in wholesale payments, in which financial intermediaries settle obligations with one another.[12] These intermediaries are increasingly seeking improved liquidity management and greater interoperability across domestic and cross-border systems.[13] In response to these and other developments, wholesale payment systems have undergone extensive modernisation over the past two decades (Section 4).

Regulation has been another important driver affecting demand for wholesale payments. Various regulatory reforms were implemented in response to the Great Financial Crisis (GFC) of 2007–2009. A prominent example of these reforms is the shift from bilateral to central clearing in over-the-counter (OTC) derivatives markets. Post-GFC regulatory reforms also contributed to the growing role of non-bank financial intermediaries in financial transactions, which, in turn, increased their payment and settlement activities.

With technological advancements, the financial industry is increasingly exploring the tokenisation of securities, such as tokenised government bonds or money market funds. As markets for tokenised securities continue to emerge and grow, market participants seek efficient funds and securities settlement solutions. Some may explore the use of stablecoins; others may look to other settlement assets, such as tokenised deposits or tokenised central bank reserves, to facilitate delivery versus payment (DvP).

[12] Although the term "wholesale" can be used to describe a variety of characteristics, it typically includes large-value transactions settled between financial intermediaries.

[13] For instance, as more retail payment systems are moving towards real-time and 24/7 availability in both domestic and cross-border contexts, issues with a potential timing mismatch may emerge: settlement risk (in the form of unsettled obligations between intermediaries) could accumulate within the payment chain if wholesale settlement continues with traditional payment schedules and designs. Conversely, improvements in retail payments may not be possible without corresponding advancements in wholesale settlement arrangements.

3.2 A broader and more diverse set of actors in payment systems

The payments landscape is becoming more concentrated in core entities and more diverse in front-end service provision. Technological advancements and globalisation have driven consolidation among financial institutions and PSPs, enabling these entities to scale beyond domestic boundaries and expand their services. As a result, payment flows – particularly in wholesale and cross-border segments – have become more concentrated within a smaller number of large entities. At the same time, technological advancements have enabled the emergence of new specialised providers for end users.

Banks remain central to the payment system, but the range of entities performing payment-related functions has expanded considerably. Regulatory frameworks for retail payments have evolved to accommodate new categories of PSPs, facilitating further entry. Non-bank PSPs now perform functions that were once concentrated in banks and established payment intermediaries. This expansion has introduced greater diversity, competition and innovation into the payment ecosystem. However, it has also increased the challenges of ensuring operational resilience and has added complexity to relationships among participants in payment systems, creating new interdependencies between direct and indirect participants. The boundaries between banks and non-bank PSPs are also evolving as some non-banks may establish banking-like operations in some jurisdictions.

Advances in technology have enabled new specialised providers to establish themselves across multiple segments of the payment chain – from payment initiation and front-end user interfaces to processing, clearing and cross-border execution (CPMI (2014)). A subset of these providers has developed end-to-end capabilities, combining customer-facing services with clearing and, in some cases, settlement functions, allowing them to operate as closed-loop systems as described in Section 4 (Figure 2). The proliferation of competing closed-loop solutions raises the risk of fragmentation across the payments landscape.

With the broader adoption of DLT and tokenisation, the diversity of non-bank PSPs may further expand. Building on the existing model of non-bank issuers (eg e-money issuance and services), some entities have sought to address emerging market demand for tokenised means of payment and/or settlement assets by issuing stablecoins. Stablecoins originated in the crypto ecosystem and have since been brought within regulatory frameworks in a number of jurisdictions.[14] To date, stablecoins have been used primarily within the crypto ecosystem as a means of payment and store of value, serving as a bridge between sovereign currencies and cryptoassets or as a way to exit volatile crypto positions while remaining within the crypto ecosystem. Outside of the crypto ecosystem, their use as a means of payment and/or settlement asset is limited and largely confined to cross-border retail payments and remittances by niche groups (Kosse et al (forthcoming)). This may change as regulatory frameworks for stablecoins become more mature and if the current shortcomings of stablecoins are addressed (BIS (2026a)).

3.3 Technological impacts on the design and organisation of infrastructures

Advances in computing power, data storage (eg cloud computing) and the advent of artificial intelligence (AI) are altering the way that payment systems and related arrangements are designed. For example, increased computing power facilitates the enhancement of RTGS systems.[15] AI may have the potential to support automation (eg through agentic payments)[16] and liquidity management in payment and settlement processes. At the same time, the growing dependence on digital technology introduces challenges, such as operational or fraud risks (eg related to cyberattacks, quantum computing or AI-related

[14] The stablecoins under discussion in this report are defined as digital assets designed to maintain stable value relative to a reference official currency (eg USD-denominated stablecoins) by holding reserve assets.

[15] Increased computing power has made it possible to increase the complexity of settlement algorithms (eg for liquidity saving mechanisms) and the speed at which they can be run. See CPSS (2005b).

[16] Agentic payments could be designed to initiate (and possibly process and complete) payment transactions without requiring direct human intervention, based on predefined rules, conditions or triggers.

threats) and obstacles to interoperability. Beyond the opportunities and risks of specific technologies, a broader pattern emerges: technological progress enhances existing capabilities and enables new configurations, while implementation challenges centre on market adoption, coordination and governance (BIS-CPMI (2024)).

Tokenisation demonstrates how technology enables different organisational structures for payment functions. In established configurations of payment systems, the issuer of a settlement asset is usually also responsible for related recording and transfer. By contrast, payment systems based on DLT allow for a more flexible technical structure enabling issuance, recording and transfer functions to be assigned to separate, multiple entities ("unbundling" of payment functions). For example, participation in the validation of transfers may be open to any entity that participates in the network or may be granted to selected multiple members.

This flexibility also allows these functions to be recombined with additional ones into new configurations. Such additional functions may include the transfer of funds and settlement of other assets, other post-trade processes, trading and lending based on collateralised digital assets. More generally, DLT and enhanced programmability enable the processing of multiple assets and multiple functions on a single platform (BIS-CPMI (2024)). On such platforms, conditional settlement may be possible, for example, enabling multiple legs of a transaction to be executed on an "all-or-nothing" basis.[17]

4 Evolving payment system configurations

Building on the stylised model of a tiered payment system as introduced in Section 2 (Figure 1), this section discusses the key features of common established configurations [18] (Section 4.1) and emerging configurations based on tokenisation and programmable platforms (Section 4.2). The discussion focuses on what these configurations are, how they relate to central bank money and what the key changes have been in the past two decades. It highlights how the overall payment system has become more diverse and complex in the configuration of its individual systems and components.

4.1 Established payment system configurations

Central bank reserves

Central bank reserves have expanded their role to support new market structures and reduce settlement risk in recent decades. For example, securities settlement systems (SSS) now widely employ DvP mechanisms (BIS (2026b); ECB (2025)), which deliver securities if and only if the payment is made with finality. Many such systems settle in central bank money. This has significantly reduced settlement risk in securities markets (including repo markets). Additionally, the role of central counterparties (CCPs) has grown notably since the GFC, as market participants and regulators have sought to improve management of counterparty risks, including through central clearing requirements, in OTC derivatives and other markets. Many CCPs now have access to central bank accounts for conducting money settlements with their participants (eg the collection and distribution of margin payments).

Central bank reserves are used as settlement assets or for funding and defunding in a large majority of fast payment systems (FPS) (Fitzgerald et al (2025)). In addition, many central banks have introduced or are exploring real-time, (near) 24/7 wholesale settlement in central bank reserves to support

[17] For example, the industry is exploring this feature of tokenisation in the context of cross-border payments, which involve multiple steps and actors.

[18] For the purposes of this report, payment system configurations are defined as the combination of: (i) the asset used as a means of payment and/or settlement asset; (ii) characteristics of the issuer of these assets; and (iii) the type of infrastructure used to transfer these assets.

FPS (CPMI (2021)). This aims to address risks arising from mismatches in operating hours between large-value payment systems and FPS.[19]

These improvements have been supported by complementary measures such as the introduction of liquidity-saving mechanisms to address high intraday liquidity needs in RTGS systems, the extension of central bank system operating hours, and broad and consistent adoption of ISO messaging standards to facilitate interoperability with their participants and connected FMIs.

Cash

In many jurisdictions, the demand for cash has been influenced by digitalisation, reflecting changing consumer preferences and the convenience offered by digital alternatives. At the same time, cash maintains its relevance for many users across jurisdictions as a critical and reliable means of payment such as for universal availability, financial inclusion and as a backup for digital payments. Central banks' objectives and initiatives to safeguard the functions of cash as a valuable form of central bank money available to the public at large, either in a physical or digital form, are discussed in Box 3 in Section 6.

Commercial bank deposits

One of the most notable evolutions over the past two decades related to commercial bank deposits has been the emergence and rapid growth of FPS. By enabling instantaneous, (near) 24/7 account-to-account transfers, FPS have significantly improved the velocity and utility of commercial bank deposits. They use the same tiered structure as traditional retail payment systems but include rules and mechanisms that make funds (in commercial bank deposits) immediately available to payees, irrespective of when the payment is made, including during nights and weekends. These systems have seen rapid global adoption.

In wholesale settlement, some private sector FMIs use commercial bank money for money settlements with their participants. For example, an FMI and its participants may maintain accounts at one or more commercial banks and settle payments through those accounts. Those commercial banks generally have access to central bank accounts and services and may settle interbank obligations as part of FMI settlement in central bank money.

Some FMIs use commercial bank money for multi-currency activities when these FMIs and/or their participants do not have central bank accounts in all relevant currencies.[20] Commercial bank money is also commonly used to settle obligations among financial intermediaries in correspondent banking arrangements for cross-border payments and may be used to settle obligations arising from cross-border links between FPS.

Non-bank means of payment and settlement assets[21]

Technological innovations are increasing the importance of non-bank PSPs in the payment system. For example, non-bank PSPs have emerged to serve the payment needs on specific platforms and for specific use cases, such as person-to-person payments, including for cross-border payments (Box 1).

Business models vary, but many non-bank PSPs operate closed-loop systems in which payments are transferred exclusively among their own customers (Figure 2). This is sometimes referred to as "on-us"

[19] Risks may arise due to the inability to extinguish accumulated obligations among FPS participants with deferred settlement and/or that of FPS participants to address liquidity shortages in the case of prefunding arrangements.

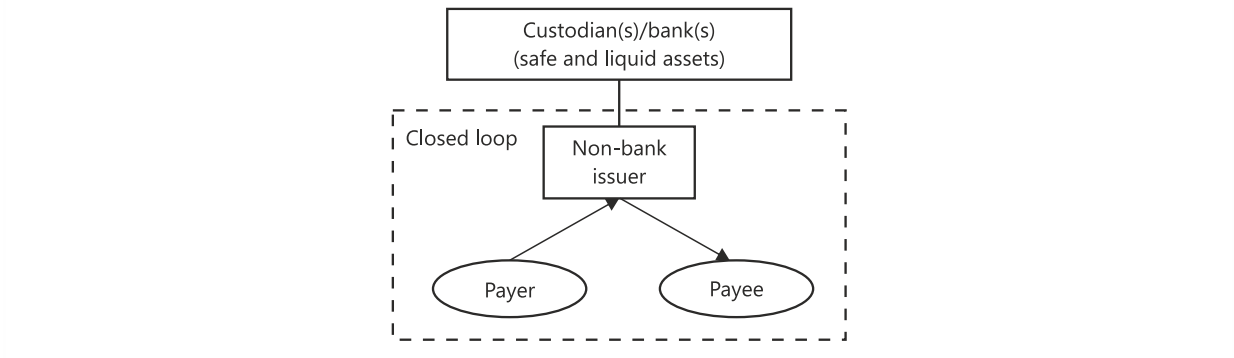
[20] Some CCPs use commercial bank money for collection and distribution of margin payments denominated in currencies different from the currency of the country in which those CCPs are incorporated. Likewise, some central securities depositories (CSDs) with activities across multiple jurisdictions use commercial bank money for cash-leg settlement of transactions carried out by their participants that do not have a cash account at relevant central banks. See Box 3 of CPSS (2003).

[21] Non-bank means of payment and settlement assets refer to the financial instruments that are used for payments and settlements but are not issued by commercial or central banks or FMIs. See CPMI (2014) for a more general analysis of the role of non-bank PSPs in retail payments.

payments.[22] To effectively connect to the broader payment system, they typically provide redemption of their liabilities into commercial bank money on demand, indirectly inheriting trust properties from commercial bank money's convertibility with central bank money.

A stylised model of a closed-loop payment

Figure 2



Ovals represent holdings by payer and payee. The direct lines indicate account relationships. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

Source: Authors' elaboration.

Non-bank PSPs are heterogeneous as a group and may be regulated as e-money issuers or under other regimes, depending on the jurisdiction. Non-bank issuers cannot create money on their own as banks can through expanding their asset side while simultaneously creating deposits. Instead, generally, they first acquire assets with their own capital or receive funds from customers, usually as deposits from customers' commercial bank accounts. Non-bank PSPs hold these assets or funds at their own custodians or banks as reserve assets,[23] before issuing their own payment instruments. These instruments are issued in direct, one-to-one proportion to reserve assets acquired or customer funds received. As a result, non-bank PSPs cannot flexibly expand their payment operations in the way banks can (BIS (2025); BIS (2026a)).

To date, non-bank PSPs in many jurisdictions do not have access to central bank accounts, although some types of non-banks have been granted specific forms of (more restricted) access in some jurisdictions (Section 6 and Annex 1). Instead, non-bank PSPs generally rely on commercial banks for indirect access to central bank payment services and private sector FMIs.

Settlement on the books of an FMI

Some private sector FMIs settle transactions between participants on their own books, with balances on the books as the settlement asset. Settlement on the books of an FMI can serve use cases that differ from those which use central bank reserves in RTGS systems. For example, it may support facilities that allow participants to operate with less liquidity than in systems with gross settlement. Another example is prefunded gross settlement on an FMI's books outside the operating hours of a corresponding RTGS system.

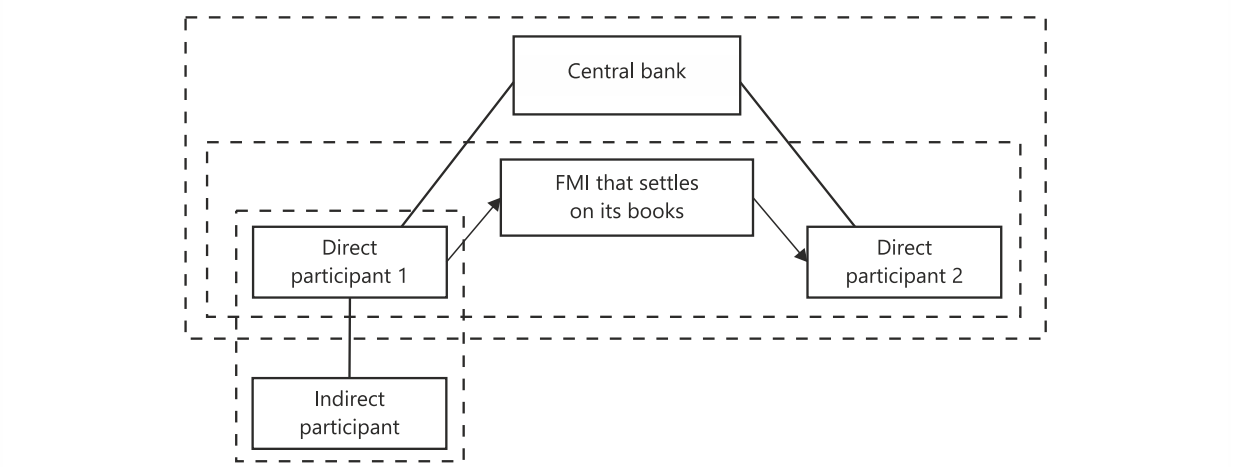
When an FMI settles on its own books, it can mitigate risk by having participants fund and defund their balances on the FMI books using participants' accounts and the FMI's account with the central bank (Figure 3). In some jurisdictions, FMIs can use so-called joint or omnibus accounts at the central bank – an account structure in which funds attributable to, or used for settlement among, multiple eligible entities

[22] On-us transactions can also take place on the ledger of a single bank with which both the payer and the payee have an account.

[23] Regulations differ across jurisdictions on the types of assets that should be held to secure their issued liability.

in a single account are administered by one entity, often an FMI operator (Section 6.1).[24] After settlement on the books of an FMI is completed, the FMI defunds participants' balances to them in central bank money using a central bank payment system.[25]

A stylised model of payment systems[1] with an FMI settling on its books Figure 3



The direct lines indicate account relationships. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

[1] In this stylised representation, the direct participants have accounts at the central bank, but this may not always be the case in practice. Moreover, this representation does not reflect the additional complexity associated with clearing and settlement of securities transactions, for which both the payment and securities leg may be settled on the books of the FMI.

Source: Authors' elaboration.

Settlement on the books of an FMI whose balances are fully prefunded with central bank money can serve as an effective way to minimise and control the credit risk in money settlements.[26] This is because the total of all the participants' balances held on the books of the FMI is designed to always match the total funds held by the FMI in its own account or a joint or omnibus account at the central bank. This alignment supports the conversion of balances on the FMI's books into central bank money at par during defunding, subject to the relevant legal and operational arrangements. Still, operationally and legally, settlement of individual payment instructions submitted to the FMI by participants takes place on the private sector system's ledger and not the ledger of the central bank. This may have implications for liquidity management and operational resilience.[27]

[24] Legal arrangements vary regarding who owns the balances and how they can be claimed. The totality of the FMI rules and contracts with participants governs how prefunding is treated in the event of an FMI default (or an FMI participant's default), but the account structure at the central bank specifically defines the relationship to the central bank.

[25] For example, at the end of the day in cases in which overnight balances in the FMI's own account or a joint or omnibus account at the central bank are not required or permitted.

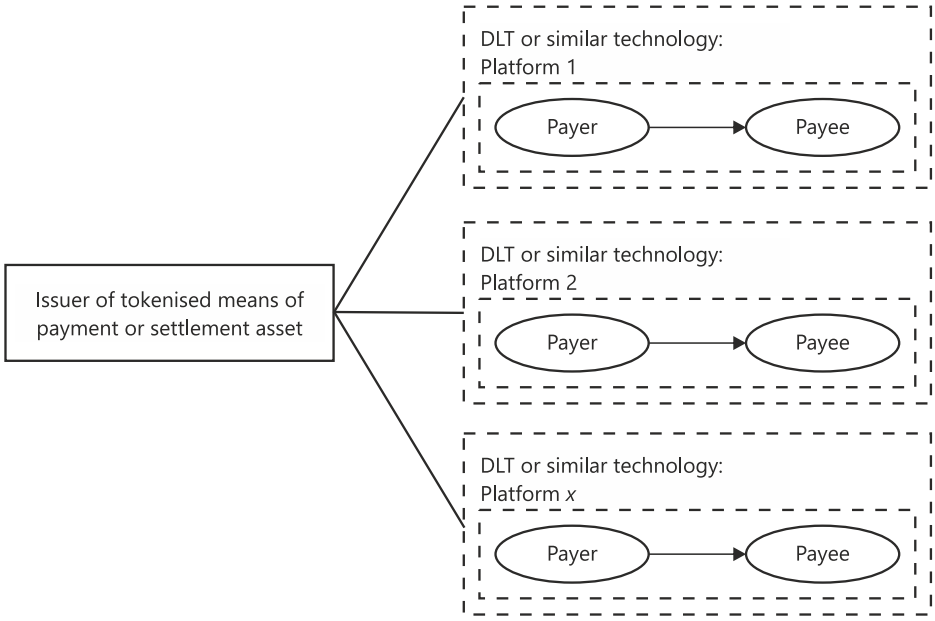
[26] In some cases, such FMIs limit their activities and operations to payment, clearing and settlement and closely related processes to minimise their overall credit risk exposures, or FMIs could be established as supervised special purpose financial institutions and limit the provision of cash accounts to participants only. See also footnote 24 above in the case of a joint or omnibus account used for prefunding.

[27] For example, central banks may provide participants with liquidity for facilitating settlement within central bank FMIs; private sector FMIs have less capacity to do so. The operational resilience of the private sector payment system is dependent on their own governance as well as regulation, supervision and oversight by relevant authorities.

4.2 Payment system configurations using tokenisation and programmable platforms

In the payment system configurations described in Section 4.1, the issuers of any liability generally operate their own ledger by recording participants' balances and validating transfers of funds. By contrast, as discussed in Section 3.3, payment system configurations based on tokenisation enable the unbundling of payment functions across different entities or platforms. This may help issuers' management of their liabilities on external and/or multiple platforms (Figure 4).

Issuance of tokenised means of payment and settlement assets — Figure 4



Ovals represent holdings by payer and payee. The direct lines indicate account relationships. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

Note: Figure represents issuance, recording and transfer on platform *i* (i = 1…*x*).

Source: Authors' elaboration.

Tokenisation, as a technical feature, could be implemented for a variety of assets, including the means of payment and settlement assets described in Section 4.1.

Tokenised central bank reserves

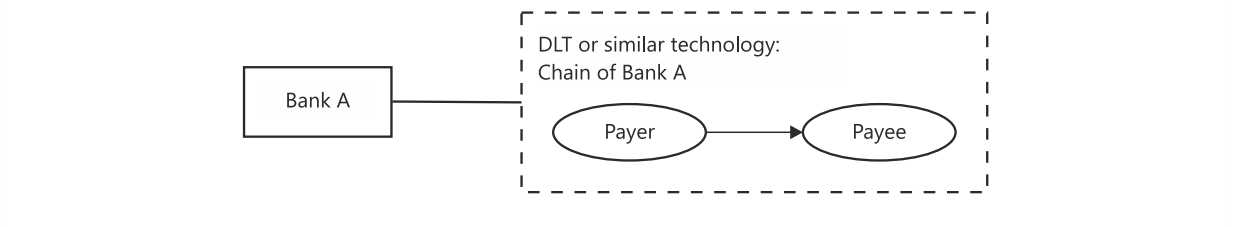
A large number of central banks are investigating whether and how to make central bank money available in the form of tokenised central bank reserves. An increasing number are running pilots and some have started to issue tokenised reserves (Kosse et al (forthcoming)). The core feature of central bank money as the safest and most liquid settlement asset remains unchanged when tokenised. However, the technology influences opportunities and risks, and depending on jurisdictional circumstances, may have implications for the applicable legal framework and broader institutional setting (Section 6).

Central banks considering tokenising central bank reserves see demand for facilitating cash-leg settlement of tokenised financial assets, including tokenised securities, as well as for interbank settlement of obligations arising from exchanges of tokenised commercial bank deposits issued by different banks.

Tokenised commercial bank deposits

Tokenised forms of commercial bank money can be implemented in different ways. One model is to implement it for on-us transactions among a bank's customers (Figure 5; also similar to closed-loop transactions in Figure 2). This model could serve specific use cases, for example 24/7 cash management by multinational firms.

Tokenised deposits for on-us transactions — Figure 5



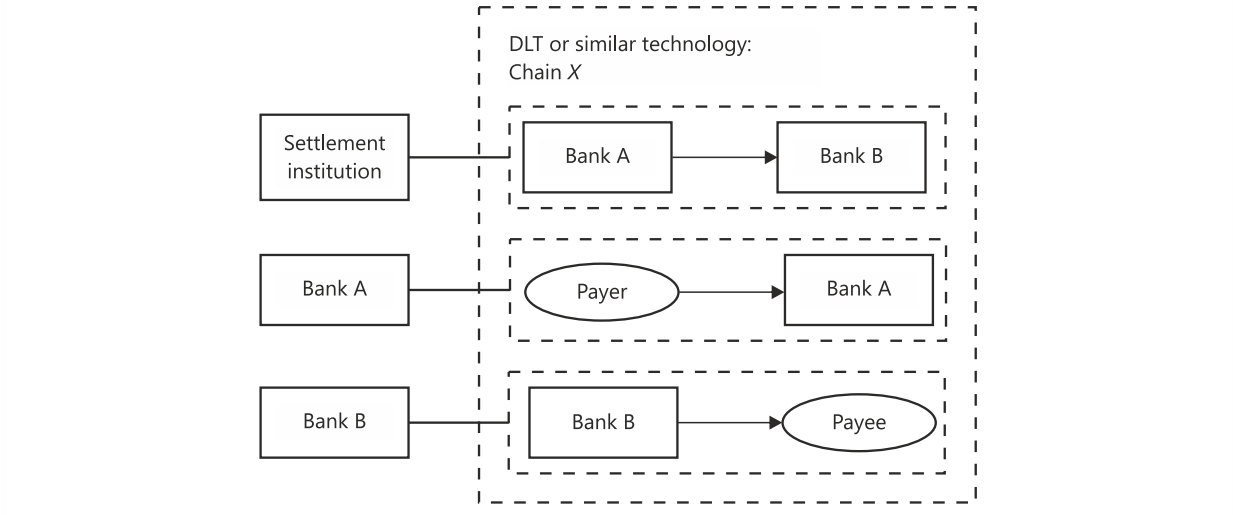
Ovals represent holdings by payer and payee. The direct lines indicate account relationships. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

Source: Authors' elaboration.

Another design configuration for tokenised deposits involves payers and payees who maintain their exposures to their respective bank, with an additional interbank settlement layer that resembles the conventional tiered payment system configuration (Figure 6).

From a technical perspective, any tokenised financial asset can be designed to settle in a peer-to-peer manner. However, when applying tokenisation to bank deposits, the consistency of their designs with the legal, regulatory and economic aspects of bank deposits would need to be considered. This includes, for example, banks' obligations to perform know-your-customer (KYC) checks. More broadly, the configuration of tokenised deposits in a tiered payment system (Figure 6) involves design choices related to how they connect to central bank money and other tokenised assets.

Tokenised deposits used for transactions with a tiered payment system — Figure 6



Ovals represent holdings by payer and payee. The direct lines indicate account relationships. An arrow represents a transfer. Dotted lines represent closed systems of issuers.

Source: Authors' elaboration.

Tokenised non-bank means of payment and settlement assets[28]

Tokenised non-bank means of payment and settlement assets (eg stablecoins[29]) show similarities with their non-tokenised counterparts (eg e-money) in that both seek to rely on full backing with safe and liquid reserve assets, depending on their applicable regulations. At the same time, the technological infrastructure differs, allowing for separating or combining functions. Moreover, business practices may differ in terms of redemption arrangements, convertibility with other means of payment and other factors (Section 5).

The link between stablecoins and central bank money depends on the stablecoins' structure. Across jurisdictions, stablecoins may or may not come with a legal requirement for their issuers to redeem their stablecoins directly to all holders, at par and into commercial bank money. Where such a requirement exists, this would create a channel through which holders can exchange their stablecoins for commercial bank money and, subsequently, commercial bank money for central bank money. For the general public redeeming stablecoins, this could occur through the convertibility of commercial bank money into cash. For banks redeeming stablecoins, this could occur through interbank settlement in central bank money between the redeeming bank and the commercial bank that the stablecoin issuer uses for redemption (if both banks have direct access to interbank settlement). Stablecoins may also rely on secondary markets for conversion especially when no requirements for direct redemption at issuers exist (Section 5.6).

Tokenised settlement on the books of an FMI

FMIs that settle on their own books could implement a model utilising tokenisation. In such cases, the funding and defunding mechanism could be the same as for their non-tokenised forms (Section 4.1).

Demand for tokenised FMI settlement assets could be motivated by their potential for enhanced settlement services, enhanced collateral management and tailored settlement services for digital assets. As with tokenised central bank money, the core features of settlement assets issued by an FMI (which may be backed fully by central bank money) remain the same while the underlying technology changes.

[28] Stablecoins are presented here as non-bank means of payment and settlement assets. However, in some jurisdictions they can be issued by banks subject to certain regulatory requirements (including the option of a separate legal entity that represents a consortium of entities).

[29] As with other emerging means of payment and settlement assets, stablecoins were developed to serve specific use cases, many of which are still evolving (Section 3).

Box 1

Evolving configurations of the payment system: an illustration from cross-border payments

The upgrades in payment system configurations discussed in this section enhance numerous use cases, including cross-border payments, for which an increasing number of configurations have become available. These options span both banks and non-banks as issuers and encompass established and tokenised means of payment and settlement assets.

For example, cross-border payment efficiency – measured by speed, cost, transparency and predictability – is significantly improved through the bilateral or multilateral interlinking of domestic fast payment systems (FPS). A notable example is Nexus Global Payments, a multilateral initiative designed to connect multiple FPS globally through a standardised architecture (BISIH (2025)).①

Similarly, Project Agorá, a BIS Innovation Hub initiative, aims to enhance wholesale cross-border payment efficiency by harnessing the programmability of shared platforms to integrate tokenised wholesale central bank reserves and tokenised commercial bank deposits (BIS Innovation Hub (2026)).

Beyond bank-led solutions, non-bank issuers have long played a significant role in cross-border payments through e-money schemes and other payment services. Stablecoins represent a more recent development in this space (Section 3.2; see also CPMI (2023c) on considerations for the use of stablecoin arrangements in cross-border payments).

Combining multiple payment system configurations and arrangements may be possible. For example, in the case of so-called stablecoin sandwich transactions, settlement using stablecoins is "sandwiched" by end-user payments processed through conventional payment service provider (PSP) accounts. In such models, stablecoins are used for settlement between the sending and receiving PSPs at the intermediary level, avoiding a potentially lengthy chain of correspondent banking relationships.

Such examples illustrate the rapid evolution of different configurations for cross-border payments, influenced by private and public players. They also highlight the increasing complexities, which could be a key factor shaping central bank policy responses as discussed in Section 6.

① A related option is the use of multilateral platforms for cross-border payments. See CPMI et al (2023).

5 Impacts on the payment system

This section examines how the developments discussed in the previous sections influence the functioning of the payment system, in terms of its overall risk, efficiency and liquidity, distribution of responsibilities and accountability in risk management, and convertibility across means of payment. While many current developments centre on tokenised infrastructures, the implications discussed below may apply to a broad range of innovation that may reshape payment system configurations. Sections 5.1 to 5.6 analyse each of these implications in isolation, while Section 5.7 examines their interaction.

5.1 Composition of means of payment and settlement assets within the payment system

Market developments have increased the range of available settlement assets and means of payment. The composition of settlement assets and means of payments within the payment system of an economy varies by jurisdiction, shaped by factors such as user choice, the roles played by the private sector and the central bank, and the central bank's policies. Tokenisation may broaden the range of available settlement assets

and means of payment by including their tokenised forms. Changes in the composition may affect the way risks arise, accumulate and are transmitted throughout the system.

The use of central bank money at the apex of the payment system underpins stability in the system. Central banks therefore share a common principle that a systemically important FMI should conduct its money settlements in central bank money where practical and available. When central bank money is unavailable, or its use is impractical, commercial bank money or settlement assets on FMI books may be used, if credit and liquidity risks are minimised and strictly controlled.[30]

In retail payments, the shift away from physical central bank money (cash) to digital payment services based on commercial bank money or non-bank means of payment may reduce the direct use of central bank money by the public and give rise to considerations regarding operational disruptions, personal data protection and financial inclusion.

5.2 Unbundling of payment functions from issuers

New technologies, particularly tokenisation, enable the unbundling of issuance from recording and transfer functions. While the degree of unbundling varies by the design of each arrangement, the resulting opportunities and challenges differ fundamentally from those of traditional arrangements in which the issuer typically performs recording and transfer functions and maintains the ledger.

First, unbundling may lower barriers to entry for new issuers, due to lower costs and other efficiencies derived from not needing to operate their own ledgers. This may spur competition and innovation and support payment system efficiency.

Second, unbundling may raise questions about accountability in risk management, including during stress events. When an issuer relies on external platforms for other payment functions, considerations arise about who is responsible for compliance, risk monitoring, operational resilience, cybersecurity and business continuity of the payment system in its entirety. In established systems, these responsibilities traditionally rest with the issuer that maintains the ledger. Such accountability challenges may be particularly relevant for certain types of stablecoin arrangements, which may use permissionless ledgers.[31] Similarly, the operation of a tokenised platform usually involves multiple layers, each with its own set of actors,[32] who may share interdependent responsibilities and different perceptions about who manages which risk. Many configurations are possible, raising coordination challenges in managing risks across different configurations.

Third, unbundling facilitates the issuance of the same asset on multiple platforms. This could enhance issuers' reach and accessibility for users. However, it also introduces considerations for managing liquidity across platforms, providing consistent functionality and user experience and maintaining interoperability. Assets issued on platforms with varying technical standards, security protocols or governance arrangements may also increase operational risks.

Fourth, unbundling issuance of a settlement asset from its transfer process could lead to the loss of real-time information on payment flows available to the issuer, depending on how the unbundling is

[30] CPMI-IOSCO (2012). Principle 9 of the Principles for financial market infrastructures applies to the use of central bank money for settlement in systemically important payment systems, as well as for money settlement of SSS and CCPs, which are in principle presumed systemically important.

[31] For governance issues arising from the decentralised nature of stablecoin arrangements, see CPMI-IOSCO (2022).

[32] Platforms typically have multiple layers, including the platform layer, asset layer, service layer and access layer (eg Budau and Tourpe (2024)). The roles and number of actors involved on each layer vary depending on the governance model of a platform or its validation method but there are typically multiple actors sharing the same role.

implemented. This may hinder the issuer – be it a central bank or a commercial bank – from effectively providing liquidity to facilitate payments among the holders of the settlement asset.[33]

5.3 Bundling of functions and consolidation of assets on platforms

Tokenisation facilitates the coexistence of multiple asset types from different issuers on a shared programmable platform. This may offer efficiency gains but it also influences the way risks are transmitted. Where a platform can record and exchange multiple asset types, there may be synergies in performing various functions, such as trading, post-trade services and lending ("bundling" of functions). Such integrated platforms may offer efficiencies to end users, for example by facilitating automated execution, synchronisation of data, coordinated processing of multiple types of transactions and collateral mobility. Leveraging such designs, issuers of means of payment can issue assets on multiple platforms to expand their user base and meet wider ranges of user needs.

Nonetheless, bundling multiple functions and consolidating multiple means of payment, settlement assets and other financial assets on a single platform may concentrate risks and increase operational dependencies. This may create additional channels through which risk can spread across the payment system and from the payment system to the broader financial system, with implications for financial stability. Alternatively, it may tighten existing interdependencies, allowing risks or disruptions to spread more quickly. The involvement of multiple entities in operational processes also requires effective accountability, governance and oversight arrangements, including those to manage risks, make decisions and address conflicts of interest.

5.4 Liquidity in the payment system

Emerging payment system configurations may affect the demand, supply and distribution of liquidity in a jurisdiction's payment system. Established payment system configurations using central bank reserves or commercial bank deposits can draw on mature arrangements for netting, intraday liquidity provision, liquidity saving and liquidity pooling.

The total demand for settlement liquidity in payment systems may increase as the use of gross settlement and/or prefunding arrangements become more prevalent.[34] Even when prefunding is not a general requirement due to the system's design, some participants may still need to prefund settlement liquidity or wait for incoming payments before sending their own if they lack access to intraday liquidity (eg reflecting their risk characteristics and/or regulatory status). In payment systems in which participants have access to intraday liquidity, they can settle payments on an RTGS basis without having to pre-position the full amount of settlement assets. This reduces the need to hold idle balances and limit the risk of payment delays or gridlock.

The proliferation of payment platforms that are not effectively connected may lead to liquidity fragmentation. A single entity may issue assets across multiple tokenised platforms or across both traditional and tokenised systems, dispersing payment activity and thereby fragmenting liquidity across separate pools. Where interoperability among these pools is limited or the operating hours of relevant systems are misaligned, liquidity available in one system may not be readily redeployed to meet settlement needs in another. This can reduce the efficient recycling of liquidity, even when aggregate liquidity is

[33] Such information may also be useful for other responsibilities of central banks, such as monetary policy and financial stability. Note that a similar loss of real-time information could occur in traditional payment system configurations, such as through the concentration of payment flows on a limited number of direct participants settling on-us for a large number of indirect participants ("tiering") or through settlement on the books of an FMI outside central bank payment systems.

[34] For example, this may be particularly relevant for use cases such as supporting interbank settlement within FPS during nights or weekends or enabling the instant settlement of trades through tokenised DvP or payment-versus-payment (PvP) mechanisms (Box 2). The use of prefunding arrangements in a jurisdiction's payment system may increase as non-bank means of payment become more widespread.

sufficient. Further, substantial expansion of closed-loop systems may exacerbate these issues by introducing frictions when users attempt to transfer ("off-ramp") funds to external systems.

5.5 Competition and innovation

The increase in heterogeneity across issuers, infrastructure and technologies has introduced or amplified competitive dynamics in the payment system, by increasing end user choice – especially due to the entry of new actors. Yet competition also introduces non-trivial implications for overall system efficiency, such as those related to a level playing field and the emergence of dominant positions.

The degree of competition within a jurisdiction's payment systems is not uniform or fixed. While the number, type and range of activities of participants providing payment services to end users have expanded significantly, the economic characteristics previously described may lead to consolidation among newer entrants or key service providers (Section 2.1). Additionally, the set of entities with direct access to the central bank accounts, services and payment systems has remained relatively concentrated and largely stable over time. Many non-bank PSPs continue to have indirect access to interbank payment systems, including through commercial banks, while in some cases simultaneously competing with these banks to provide payment services to end users.[35] This reliance on potential competitors may raise neutrality concerns and increase barriers to entry and costs to innovation. This in turn may reduce efficiency gains from the involvement of a wider and more diverse set of service providers. However, these market dynamics may also reflect broader policy considerations, as discussed in Sections 6.1 and 6.2.

5.6 Convertibility

The considerations discussed thus far affect convertibility across various means of payment and settlement assets within a jurisdiction's payment system. Where means of payment and settlement assets are convertible at par with limited frictions, this supports the singleness of money in a jurisdiction's payment system and the overall safety and efficiency of the related payments, facilitating the underlying economic activities.

Two complementary mechanisms support convertibility. The first is direct redemption between issuer and holder. Direct redemption allows holders to demand conversion of the issuer's liability into another means of payment, typically central bank money or commercial bank money. To consistently convert its liabilities at par, the issuer must manage the credit, custody and operational risks and, where relevant, market risk associated with its assets. It must also manage its liquidity risk related to responding to redemption requests in a timely manner. Institutional frameworks such as tailored prudential regulation, supervision and deposit insurance support reliable redemption.

The second mechanism is conversion between different issuers' liabilities. Conversion across various means of payment enables payers to use an issuer's liability that differs from the one that the payee holds or accepts. This conversion currently occurs mainly through interbank payment systems in which the sending bank's liability is converted to the receiving bank's liability, with central bank money typically (but not always) used as the interbank settlement asset (Figure 1).[36] A safe and efficient interbank payment system, combined with prudential regulation, supervision and safety nets such as deposit insurance and central bank liquidity provision, supports the general acceptance of commercial bank money, which serves as the dominant means of payment for businesses and households.

To date, non-bank means of payment such as e-money or stablecoins typically lack clearing and settlement mechanisms comparable to those for banks. This may result from business models of non-bank

[35] Banks, in turn, face strategic choices about whether to compete with non-bank PSPs or partner with them in providing payment services (CPMI (2014)).

[36] One advantage of this mechanism is that the payee does not need to bear the costs of monitoring, assessing and managing the risks associated with the payer's bank, provided that the transfer is settled with finality.

issuers and the access policies of existing interbank payment systems. For example, many non-bank issuers focus on specific use cases or operate as closed-loop arrangements, processing payments in-house to reduce costs and shorten processing times. In such cases, enabling payments outside of the issuer's customer base is not their primary focus, and issuers may not prioritise arrangements and relationships that would improve such payments. That said, convertibility with other means of payment may be maintained by funding and defunding via commercial bank money or, where possible, central bank money without establishing direct clearing and settlement mechanisms between issuers.

Stablecoins present additional specific convertibility considerations. Depending on regulatory requirements, the issuer's design choices and contractual arrangements, holders may not have direct redemption rights with the issuer and therefore rely on secondary markets for conversion with other means of payment or settlement assets. In secondary markets, convertibility is a function of supply and demand and relies on arbitrageur participation and market liquidity. This could result in price fluctuations that are not necessarily related to the solvency of the issuer. Small and temporary deviations from par may be manageable in practice and in normal times, depending on the types of users and transactions for which stablecoins are used. However, persistent or volatile deviations in a stablecoin price can create uncertainty about the value at which the stablecoin can be converted into other means of payment, potentially limiting the coin's acceptance as a means of payment or as a settlement asset.

5.7 Interactions

The implications described above interact through various mechanisms, potentially influencing the dynamics of payment systems. Three patterns stand out. First, the composition of means of payment and settlement assets used in the payment system (Section 5.1) matters for the distribution of risk and the availability of liquidity that facilitates payments. The use of central bank money at the apex of the tiered system minimises credit and liquidity risk, especially where the value settled is large and risk is concentrated. Alternative means of payment may serve specific purposes effectively, though with different risk profiles.

Second, structural changes in the payment system affect accountability and market dynamics. Unbundling (Section 5.2) and consolidation (Section 5.3) affect allocation of the responsibilities and accountability across actors and infrastructures. Competitive dynamics (Section 5.5) shape overall market structure. The impacts in these three areas, in turn, affect the composition of settlement assets as well as the path and degree of innovation.

Third, liquidity and convertibility implications may vary with system design and scale. Liquidity challenges (Section 5.4) may reflect gross settlement prefunding requirements, access to intraday liquidity and the degree of fragmentation, dispersing liquidity and reducing the efficiency in funds transfer. However, some fragmentation is natural where different arrangements serve different purposes. Convertibility mechanisms (Section 5.6) vary among means of payment, affecting their risk profiles. Arrangements with limited convertibility may function effectively at a small scale or for narrow use cases. Convertibility becomes more relevant as arrangements grow and interconnect.

These developments introduce policy trade-offs: addressing one implication may affect others. For example, policies that aim to expand competition and support innovation (Section 5.5) may shift the composition of settlement assets towards new instruments (Section 5.1), which in turn may affect both liquidity conditions (Section 5.4) and convertibility (Section 5.6). The effectiveness of policy tools depends on recognising these interdependencies and taking a holistic and coherent policy approach. As shown in Section 6, central banks have a range of policy tools. Central banks seek a combination of policy tools that can address various trade-offs and achieve multiple policy objectives at the same time.

Box 2

Liquidity implications of tokenisation for FMIs in the context of DvP and PvP

Tokenisation may enable an arrangement with lower costs and greater efficiency in which securities trading or foreign exchange (FX) is executed and settled instantly at the time of trade, with delivery and payment (for DvP) or payment and payment (for PvP) taking place on a gross basis.① As with the traditional DvP and PvP mechanisms, tokenised DvP and PvP mechanisms eliminate the risk (principal risk) of one party losing the full value of a transaction because it fulfilled its obligation while the other party failed to do so. Making trade execution contingent on instant gross DvP or PvP would also avoid settlement fails and associated replacement cost risk. Furthermore, it may increase the velocity of liquidity through immediate asset availability.

The introduction of instant gross DvP may have non-trivial liquidity implications. A key potential challenge relates to the need for pre-positioning of funds and financial assets prior to trade execution. Another challenge concerns the potential elimination of netting, which drives much of today's liquidity efficiency of DvP and PvP transactions. A loss of netting efficiency may need to be compensated with other liquidity saving or liquidity provision mechanisms (CPSS (1992)). In addition, it may limit the set of executable trades, since market participants cannot take short selling positions without first obtaining the securities (or long positions without first having secured sufficient funds) under instant settlement. This could affect the broader market liquidity of the assets.

Tokenisation could affect FMIs' credit and liquidity management. For instance, FMIs may consider augmenting the set of potential financial assets that they accept as collateral. Tokenisation may also change the risk profiles of collateral that is already accepted at an FMI (positively or negatively) and may enhance collateral mobility including in the cross-border context. Further, simplified reconciliation and automation enabled through tokenisation may facilitate liquidity management of FMIs and their participants more generally.

Generally speaking, the potential benefits of tokenisation may be largest when alternative solutions using conventional technologies are often more limited. This may be the case for enabling intraday FX swaps or repos, specific collateral mobilisation scenarios or securities or FX trades for which instant settlement of the trade is desired. The overall impact on liquidity may, among other factors, depend on the degree of adoption of tokenisation across financial markets and market participants. A lack of domestic and cross-border interoperability across platforms may hamper reconciliation, fragment liquidity and increase complexity and costs, reducing the benefits of tokenisation.

It remains to be seen whether and how the widespread use of instant settlement of trades may affect FMI risk management. A potential move to a broad adoption of tokenised DvP and PvP and the realisation of its liquidity effects on FMIs and their participants would likely be an evolutionary process over time. During any transition, the challenges are likely to be prominent, as relevant market conventions, legal frameworks and the approaches of FMIs and their participants are likely to change at different paces.

① Note that the adoption of tokenisation is not necessarily linked to instant gross DvP. Rather, this is one of the capabilities that tokenisation may enable.

6 Key policy tools and considerations for central banks

The developments in the payments landscape and their impacts on the payment system are relevant to the roles and objectives of central banks. Based on their assessment of these developments, central banks consider whether and how central bank money and associated payment services may adapt to changing market needs and technological advancements. Central banks may consider how their policy choices could affect central bank money's pivotal role in the payment system, and how practical and available central bank money is for those entities or types of transactions for which its use is considered important. This section analyses policy choices that central banks face – as issuers of central bank money, payment system operators, overseers and catalysts – and presents related considerations.

6.1 Provision of central bank money through accounts and services

Central banks offer accounts that can be used within the interbank payment systems operated by central banks, and in certain cases also in relation to settlement in privately operated payment systems and other types of FMIs (eg SSS and CCPs). Such accounts are typically referred to as settlement accounts.[37] These accounts are universally offered by central banks and are the most widely used by banks. Settlement accounts allow central banks to supply liquidity elastically to account holders, and intraday liquidity supplied by central banks plays a key role in the smooth functioning of payment systems. When contemplating policies regarding access in light of the evolving payment system, a spectrum of possibilities exists, including maintaining current access policies, broadening the range of institutions allowed direct access or offering differentiated accounts and services for different types of institutions.

Selected policy options

Direct and indirect access to settlement accounts

Central banks may influence whether entities access central bank money directly or through intermediaries, to the extent that they set policies on eligibility for, or access to, a settlement account. In some jurisdictions, entities' eligibility may be determined by domestic legislation, limiting central bank discretion. When not eligible for access or not seeking direct access, entities may choose to become a customer of an entity that has direct access.[38] This is an indirect model for accessing central bank money and payment services, and some central banks may offer indirect access in formal arrangements, such as through specific correspondent services. Central bank policies regarding access, together with private sector entities' business models, risk profiles and operational constraints, result in the tiered structure of payment systems described in Section 2.4.

Some central banks offer omnibus (or joint) accounts to support payment arrangements (Section 4.1). This structure pools funds attributable to, or used for settlement among, multiple eligible entities in a single account administered by one entity, often a payment system or other FMI operator and is used to enable fully prefunded settlement within the FMI.[39]

Access to differentiated central bank services

Beyond basic settlement account eligibility and access, central banks may differentiate the services and functionalities available to account holders, consistent with their legal mandates.[40] Such differentiation

[37] In this report, settlement accounts refer to accounts used to send or receive payments for the purpose of interbank settlement (irrespective of whether it can also be used for other purposes). In some jurisdictions, central banks offer one single account to each account holder that, subject to eligibility, can be used not only for sending or receiving payments but also for other purposes. In other jurisdictions, entities may hold multiple accounts, each for a dedicated purpose.

[38] In addition to central bank policies, access to a settlement account is driven by an entity's business constraints and preferences. For example, an entity eligible for direct access to an account may prefer to handle settlement through an intermediary, eg due to limited resources.

[39] In the US, a group of eligible account holders may request a joint account to facilitate settlement between depository institutions in a private sector arrangement. For example, Clearing House Interbank Payment System (CHIPS), a private sector payment system is the agent for a joint account with the central bank that is jointly owned by the CHIPS funding participants. In the UK, the Bank of England (BoE) is offering omnibus accounts to allow private sector payment systems to fully fund wholesale settlement on their platform with central bank money while individual transactions are settled on their platform using a settlement model of their choice. Other central banks offering omnibus accounts include the Eurosystem central banks (for selected payment systems, other types of FMIs, card network operators and government bodies).

[40] Banks generally have access to a wide range of central bank facilities and services, while accounts held by non-banks are usually limited for settlement purposes and/or subject to restrictions. For example, in the US, a new type of account ("payment account") is being considered that any eligible institution could use for the specific purpose of clearing and settling their payments. Some central banks offer only one type of settlement account, but with limitations placed for certain account holders. For example, in Argentina, non-bank payment service providers, FMIs, government entities and non-resident institutions holding a settlement account at the Central Bank of Argentina do not have access to central bank intraday and overnight credit or remuneration.

may include the provision of intraday credit for facilitating settlement during the day and remuneration of the accounts, as well as imposing balance limits, minimal holding requirements, additional restrictions or prudential standards.

For some eligible entities, accounts may also be used for central banks' overnight lending services and for storing interest-bearing overnight deposits. These services address aspects of central banks' responsibilities beyond payments, such as monetary policy implementation and emergency liquidity provision for financial stability considerations. A further discussion of these topics is beyond the scope of this report.

Emerging account types and services

Some central banks have introduced new account types or services to address emerging needs in the payment system. For example, in specific cases, dedicated safeguarding accounts may allow certain types of non-banks to store the assets backing their liabilities to end users at the central bank.[41]

Key policy considerations for central banks

Decisions about access to accounts and services involve balancing multiple objectives and entail complex trade-offs regarding safety and efficiency. Relevant considerations may include: (i) using central bank money as a settlement asset versus private sector alternatives; (ii) supporting additional competition in the market for payment services versus potentially creating regulatory arbitrage opportunities; and (iii) reducing risks of concentration (eg a limited number of direct participants settling on behalf of a large number of indirect participants) versus introducing a risk transmission channel (if credit, liquidity and operational risks of new entities granted access are not well managed).

Access policies affect the distribution of settlement between central bank money and private alternatives across the payment system and the range of central bank services that participants can access directly rather than through intermediaries. Expanded access to central bank settlement accounts can increase the use of central bank money as a settlement asset and allow more participants to access services directly. This can support participants with direct access as well as the payment system as a whole in terms of safety, settlement finality and risk reduction. In the same vein, central banks may provide settlement accounts and related services to key private sector FMIs, large PSPs or other entities to allow direct convertibility of their settlement assets into central bank money. Narrower access, by contrast, preserves a more limited, multi-tiered structure, in which private sector alternatives may offer additional settlement models, features or other service options that may meet users' needs better.

Depending on the composition and concentration of payment services within the overall payment system, reliance on potential competitors (such as commercial banks) as intermediaries for central bank settlement services could raise concerns about neutrality and competition (Section 5.5).Consistent with their authorities, some may expand direct access to address such concerns. Other central banks may instead consider that the risks associated with a wider range of participants, including entities with different risk profiles and/or regulatory or supervisory arrangements, outweigh these benefits. These central banks may opt to maintain more restrictive access or implement a differentiated approach. Access policies with differentiated account services may provide flexibility to address specific use cases while managing risks that new types of participants may pose to the central bank and other participants in the payment system.

[41] Unlike omnibus (or joint) accounts, which facilitate funding and/or settlement in central bank money, for the purpose of this report, safeguarding accounts refer to accounts used solely for holding central bank deposits as backing/collateral assets for liabilities of non-bank PSPs issued to end users. For example, in the UK, the draft Code of Practice published by the BoE in June 2026 requires systemic sterling-denominated stablecoins to hold 30% of their backing assets as unremunerated deposits in a central bank deposit account (BoE (2026)). Note that safeguarding of backing/collateral assets does not necessarily require a separate single-purpose account. Depending on the account structure of central banks, some central banks may offer safeguarding services to a subset of central bank account holders that are specifically eligible for the service.

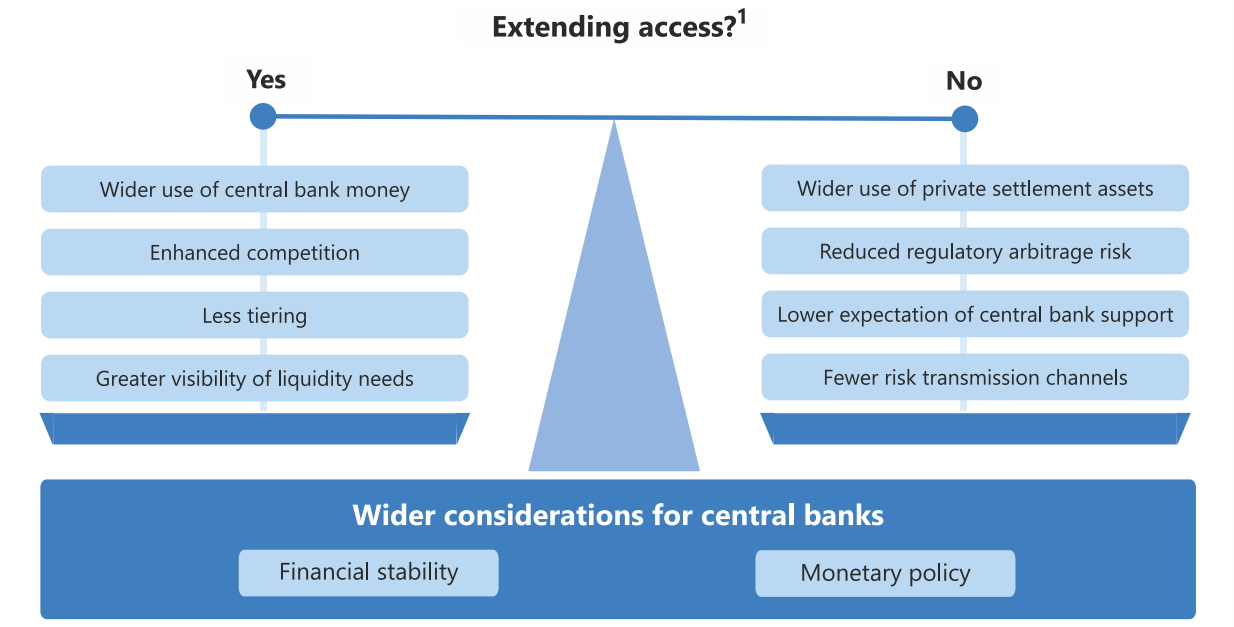
Access policies may also affect the degree of tiering in payment systems and address risks of concentration associated with a limited number of direct participants settling on behalf of a large number of indirect participants. By expanding access to payment systems they operate, central banks can gain more direct visibility into payment flows, which can support effective provision of central bank liquidity in normal and stressed times. At the same time, policies that expand access to a payment system can transfer risks (eg credit, liquidity, operational or cyber-related risks) to the central bank or other participants in the system. Additionally, expanding access may increase moral hazard by creating an expectation that the central bank might intervene in times of stress to support those with access.

Current practices and broader central bank considerations

The options and trade-offs discussed above are reflected in current central banks approaches. Current practices are summarised in Annex 1. At the time of the CPMI member survey, while all CPMI central banks offer settlement accounts to domestically located banks, eligibility policies for non-banks varied widely across non-bank types, reflecting their heterogeneous nature, and were generally more restrictive for foreign entities.

The appropriate balance among these trade-offs depends on a range of factors, including each jurisdiction's financial system structure, central bank policy priorities and legal frameworks governing them, regulatory and supervisory frameworks for new types of entities seeking access and the level of their risk management. In addition, this balance could shift over time as the broader risk environment evolves (eg threats of cyber attacks or fraud). Cross-border dimensions add further complexity, such as differences in regulatory frameworks, especially when central banks consider possible access by non-resident entities or payment service providers with activities across jurisdictions.

Access to settlement accounts and services: examples of policy considerations Figure 7



[1] Decisions about access to central bank accounts are not binary; when contemplating extending access, central banks may consider a spectrum of possibilities, such as broadening the range of institutions allowed direct access or offering differentiated accounts and services for different types of institutions.

Source: Authors' elaboration.

Decisions regarding access will also have wider implications for central banks that go beyond their roles in payment and settlement. For example, policies that expand access may indirectly, through enhanced competition, affect commercial banks' capacity for credit provision to the real economy if structural changes result in substitution away from commercial bank deposits. In addition, both omnibus or joint accounts and safeguarding accounts may affect monetary policy implementation if large balances sit in accounts but are not influenced by market operations.

Figure 7 illustrates the notable trade-offs and considerations discussed above. Central banks may also consider whether to adjust policies in response to changes in the use of cash in their jurisdictions. Such considerations are discussed in Box 3.

Box 3

Cash

In addition to providing accounts to financial intermediaries, central banks provide cash to the banking sector and the public as part of their role as issuer. Even in economies in which there is a decline in the use of cash for making payments, public demand for cash as a means of payment and store of value remains (Aksonthung et al (2026)). Cash is unique in that it is issued by a central bank and widely accessible, including for those who cannot or prefer not to pay electronically. Cash offers resilience by providing a backup in case of operational disruptions to digital payment systems. In addition, the optionality of using physical cash alone can serve as a disciplining mechanism for other forms of money.

Some jurisdictions have increased efforts to support the role of cash through various measures. These include national strategies to keep the cash infrastructure efficient and resilient, issuing advisories to hold cash for emergencies, enforcing cash acceptance as a form of payment and expanding regulatory and supervisory powers to support institutions' provision of reliable cash services.

As demand for digital services has increased, various central banks are engaged in work on digital cash, or retail central bank digital currency (Kosse et al (forthcoming)). Some initiatives have progressed to advanced technical preparation and legislative negotiation phases, while others remain in exploratory stages. These initiatives vary significantly in design and implementation. A common (envisioned) approach is to replicate the tiered system in which digital cash is issued by the central bank and distributed by private sector intermediaries.①

Other jurisdictions have decided not to pursue digital cash at present. These decisions reflect various considerations, including uncertainty about the demand for physical and digital cash as well as differences in the legal and regulatory environments in which central banks operate.

① Examples of (proposed) digital cash distributed to end users via intermediaries include the digital euro, and a possible digital pound (see ECB (2026) and Bank of England (2026b)). e-CNY, which migrated from digital cash to digital deposit money in 2026, also uses a tiered model, though through a distinct and hybrid approach: the People's Bank of China issues it to the participating commercial banks, who in turn distribute it to end users as digital commercial bank deposits with fiat currency nature. As a result, the balances in commercial banks' e-CNY settlement wallets are central bank liabilities, while end users' e-CNY balances are liabilities of the commercial banks. For more information, see e-CNY.

6.2 Maintaining and adapting infrastructure

Central banks regularly evaluate their payment and settlement infrastructure, considering what services, design choices and risk management best serve the safety and efficiency of the payment system. Much of the existing central bank infrastructure was originally designed for an era in which market demands differed from the emerging demands discussed in Section 3. The developments and implications discussed in Sections 4 and 5 may raise questions about the effectiveness and suitability of existing infrastructure. A range of policy options and trade-offs exist, with central banks' choices reflecting different market needs, technical maturity, costs and benefits and operational constraints.

Selected policy options

Modernising existing infrastructure

Many central banks are modernising existing infrastructure to address emerging demands, support liquidity provision and respond to innovation, among other motivations. For example, extending the operating hours of RTGS systems can address the emerging demand for convenience and speed of domestic payments, enhance cross-border payments and address settlement needs arising from FPS (CPMI (2022a)).[42] Other recent initiatives to modernise existing central bank-operated systems include migration to the ISO 20022 messages with harmonised data requirements and increased deployment of application programming interfaces (APIs) for data exchange. Many central banks have also explored connecting payment systems across jurisdictions or developing multilateral regional common platforms (Lammer et al (2026)).

Central banks may also consider how modernising infrastructure can support wider safety and efficiency goals. For example, in traditional interbank payment systems, the expansion of operating hours of central bank systems has facilitated efficient liquidity management by banks and other entities that participate in multiple systems. Some offer "liquidity bridges" that enable participants to move funds between systems intraday, reducing the need to maintain separate liquidity buffers.[43]

Modernising existing systems involves complex design choices and has technical and operational implications for central banks. Examples include the need for system maintenance windows, staffing adaptations, changes to risk and liquidity management procedures, cost recovery and pricing policies, and value-for-money assessment of modernising investment (CPMI (2023a)). Payment system modernisation also has operational and financial implications for payment system participants, connected FMIs and broader market participants, which should be taken into account. In addition, central banks cooperate closely with payment system overseers and other authorities when modernising systems to navigate differences in legal frameworks, regulations and policies across PSP types and jurisdictions (CPMI (2024)).

Building new infrastructure

In addition to modernising existing infrastructure to respond to evolving needs, some central banks are developing new infrastructures. Many jurisdictions have introduced FPS over the past decade, with nearly one third owned and operated by central banks (Fitzgerald et al (2025)). Some central banks are also exploring possible infrastructures (including those based on DLT) for providing central bank money for settlement of tokenised interbank payment transactions and DvP transactions.[44]

Implementing a new infrastructure is a complex endeavour involving many strategic, technical and operational decisions (Box 4). Important considerations relate to expected benefits of risk reduction and efficiency gains in the payment system as a whole, high upfront investment costs, impacts on running costs and longer-run cost recovery. Additional considerations include competition, interoperability and alignment of provided services with market demand. Even if the central bank does not directly operate a new infrastructure, central bank provision of settlement services may be critical for safe and efficient implementation of the infrastructure. Central banks may also weigh other public policy-related

[42] Options range from increasing operating hours on current operating days to adding more operating days to moving to full 24/7 operations. For example, the BoE is considering extending the operating hours of its RTGS system, CHAPS, potentially moving towards a 22x5, 22x6 or longer-term near-continuous settlement model.

[43] Examples of liquidity bridges include the bilateral intraday euro liquidity bridge between the UK RTGS system and TARGET2 via De Nederlandsche Bank and the Scandinavian Cash Pool, a tripartite liquidity bridge arrangement between the central banks of Denmark, Norway and Sweden. See CPMI (2022b).

[44] For example, the BoE has built its renewed RTGS service as a "digital public infrastructure" with enhanced functionality and interoperability to preserve the role of central bank money for new types of FMIs, including those that offer tokenised asset settlement and synchronised settlement across diverse ledgers. Other central bank initiatives include Project Pontes and Appia by the Eurosystem and the Helvetia Pilot in Switzerland.

implications, eg for financial stability, monetary policy or the potential impact on other payment instruments, including (digital) cash.[45]

Key policy considerations for central banks

Central banks balance trade-offs when deciding on the best infrastructure design for safe and efficient payments. Incremental upgrades may address near-term needs at lower cost but may not fully meet market needs or resolve larger system issues, constraints and limitations. More transformative changes with innovative technologies, however, may require substantial evaluation, investment, testing and coordination with a range of stakeholders.

Timing is another key factor. Acting too early risks misjudging needs, supporting untested innovations or inadvertently favouring certain private solutions. Acting more slowly may allow inefficiencies or safety issues to build up. Deciding whether and when to adapt infrastructure requires understanding market needs, technical maturity and constraints, costs, benefits, replacement cycles of the IT systems used by central bank payment systems and their participants, and whether market changes show transitional or persistent coordination failures.

Central banks may also weigh different operational models, which are not necessarily mutually exclusive. Direct provision of infrastructures and services offers greater control over safety and access but requires initial investment and ongoing resources. By contrast, enabling private solutions may foster innovation and competition, but these may not fully align with the public interest, which also depends on the effectiveness of relevant regulation, supervision and oversight. Similarly, offering multiple infrastructures can meet diverse needs and encourage innovation but also increase operational complexity and costs.

Central banks may need to consider how interoperability across multiple platforms is supported. Central banks' payment infrastructures are likely to coexist with those managed by the private sector. Interoperability among such infrastructures can facilitate the distribution of payments across different platforms, removing technical barriers to liquidity (Section 5.4) and supporting convertibility (Section 5.6).

[45] CPMI (2016). For example, some jurisdictions used the launch of an FPS as an opportunity to implement the ISO 20022 message standard for other payment systems that would interact with the FPS.

Box 4

Design considerations for central bank money in token arrangements

Central banks are analysing how central bank money could be provided for the settlement of tokenised interbank payments or delivery versus payment (DvP) transactions. Options range from adapting and using existing arrangements to introducing more innovative token arrangements. These efforts involve decisions across four dimensions: the technical form of central bank money, its interaction with other tokenised assets, the number of platforms involved, and platform ownership and governance. The trade-offs outlined below are conceptual, as central banks continue to explore these design choices. Eventual choices will be jurisdiction-specific, and central banks may explore multiple models tailored to specific use cases.

Technical form of central bank money

The technical form of central bank money could involve using *balances in existing central bank settlement accounts* as in today's large-value payment systems. For example, some central banks are linking private sector distributed ledger technology (DLT) platforms with central bank settlement services to settle wholesale transactions in central bank money.① Other options include using *tokenised forms of current central bank accounts* or *digitally native central bank money tokens* on a new platform. Using existing infrastructure may offer greater reliability and familiarity and thereby support safety and robustness and be faster and cheaper to deploy. However, it may hinder integration with new technologies and adaptability to future market needs. Where central bank money is not available or practical for private sector tokenised forms of money or securities, industry may seek private sector alternatives which may or may not be sufficiently safe or liquid as settlement assets. Tokenised forms of existing central bank accounts or digitally native central bank money tokens could unlock new functionalities but are more complex and may take longer to implement due to policy, technological and legal challenges.

Interaction with other tokenised assets

Choices about interaction with tokenised assets range from making central bank money available on a dedicated central-bank platform *linked with* other tokenised asset platforms, to *integrating it into the same platform*(s) in which other tokenised assets reside.② Using a dedicated central-bank platform and linking it with other platforms could leverage existing systems and be quicker and easier to implement but could create synchronisation and information flow challenges. Issuing tokenised central bank money on a shared platform with other tokenised assets could improve efficiency and foster innovation but may require more time, cost and stakeholder coordination in establishing the shared platform as well as operating it.

Number of platforms

Tokenised forms of central bank money could be provided on *single or multiple* programmable platforms. A single platform may simplify deployment, operations and supervision, while fostering efficiency and scale. However, this could create a single point of failure. Offering central bank money on multiple platforms may improve resilience and flexibility but add challenges in oversight, standardisation and liquidity management.

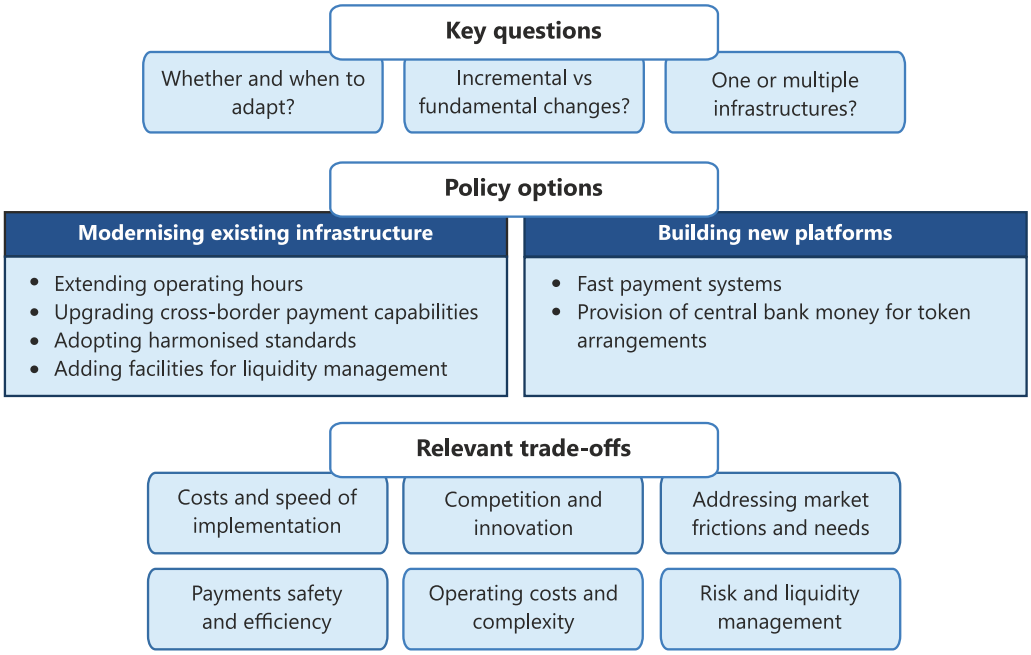
Ownership and operation of platforms

Ownership and operation of platforms is another pivotal question. Central bank–operated platforms ensure policy alignment and robust oversight. Providing central bank money on private platforms may drive innovation but raise governance and regulatory challenges. Jointly owned and operated platforms can balance public and private strengths but require acceptable governance arrangements and close coordination. Regardless of the model, central banks will continue to safeguard the safety, resilience and efficiency of the money settlement.

① For example, the Eurosystem's Project Pontes aims to link market DLT platforms with Eurosystem TARGET Services to settle wholesale transactions, eg for securities settlement in central bank money. In Switzerland, as part of the Helvetia pilot, the Swiss National Bank (SNB) is exploring multiple approaches to settling tokenised asset transactions with central bank money, including settlement in traditional central bank money via a real-time gross settlement link between the Swiss Interbank Clearing (SIC) payment system and the private sector DLT settlement platform BX Digital. ② One approach the SNB is exploring as part of the Helvetia pilot is a tokenised form of the Swiss franc for use by financial institutions that would coexist with tokenised assets on the same DLT infrastructure, allowing them to be transferred simultaneously on a DvP basis.

Adapting payment infrastructure: selected policy options and considerations for central banks as operators

Figure 8



Source: Authors' elaboration.

6.3 Oversight in evolving payment systems

As the systems that central banks oversee evolve, so can the questions that central banks face in their role as overseers. Central bank oversight of payment systems aims to maintain their safety and efficiency and safeguard financial stability by monitoring existing and planned systems, assessing them against these objectives and, where necessary, inducing change (CPSS (2005a)).[46] Central bank overseers often need to coordinate with each other and other authorities, such as overseers or supervisors of other types of FMIs (eg CCPs), banking supervisors and resolution authorities subject to relevant oversight frameworks.

Oversight frameworks in jurisdictions have evolved over the past two decades. First, oversight expectations have generally been aligned with the CPMI-IOSCO Principles for financial market infrastructures (PFMI). Second, and relatedly, jurisdictions have incorporated the PFMI, alongside post-GFC financial reforms, into their laws, regulations and relevant central bank policies, often widening the scope and types of FMIs subject to central bank oversight. Third, in some jurisdictions, the scope of oversight has been expanded to include retail payment systems, services and/or instruments, non-bank payment services and third-party service providers[47] that are considered to be systemically important or critical or could pose systemic risks.

The further evolution of payment systems through tokenisation and other emerging technologies raises questions for central bank oversight, where new entity types or arrangements conducting regulated activities proliferate and where potential challenges to convertibility across means of payment arise.

[46] Central banks (and other relevant authorities) may also be responsible for the consistent and effective regulation, supervision and oversight of FMIs more broadly to promote financial stability.

[47] For example, in the euro area, service providers that provide important services to the payment system fall within the oversight remit of the Eurosystem. See ECB (2016).

Scope of oversight and systemic importance

Historically, central bank oversight evolved from their responsibilities to ensure the safety and efficiency of core interbank payment systems in which systemic risks were most apparent. The PFMI apply to payment systems that are determined by national authorities to be systemically important. The principles-based approach of the PFMI recognises that payment systems may be organised and function in diverse ways. It acknowledges that risk management must suit the specific design of each system.

Evolving payment system configurations and payment arrangements raise questions about how to pursue consistent regulatory outcomes most effectively ("the same risk, same regulatory outcome" principle) and whether new configurations and arrangements fall within the scope of central bank oversight. Relevant questions are whether emerging arrangements fulfil functions typically performed by an FMI, and if so, whether they are, or have the potential to become, systemically important.

Addressing these questions involves a significant degree of judgment. Considerations include the nature and activities of the arrangement, volumes and values processed, interconnection with other systems (including access to central bank accounts and services) and lack of substitutability.[48] Moreover, central banks may calibrate the intensity of their oversight activities to the risks posed by a payment arrangement. For entities or arrangements that fall within the central bank oversight perimeter but are not systemically important, central banks may apply the principle of proportionality to support safe and responsible innovation, tailoring oversight intensity while avoiding undue barriers to entry. This may include adapting existing oversight tools as well as employing more bespoke approaches such as regulatory sandboxes.

Direct versus indirect approaches

The separation of the issuance and transfer functions in certain arrangements may pose challenges for effective oversight. Technological advancements facilitate the combination of wider sets of assets, functions and entities on programmable platforms. This raises questions for oversight relating to where risks are concentrated, how they spill over across distributed payment chains and who manages which risk. It could also blur the allocation of supervisory responsibility among central banks, market authorities and other relevant institutions.

As the organisation of payment arrangements becomes more flexible and diverse, jurisdictions may face strategic choices regarding whether applying direct oversight of new arrangements versus relying on indirect regulation, where available, is appropriate. One option is to apply direct oversight to new arrangements that meet the relevant criteria, potentially amending those criteria where necessary to bring relevant entities or activities within the scope. Another option is to rely on regulatory requirements imposed on regulated entities governing their use of third-party service providers, potentially including providers of new payment functions in the scope. Such third-party reliance may introduce risks, including vulnerabilities related to cybersecurity, especially in the case of critical services. Such reliance may warrant clear accountability, a robust third-party risk management framework and clearly defined and credible exit strategies.[49]

Choosing between direct and indirect approaches involves trade-offs regarding their respective objectives, regulatory coverage, effectiveness and resource requirements. The indirect approach is often rooted in prudential regulation, with indirect requirements related to the arrangements that regulated entities rely on. The direct oversight approach is generally taken for arrangements that function as systemically important payment systems. Where authority exists, a combination of both direct and indirect approaches may be used to achieve the desired outcomes.

[48] CPMI-IOSCO (2012), paragraph 1.20, and CPMI-IOSCO (2022), Section 2.

[49] CPMI-IOSCO (2026) discusses the risk management challenges associated with the increased reliance of FMIs on third-party service providers and FMIs' resulting increased operational risk exposure, particularly for the delivery of their critical services.

Challenges related to tokenised assets and DLT-based infrastructures

The growing interest in tokenised means of payment or settlement assets and DLT-based infrastructures from industry exemplifies the need for overseers to effectively assess risks and risk management. The adoption of such new technologies may affect settlement finality, data integrity and confidentiality, operational resilience and sound governance. Different means of payment and settlement assets have different financial risk profiles, requiring assessment of the relevant credit and liquidity risks and, where applicable, market risk. Emerging platforms may host payment services with multiple means of payment and settlement assets, which may raise challenges in coordinating legal and operational arrangements and maintaining effective governance.

Rapid technological change has necessitated deft operational risk management in the financial sector, as well as assessment of the adequacy of existing oversight frameworks and their adaptability as needed. Cyber resilience continues to be an oversight priority, requiring new capabilities for threat identification and mitigation, as well as practices to enhance traditional operational risk frameworks. Some central banks are exploring how overseers might leverage new technologies as tools to support oversight of emerging arrangements including DLT-based infrastructures, such as use of DLT to access data for supervisory purposes or compliance assessments (sometimes termed "embedded supervision"). These capabilities could enhance oversight effectiveness but may also require central banks to develop new technical expertise and employ appropriate controls.

Cross-border coordination

Multi-jurisdictional aspects associated with newly emerging payment arrangements present an additional layer of complexity for central bank oversight. As payment systems and arrangements increasingly operate across borders, questions arise about how to effectively monitor, regulate, supervise and oversee entities operating across jurisdictions. Coordination challenges can become particularly pronounced during stress events. Further, as multi-jurisdictional arrangements may develop rapidly, cooperative oversight arrangements across jurisdictions may need to adapt swiftly to keep pace with these developments, necessitating enhanced international cooperation. For example, in the context of stablecoin arrangements that operate across multiple jurisdictions, regulatory frameworks may be implemented with special attention to cross-border coordination. Effective cross-border coordination may also help to address regulatory arbitrage, especially when coordination fosters greater consensus on oversight approaches.

6.4 Convening stakeholders and supporting responsible innovation

Central banks act as catalysts when network externalities or coordination challenges create barriers to identifying and implementing welfare-improving solutions among market participants. Three main approaches may be adopted: (i) convene industry stakeholders; (ii) actively catalyse the development of concrete market solutions; and (iii) promote the adoption of technical industry standards and common practices. These approaches exist on a continuum and it is neither meaningful nor possible to clearly delineate them in practice.

Convene industry stakeholders

Central banks may convene market participants to foster dialogue, understand evolving needs and address coordination challenges as markets develop. During periods of rapid technological change, regular engagement helps central banks learn from market developments, understand where coordination problems emerge and assess whether private mechanisms can address them or whether market failures warrant policy responses.

Different jurisdictions take varying approaches to this engagement, reflecting their own market structures, regulatory frameworks, central bank mandates and traditions. Some central banks engage proactively and frequently with market participants. Others monitor and engage when specific coordination challenges become apparent.

Central banks may also facilitate coordination among market participants where market incentives exist but coordination mechanisms are absent. In various jurisdictions, central banks have helped overcome coordination problems associated with the development of new retail payment systems, such as FPS. More recently, Project Agorá brings together central banks and private sector institutions to explore how tokenised commercial bank deposits and central bank money can be integrated on programmable platforms for cross-border payments (Box 1).

Support the development of market solutions

In cases where risks are evident or market discipline appears insufficient and their mandates permit, central banks may actively catalyse the development of particular market solutions, interoperability protocols or clearing arrangements that address systemic risks that market discipline alone cannot resolve.[50]

More recently, in response to the possible impact of tokenisation and other emerging innovations on the demand, supply and distribution of liquidity in payment systems (Section 5.4), both the industry and the public sector are actively collaborating. Financial institutions, PSPs and platform providers are forming strategic partnerships to improve connectivity across platforms and networks, while public-private sector initiatives are working to promote interoperability and facilitate the flow of liquidity across the broader ecosystem.[51] For emerging or future arrangements such as those that facilitate the convertibility of tokenised forms of means of payment and settlement assets, design considerations depend on scale and use. At limited scale, bilateral agreements and market-based conversion may provide sufficient convertibility. The appropriate response depends on their scale, regulatory requirements and whether market mechanisms can maintain adequate stability.

Promote the adoption of technical industry standards and common practices

The catalyst role also involves promoting the adoption of technical industry standards and common practices. For example, when multiple arrangements emerge, central banks may coordinate to support efficient interaction across such arrangements, where stakeholders share challenges and practical approaches in addressing them. This supporting role includes convening industry representatives and providing technical expertise where relevant.[52] When industry standards and common practices pertain to activities and arrangements that span borders, international collaboration among central banks and relevant public or private sector stakeholders could be facilitated by international bodies, which can serve as a useful forum for fostering timely and consistent adoption.[53]

[50] A prime historical example is the central bank strategy to reduce foreign exchange (FX) settlement risk in the 1990s, which led to the creation of CLS Bank in 2002. Prior to 2002, FX settlement involved significant principal risk, but individual banks could not solve this coordination problem alone. Following a 1996 G10 central banks report (CPSS (1996)), central banks convened major banks and facilitated the development of a private sector solution while adapting central bank policies on access to settlement accounts and services to provide support to the industry-wide initiative, which included remote access by CLS Bank to accounts at the central banks of CLS-eligible currencies.

[51] Examples include the Eurosystem's Appia initiative.

[52] For example, central banks have encouraged the adoption of ISO 20022 and harmonised ISO 20022 data requirements to improve interoperability and data quality across payment systems. The CPMI as a central bank forum collaborated with the private sector Payments Market Practice Group to agree on harmonised ISO 20022 data requirements. CPMI (2023b).

[53] Examples from recent years include the CPMI's Payment Interoperability and Extension (PIE) task force and the Financial Stability Board's Taskforce on Legal, Regulatory, and Supervisory matters (FSB LRS Taskforce). The CPMI PIE task force was established in 2023 and supports the G20 Roadmap to enhance cross-border payments by providing expert advice on market conventions and industry practices as well as serves as a forum for the exchange of implementation experiences and coordination between public authorities and private sector stakeholders. The FSB LRS Taskforce was established in 2023 and serves as a mechanism for regular engagement between the public sector and senior managers from the private sector that helps to support the implementation of the G20 Roadmap.

Key policy considerations for central banks

The catalyst role is based on the premise that the private sector is well positioned to identify market needs and develop novel solutions, while recognising that network externalities or coordination challenges may create barriers to beneficial market outcomes. Central banks aim to be open to innovation and take cues from market developments, with the goal of supporting market solutions while remaining alert to coordination failures or systemic risks that markets alone cannot resolve. Central banks' choices on how and when to act as a catalyst involve several key trade-offs.

The scope and intensity of central bank engagement present a first consideration. Convening market participants to develop industry standards and common practices allows central banks to support private innovation while promoting system-wide efficiency. This approach enables central banks to learn from market developments and understand where genuine coordination challenges exist. It also requires broad industry participation and consensus-building, which may move slowly relative to market innovation and may become more challenging as the range of private sector entities involved in the payment system becomes larger and more diverse. During periods of rapid change, the pace of coordination may limit effectiveness in addressing emerging risks or inefficiencies. More active approaches to catalyse specific developments offer central banks more direct responses to identified policy concerns.

Timing presents another consideration. Acting early allows central banks to address potential coordination failures before they become entrenched, but it also risks supporting solutions for problems that may be resolved through market forces or backing approaches that ultimately prove unsuitable. Acting later allows market needs to crystallise and private solutions to emerge but may leave welfare-reducing frictions unaddressed during the transition or allow systemic risks to build.

Central banks may also assess whether coordination failures are transitional or structural. Some barriers to market solutions may reflect temporary information gaps or first-mover disadvantages that will diminish as markets mature. Others may stem from network externalities or collective action problems that private mechanisms alone cannot adequately resolve. The nature of the coordination failure informs whether and how central banks engage.

These considerations remain jurisdiction-specific. Central banks continue to assess when using their role as catalyst is appropriate and what form it should take as well as when more direct approaches are necessary that may involve central bank actions as overseer or operator of payment systems.

7 Conclusion

Payment systems are undergoing profound transformation. Technological innovation, changing user demand and the emergence of new actors and infrastructures are increasing the range of payment and settlement arrangements and creating opportunities for greater efficiency, competition and innovation. At the same time, these developments are generating new interdependencies and changing the way credit, liquidity, operational and other risks arise and are transmitted throughout the payment system and the broader financial system.

These developments do not fundamentally alter the economic characteristics that have long shaped payment systems. Network effects, the dynamics between concentration and fragmentation and the importance of trust in money used in payments remain central. What is changing is where these forces arise, how risks and responsibilities are distributed across actors and infrastructures and how different forms of money interact in payments. As the safest and most liquid settlement asset, central bank money underpins the stability of FMIs, supports liquidity and provides an anchor for par convertibility across different forms of money, fostering their coexistence in a jurisdiction's payment system. Its role, however, does not require that it is used directly in every transaction or payment arrangement. This report reaffirms that the combination of central bank money and private means of payment and settlement assets should

be preserved. While the specific balance will differ across jurisdictions and may change over time, outcomes in which either the central bank or private sector entities provide all the money would not be sufficiently stable or efficient.

A safe and efficient payment system combines central bank money with private means of payment and settlement, in which their risks are appropriately managed and different forms of money remain reliably convertible at par. Nonetheless, central bank money should be used as the settlement asset in systemically important payment systems and other FMIs where practical and available. This underscores the importance of central banks continually evaluating the practicality and availability of central bank money for entities or transaction types for which its use is deemed important.

As new means of payment and settlement assets emerge, preserving or enabling reliable par convertibility and effective links to central bank money become increasingly important considerations for central banks in maintaining trust in money and preventing fragmentation in the payment system. Central banks have a range of established policy tools for achieving these outcomes but may need to use them in different ways and combinations as the payment system continues to evolve. Further, whether these new means of payment and settlement assets can achieve reliable par convertibility depends crucially on their risk profiles, which may vary considerably.

Looking ahead, the trajectory of developments is uncertain, though innovation will certainly continue at a rapid pace. The private sector continues to play an important role in the payment system by driving innovation, fostering competition, enhancing efficiency, expanding access to payment services and offering diverse payment services. As markets evolve, central banks may assess whether developments in the payments landscape and their impacts give rise to risks or coordination challenges requiring central bank policy response. Central banks may reassess their policies as needed to achieve their objectives.

Different jurisdictions will follow different paths depending on their current configurations of payment systems, broader financial structures, legal frameworks, market developments and policy preferences. Nevertheless, common considerations apply and, by elaborating on such considerations, this report offers central banks a coherent framework to support their policymaking and implementation. New arrangements should be assessed according to their implications for safety and efficiency, liquidity, resilience, convertibility, interoperability, competition and the concentration or distribution of risks.

Central banks have a range of complementary tools to address these challenges through their roles as issuers, operators, overseers and catalysts. They can adapt, where permissible, access to central bank accounts and services; modernise existing infrastructures or support new arrangements; adjust central bank oversight activities to emerging risks and, where relevant, to support welfare-enhancing innovation; and convene market participants to address coordination failures through fostering industry standards, interoperability and cooperation with and among market participants. These tools interact, and central bank actions in one area may affect outcomes in others. Policy choices therefore need to be considered holistically rather than in isolation.

As innovation continues, central banks will need to remain adaptable. They will seek to avoid both premature commitment to particular technologies and delays that allow risks or inefficiencies to become entrenched. The technologies driving payment system change will vary over time, and central banks will face recurring questions about their roles as issuers, operators, overseers and catalysts in the payment system. Continued cooperation with the private sector and among authorities across jurisdictions will be essential. The objective is that, as payment arrangements evolve, the payment system continues to provide a safe, efficient and robust foundation for economic activity.

References

Aksonthung, C, A Kosse and I Mustafi (2026): "Tap a card, pay by phone, but cash still holds its own", *CPMI Briefs*, no 12.

Bank for International Settlements (BIS) (2025): "The next-generation monetary and financial system", *Annual Economic Report 2025*, Chapter III.

——— (2026a): "Anchoring trust in money: innovation beyond stablecoins", *Annual Economic Report 2026*, Chapter III.

——— (2026b): *Comparative table on features of selected central securities depositories*, BIS statistics on Financial market infrastructures and critical service providers, BIS Data Portal, https://data.bis.org/topics/CPMI_FMI/tables-and-dashboards?activeTab=Comparative.

Bank of England (BoE) (2026a): *Sterling-denominated systemic stablecoins. Policy statement and consultation on draft Code of Practice*.

——— (2026b): *Design note - Intermediary roles and scheme rulebook*, https://www.bankofengland.co.uk/report/2025/intermediary-roles-and-scheme-rulebook-design-note

BIS and Committee on Payments and Market Infrastructures (CPMI) (2024): *Tokenisation in the context of money and other assets: concepts and implications for central banks*.

BIS Innovation Hub (BISIH) (2025): *Project Nexus: enabling instant cross-border payments*.

——— (2026): *Project Agorá: a shared programmable platform for wholesale cross-border payments*.

Borio, C, P Disyatat and N Tarashev (2026): "Stablecoins and the exorbitant privilege of money creation", *CEPR VOXEU Column*.

Budau, V and H Tourpe (2024): "ASAP: a conceptual model for digital asset platforms", *IMF Working Paper*, no 19.

Committee on Payment and Settlement Systems (CPSS) (1992): *Delivery versus payment in securities settlement systems*.

——— (1996): *Settlement risk in foreign exchange transactions*.

——— (2003): *The role of central bank money in payment systems*.

——— (2005a): *Central bank oversight of payment and settlement systems*.

——— (2005b): *New developments in large-value payment systems*.

Committee on Payment and Settlement Systems (CPSS) and the Group of Computer Experts of the Central Banks of the Group of Ten Countries (1996): *Security of electronic money*.

CPMI (2014): *Non-banks in retail payments*.

——— (2015): *Digital currencies*.

——— (2016): *Fast payments – Enhancing the speed and availability of retail payments*.

——— (2017): *Distributed ledger technology in payment, clearing and settlement. An analytical framework*.

——— (2019): *Wholesale digital tokens*.

——— (2020): *Enhancing cross-border payments: building blocks of a global roadmap*, Stage 2 report to G20.

——— (2021): *Developments in retail fast payments and implications for RTGS systems*.

——— (2022a): *Improving access to payment systems for cross-border payments: best practices for self-assessments*.

——— (2022b): *Liquidity bridges across central banks for cross-border payments*.

——— (2023a): *Operational and technical considerations for extending and aligning payment system operating hours for cross-border payments: An analytical framework*.

——— (2023b): *Harmonised ISO 20022 data requirements for enhancing cross-border payments*.

——— (2023c): *Considerations for the use of stablecoin arrangements in cross-border payments*.

——— (2024): *Linking fast payment systems across borders: governance and oversight*, final report to the G20, October.

CPMI, BISIH, International Monetary Fund (IMF) and World Bank (2023): *Exploring multilateral platforms for cross-border payments*.

CPMI and International Organisation of Securities Commissions (IOSCO) (2012): *Principles for financial market infrastructures*.

——— (2022): *Application of the principles for financial market infrastructures to stablecoin arrangements*.

——— (2026): *FMIs' reliance on third-party service providers: challenges and risks*.

European Central Bank (ECB) (2016): *Eurosystem oversight policy framework*.

——— (2025): *TARGET services Annual Report 2025*.

——— (2026): *Latest news on the digital euro project,* https://www.ecb.europa.eu/euro/digital_euro/html/index.en.html#latest.

Fitzgerald, E, A Illes, T Lammer, F Leppanen and F Semorile (2025): "Moving on up: results of the 2024 cross-border payments monitoring survey", *CPMI Briefs*, no 10.

Kosse, A, F Leppanen and P Wierts (forthcoming): "Results of the 2025 BIS survey on retail central bank digital currencies, tokenisation and crypto", *BIS Papers*.

Lammer, T, F Leppanen and F Semorile (2026): "Enhancing cross-border payments step by step: insights from the 2025 monitoring survey", *CPMI Briefs*, no 13.

Reserve Bank of Australia (RBA) and Digital Finance Cooperative Research Centre (DFCRC) (2026): *Project Acacia – Exploring the role of digital money in wholesale tokenised asset markets, final report.*

Annex 1: CPMI central bank policies on access to settlement accounts and related services

This annex provides a high-level summary of current and emerging policies related to access to settlement accounts and related services across CPMI member jurisdictions as of September 2026. A settlement account is defined as an account offered by central banks that can be used to send and receive payments or to discharge obligations for the purpose of interbank settlement.

Settlement in central bank money

- Systemic importance is a key driver of central bank policies on settlement in central bank money. Consistent with the PFMI Principle 9 on money settlements, all CPMI jurisdictions require or encourage systemically important payment systems and FMIs to settle in central bank money where practical and available. If central bank money is not used, the respective payment system or FMI operators are subject to strict risk controls, such as backing balances in private sector settlement assets with balances prefunded in central bank money,[54] to obtain specific authorisation or remain below certain settlement thresholds.[55]
- In some jurisdictions, certain FMIs are admitted by the central bank as an RTGS participant without having access to a central bank account themselves. These FMIs are authorised to use the RTGS to directly credit or debit its participants' net positions using the accounts that these participants hold with the central bank.[56]
- Some central banks have started, or are considering starting, assessments as to whether new forms of non-central bank settlement assets would be suitable for settling certain types of financial transactions, using controlled pilot regimes or sandboxes.[57]

Access to settlement accounts

- All CPMI central banks offer settlement accounts to domestically located banks, ie banks with some specified form of authorised establishment within their respective jurisdiction (Table A1).
- Eligibility policies for non-banks vary widely across non-bank types, reflecting their heterogeneous nature. While many CPMI jurisdictions allow payment systems and other types of FMIs to hold a settlement account, there is a greater degree of diversity in the approaches for e-money issuers and other types of PSPs.
- While non-bank PSPs typically connect to central bank payment services indirectly through banks, in some jurisdictions they can have direct access. For example, the ECB adopted a Eurosystem-wide harmonised policy in 2024 to allow non-bank PSPs without a banking licence – Payment Institutions (PIs) and Electronic Money Institutions (EMIs) – direct access to Eurosystem payment accounts and central bank-operated payment systems, including TARGET (T2 for settling

[54] Such as CHIPS in the US and payment system operators in the UK.

[55] For example, as a general rule under the EU framework, CSDs can settle in commercial bank money where the use of central bank money is not practical or available, provided they obtain the relevant authorisation. Such authorisation requires robust arrangements to manage credit and liquidity risks. Where CSDs are below certain settlement thresholds, they are exempted from the authorisation requirement.

[56] This arrangement exists, for example, in Switzerland, where it is known as "third-party system access".

[57] For example, in the EU, DLT-based settlement systems and DLT-based trading and settlement systems may be granted an exemption under Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 ("the EU's DLT pilot regime") to permit settlement in tokenised commercial bank money or e-money tokens within strict activity limits. Similarly, in the UK, the Financial Conduct Authority-BoE digital securities sandbox (DSS) enables DSS entrants to use DLT for financial transactions and the BoE is exploring allowing them to use regulated stablecoins as an on-chain settlement asset.

payments and TIPS for settling instant payments). Based on this policy, licensed EMIs issuing e-money tokens are eligible for access to a central bank account for settlement purposes.

- The central banks in the euro area, the UK and the US offer so-called omnibus (or joint) accounts with varying eligibility to operators of payment systems, other types of FMIs and card networks, and in certain cases also to government agencies (Table A3). This account structure pools funds belonging to some or all of the participants of respective payment arrangements into a single account. It allows the participants to fund and defund in central bank money, while settling payment instructions on the arrangement's books.
- Irrespective of the type of entity, many CPMI central banks have more restrictive policies for foreign entities, ie entities that have no specified form of authorised establishment within the given jurisdiction (Table A2). Payment systems, other types of FMIs and card network operators have remote cross-border access in more jurisdictions than banks. Where foreign entities are eligible for a settlement account, it is often exceptional and subject to tailored criteria.[58]

Access to central bank services

- The type of services available to settlement account holders varies by entity type. Banks generally have access to a full range of services and facilities, including intraday and overnight credit and remuneration of account balances. Access to credit is generally subject to additional conditions (eg compliance with regulatory and prudential requirements and the provision of eligible collateral).
- Policies regarding non-banks' access to these services are highly jurisdiction-specific. Compared with banks, settlement accounts held by non-banks are provided more often as a dedicated account that only allow for sending and receiving payments or discharging obligations for the purpose of settlement with other financial intermediaries or FMIs. For instance, in the EU, authorised non-bank PSPs may hold a settlement account solely for payment purposes. These settlement accounts cannot be used to hold customer funds on an ongoing basis, and balances must be limited to what is strictly necessary for settlement. For authorised non-bank PSPs to be eligible for access to intraday credit, overnight credit and remuneration, they must be licensed credit institutions.
- In some jurisdictions, specific non-bank types are offered intraday credit or remuneration, mostly with the aim of facilitating safety and efficiency in payments rather than supporting other central bank responsibilities, such as monetary policy implementation. For instance, in the UK, for non-bank PSPs, interest is earned on pre-funding accounts. Similarly, overnight balances held by payment system operators for prefunding purposes are remunerated in the EU.
- Some central banks offer bespoke safeguarding accounts to entities that hold end users' funds and are subject to safeguarding requirements. The purpose of these accounts is to hold backing or collateral assets for liabilities issued to end users instead of sending and receiving payments for settling obligations among financial intermediaries. For example, in Brazil, e-money issuers are allowed to safeguard the assets backing their e-money in circulation in a safeguarding account held with the central bank. These safeguarding accounts held by e-money issuers are remunerated. A more recent example is the draft Code of Practice published by the Bank of England in June 2026, which requires systemic sterling-denominated stablecoins to hold 30% of their backing assets as unremunerated deposits in a central bank deposit account (BoE (2026)).

[58] Eg in Switzerland, the Swiss National Bank (SNB) has allowed remote access to a settlement account for foreign banks for settling transactions in the Swiss Interbank Clearing (SIC) system. As a general rule, in order to be admitted, these banks must make a significant contribution to the fulfilment of the SNB's tasks, and their admission must not pose any major risks. For reasons of legal and operational security, this applies only to foreign banks from jurisdictions which have at least the same standards as Switzerland with respect to banking supervision, the fight against money laundering and telecommunications infrastructure.

Ongoing or planned reviews of account access policies

- A number of CPMI member central banks are considering eligibility and/or types of access.
  - The Reserve Bank of Australia (RBA) will undertake a review of its settlement account access policy following passage of the Australian Government's payment service provider licensing reforms that will establish a new prudential regime. Based on use cases demonstrated in Project Acacia, this review will consider some of the potential uses of settlement account balances and account structures that could support innovations in private forms of tokenised money such as stablecoins.[59]
  - In Canada, subject to meeting certain requirements, registered and supervised non-bank PSPs will be eligible to open a dedicated settlement account at the Bank of Canada for use in the planned new fast payment system.
  - The Saudi Central Bank is planning to review its access policy as part of its RTGS modernisation initiative.
  - In the UK, the BoE is reviewing policies to include the introduction of a stablecoin account for regulated systemically important stablecoin issuers.
  - The South African Reserve Bank (SARB) is in the process of amending the National Payment System Act, which includes proposals for the SARB to expand access to the settlement system to non-banks. This will allow non-banks to have a settlement account with the SARB.
  - In the US, a new type of Reserve Bank account ("payment account") is being considered that any eligible institution could use for the limited purposes of clearing and settlement. As described in a public proposal, payment account parameters could include that holders would not have access to Federal Reserve credit or the discount window, nor would they earn interest on balances held at a Reserve Bank. They would only have access to payment services with automated controls to prevent overdrafts, and they would be subject to an overnight balance limit. The proposal would not expand the types of institutions eligible to access an account.
- A number of CPMI central banks are also considering allowing certain foreign banks to hold tokenised central bank money.
  - For example, the Bank of Mongolia, Bank of Thailand, Central Bank of the United Arab Emirates, Hong Kong Monetary Authority, Monetary Authority of Macao and People's Bank of China participating in Project mBridge allow commercial banks from all six participating jurisdictions to open a multi-currency wallet on the mBridge platform and to hold tokenised central bank money of any of the participating central banks.

[59] Project Acacia explored the role of digital money in wholesale tokenised asset markets (RBA-DFCRC (2026)).

Eligibility for access to a central bank settlement account as of September 2026, domestic entities[1]

Y = yes, entity is eligible for access;[2] N = no, entity is not eligible for access; Entity NA = entity type cannot exist in the jurisdiction, eg because they are banned by law. Table A1

	Banks[3]	**Non-banks**							**Other**[6]
		FMIs excl. payment systems	Payment system operators	Payment card network operators	E-money issuers	Stablecoin issuers[4]	Other PSPs	Government[5]	
Argentina	Y	Y	Y	Y	Y	N	N	Y	Certain capital market entities, eg brokerages and markets
Australia	Y	Y	N	N	Y	N	Y	N	
Belgium[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms;[10] post office[11]
Brazil	Y	Y	Y	N	Y	N	Y	Y	Authorised non-bank financial institutions
Canada	Y	Y	N	N	N	N	N	N	
China	Y	Y	Y	Y	Y	Entity NA	Y	Y	e-CNY system
Euro area[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms[10]
France[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms;[10] post office[11]
Germany[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms[10]
Hong Kong SAR	Y	Y	N	N	Y	N	N	N	
India	Y	Y	Y	Y	Y	N	Y	N	
Indonesia	Y	Y	Y	Y	Y[12]	N	N	Y	
Italy[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms;[10] post office[11]
Japan	Y	Y	Y	N	N	N	Y[13]	Y	Financial instruments business operators; money market brokers; other eligible entities
Korea	Y	Y	Y	N	N	N	Y	Y	Post office;[11] securities firms and insurance companies
Mexico	Y	Y	Y	Y	Y	N	Y	Y	
Saudi Arabia	Y	N	Y	N	N	Entity NA	N	N	
Singapore	Y	Y	Y	N	N	N	Y[14]	N	
South Africa	Y	N	Y[15]	N	N	N	N	N	Post office[11]
Spain[7]	Y	Y[8]	Y	Y	Y[15]	Y[9]	Y[16]	Y	Investment firms[10]
Sweden[17]	Y	Y	N	N	Y	Y[18]	Y	Y	
Switzerland	Y	Y	Y	N	Y[19]	N	Y[19]	Y	Securities firms; central mortgage bond institutions; cash processing operators; fintech companies; (branches of foreign) insurance companies; fund management

									companies; eligible investment companies and partnerships.
The Netherlands[7]	Y	Y[8]	Y	Y	Y	Y[9]	Y	Y	Investment firms; [10] post office[11]
Türkiye	Y	N	Y	N	Y	N	Y	N	Post office[11]
United Kingdom	Y	Y	Y	Y	Y	N[20]	Y	N	Building societies
United States	Y	Y[21]	Y[21]	N	N	N	N	Y	

[1] This table is about the *eligibility* of domestic entities for access to a settlement account at the central bank. For the purpose of this report, a settlement account is defined as an account used to send and receive payments for interbank settlement (irrespective of whether it can be used for other purposes as well). Settlement accounts using emerging technology, such as tokenisation or DLT, are out of scope. The table identifies entity types that are or would be eligible for such an account and does not presume that all such entities currently hold one in practice or will be granted access to one. Many central banks, for example, have risk management considerations that affect the ultimate decision on receiving and maintaining access. Domestic entities are defined as entities with some specified form of authorised establishment within the given jurisdiction. Eg a domestic branch of a foreign entity would be captured in this table. [2] Some jurisdictions distinguish between specific types of access, eg direct or indirect access. [3] Multiple jurisdictions have diverse types of banks or bank structures, and access might vary among bank entities. [4] In jurisdictions where banks may issue stablecoins, those issuers' access would be counted in the bank column, not the non-bank stablecoin issuers column. [5] The specific government entity types vary between jurisdictions. [6] This column is intended to cover any other entities that are eligible for access. [7] For all jurisdictions within the EU, domestic entities are defined as entities with some specified form of authorised establishment within the EU. Any entity holding a bank identifier code (BIC) may become an addressable BIC in T2. Addressable BIC holders rely on direct participants to use the T2 wholesale payment network without holding a direct or indirect T2 account. [8] Access by domestic operators of FMIs established within the European Economic Area is subject to additional conditions. [9] Licensed electronic money institutions issuing e-money tokens are eligible for TARGET accounts as per Decision (EU) 2025/222 of the European Central Bank of 27 January 2025 on access by non-bank payment service providers to Eurosystem central bank operated payment systems and central bank accounts. [10] At the discretion of the central bank responsible for a TARGET component system, it may admit investment firms. [11] If not licensed as a bank. [12] E-money issuers have access to a central bank settlement account and may be eligible to participate in the Bank Indonesia Fast Payment (BI-FAST) system. [13] Determined on a case-by-case basis. [14] This includes finance companies. [15] Designated settlement system operators are eligible for access. [16] As of September 2026, access remains subject to the transposition of the Finality Directive into Spanish legislation. [17] For all jurisdictions within the EU, domestic entities are defined as entities with some specified form of authorised establishment within the EU. [18] According to the Sveriges Riksbank's "Terms and Conditions for RIX and Monetary Policy Instruments", electronic money institutions are eligible for Riksbank settlement accounts. Where a stablecoin provider has a licence as an e-money institution then they may also be eligible. [19] Companies with a fintech licence are eligible for access. [20] The Bank of England expects to provide systemic stablecoin issuers with access to central bank deposit accounts from October 2027, once the UK regime is live and issuers can be recognised as systemic. [21] If designated systemically important.

Eligibility for access to a central bank settlement account as of September 2026, foreign entities[1]

Y = yes, entity is eligible for access;[2] N = no, entity is not eligible for access; Entity NA = entity type cannot exist in the jurisdiction, eg because they are banned by law. Table A2

	Banks[3]	**Non-banks**							**Other central banks**	**Other[6]**
		FMIs excl. payment systems	Payment system operators	Payment card network operators	E-money issuers	Stablecoin issuers[4]	Other PSPs	Govern-ment[5]		
Argentina	N	N	N	N	N	N	N	N	N	
Australia	N	Y	N	N	N	N	N	N	N	CLS Bank[8]
Belgium[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank;[8] post office[10]
Brazil	N	N	N	N	N	N	N	N	N	
Canada	N	Y	N	N	N	N	N	N	N	CLS Bank[8]
China	Y[11]	N	N	N	N	Entity NA	N	Y[12]	Y	
Euro area[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
France[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
Germany[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
Hong Kong SAR	N	N	N	N	N	N	N	N	N	CLS Bank[8]
India	N	N	N	N	N	N	N	N	N	
Indonesia[13]	Y	N	N	N	N	N	N	N	Y	
Italy[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
Japan	N	N	N	N	N	N	N	N	Y	CLS Bank[8]
Korea	N	N	N	N	N	N	N	Y	Y	CLS Bank[8]
Mexico	N	N	N	N	N	N	N	Y	N	CLS Bank[8]
Saudi Arabia	N	N	N	N	N	Entity NA	N	N	N	
Singapore	Y	Y	Y	N	N	N	N	N	Y	CLS Bank[8]
South Africa	N	N	Y[14]	N	N	N	N	N	N	CLS Bank[8]
Spain[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
Sweden[15]	Y	Y	Y	Y	Y	N	Y	N	N	CLS Bank[8]
Switzerland	Y	Y	N	N	N	N	N	N	N	CLS Bank[8]
The Netherlands[7]	N	Y[9]	Y	Y	N	N	N	N	N	CLS Bank[8]
Türkiye	N	N	N	N	N	N	N	N	Y	
United Kingdom	Y	Y	Y	Y	N	N	N[16]	N	N	CLS Bank;[8] building societies
United States	N	N	N	N	N	N	N	N	Y	

[1] This table is about *eligibility* of foreign entities for access to a settlement account at the central bank. For the purpose of this report, a settlement account is defined as an account used to send and receive payments for interbank settlement (irrespective of whether it can be used for other purposes as well). Settlement accounts using emerging technology, such as tokenisation or DLT, are out of scope. The table identifies entity types that are or would be eligible for such an account and does not presume that all such entities currently hold one in practice or will be granted access to one. Many central banks, for example, have risk management considerations that affect the ultimate decision on receiving and maintaining access. Foreign entities are defined as entities that have no specified form of authorised establishment within the given jurisdiction. Eg a domestic branch of a foreign entity would be captured in the previous table (Table A1). [2] Some jurisdictions

distinguish between specific types of access, eg direct or indirect access. [3] Multiple jurisdictions have diverse types of banks or bank structures, and access might vary among bank entities. [4] In jurisdictions where banks may issue stablecoins, those issuers' access would be counted in the bank column, not the non-bank stablecoin issuers column. [5] The specific government entity types vary between jurisdictions. [6] This column is intended to cover any other foreign entities that are eligible for access. [7] For all Eurosystem jurisdictions, foreign entities are defined as entities that have no specified form of authorised establishment within the EU. Any entity holding a bank identifier code (BIC) may become an addressable BIC in T2. Addressable BIC holders rely on direct participants to use the T2 wholesale payment network without holding a direct or indirect T2 account. [8] While listed under "Other", the legal status (or entity type) of CLS Bank and their qualification for access may vary by jurisdiction. [9] Access by foreign operators of FMIs established outside the European Economic Area is subject to additional conditions determined by a discretionary decision. [10] If not licensed as a bank. [11] Access to a central bank settlement account by foreign commercial banks refers to access to a settlement wallet on the CBETS platform. CBETS is the e-CNY cross-border payment system operated by e-CNY Center International Co Ltd, which is a subsidiary of the Digital Currency Institute of the People's Bank of China. [12] Foreign governments may open settlement accounts as required for business operations and with the consent of the People's Bank of China. [13] In principle, foreign entities can have access to a settlement account in Bank Indonesia's RTGS system if they obtain approval from Bank Indonesia. In practice, no foreign entities have such a settlement account. [14] Designated settlement system operators are eligible for access. [15] For all jurisdictions within the EU, foreign entities are defined as entities that have no specified form of authorised establishment within the EU. In the Swedish case, such entities also need to have additional documentation to show that they are subject to supervision equivalent to that in Sweden. [16] Non-bank PSPs must have some form of UK presence to be authorised by the Financial Conduct Authority, eg some UK operations or a UK head office.

Eligibility for access to an omnibus account[1]

Table A3

	Domestic entities with access[2]	Foreign entities with access[3]
Euro area[4]	• FMIs excl. payment systems • Government • Investment firms • Payment card network operators • Payment system operators	• FMIs excl. payment systems • Payment card network operators • Payment system operators
United Kingdom	• Payment card network operators • Payment system operators	• Payment card network operators • Payment system operators
United States	• Entities eligible for a settlement account[5]	

[1] As of September 2026. For the purposes of this report, an omnibus (or joint) account is an account structure in which funds attributable to, or used for settlement among, multiple eligible entities in a single account are administered by one entity. This table lists the CPMI member jurisdictions whose central banks are offering omnibus (or joint) accounts, including the entities eligible to administer such an account. [2] Domestic entities are defined as entities with some specified form of authorised establishment within the given jurisdiction. [3] Foreign entities are defined as entities that have no specified form of authorised establishment within the given jurisdiction. [4] The entries for euro area also cover Belgium, France, Germany, Italy, Spain and The Netherlands. [5] In the United States, a joint account is an account at a Reserve Bank in which the rights and liabilities are shared among multiple account holders. Each joint account holder must meet all applicable legal requirements to have a Federal Reserve account, and the Reserve Bank will not have any obligation to any non-account holder with respect to the balance in and operation of the account. See Federal Reserve Board - Guidelines for Evaluating Joint Account Requests.

Annex 2: Acronyms and abbreviations

AI	artificial intelligence
API	application programming interface
BIC	business identifier code (also known as bank identifier code)
BIS	Bank for International Settlements
BISIH	BIS Innovation Hub
CCP	central counterparty
CHIPS	Clearing House Interbank Payment System
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CSD	central securities depository
DLT	distributed ledger technology
DSS	digital securities sandbox
DvP	delivery versus payment
EEA	European economic area
EMI	electronic money institution
FMI	financial market infrastructure
FoP	CPMI Future of Payments working group
FPS	fast payment system
FX	foreign exchange
GFC	great financial crisis
G10	Group of Ten
G20	Group of Twenty
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ISO	International Organization for Standardisation
IT	information technology
KYC	know your customer
NBFI	non-bank financial intermediaries
PI	payment institution
PSP	payment service provider
PvP	payment versus payment
PFMI	Principles for financial market infrastructures
QR code	quick response code
RTGS	real-time gross settlement
SSS	securities settlement system
TARGET	trans-European automated real-time gross settlement express transfer

Annex 3: Composition of the Future of Payments working group (FoP)

Chair	
Board of Governors of the Federal Reserve System	David Mills
Members	
Central Bank of Argentina	Luis D'Orio (until October 2025) Danilo Bedotti (since December 2025) Luis Bacigalup (since December 2025)
Reserve Bank of Australia	Chris Thompson (until May 2026) Kylie Stewart (since May 2026)
National Bank of Belgium	Filip Caron Laurent Wernimont
Central Bank of Brazil	Lucio Holanda Oliveira Angelo Duarte**
Bank of Canada	Scott Hendry (until December 2025) Diego Zuniga (since December 2025) Ram Dharba
People's Bank of China	Changchun Mu Yuan Lyu
European Central Bank	Daniela Russo** Mirjam Plooij
Bank of France	Audrey Metzger Alexandre Stervinou
Deutsche Bundesbank	David Ballaschk Rebecca Hertlein (until February 2026) Alexandra Mitschke (since February 2026)
Hong Kong Monetary Authority	George Chou Yvonne Tsui (until February 2026) Michael Law (since February 2026)
Reserve Bank of India	Kandiyil Vijayakumar (until June 2026) Amit Sinha (since June 2026) Ashish Thakare

Bank Indonesia	Nenden Endah Sari (until June 2026) Novi Maryaningsih (since June 2026) Najibullah Ulul Albab
Bank of Italy	Emanuela Cerrato Cristina di Luigi Rosella Pascale (until April 2026) Viviana Canale (since April 2026)
Bank of Japan	Naomi Takeda*** (until August 2026) Akiko Kobayashi* Yuko Morikawa (until June 2026) Keiko Sumida (since June 2026)
Bank of Korea	JoonYoung Park Jaemin Ryu
De Nederlandsche Bank	Vera Lubbersen (until 1 January 2026) Sarah Liebing (since 1 January 2026) Nico Salemans
Saudi Central Bank	Mohsen Al-Zahrani Khalid Alotaibi
Monetary Authority of Singapore	Tze Hon Lau Angelina Lam
South African Reserve Bank	Annah Masoga Pearl Malumane
Bank of Spain	Sergio Gorjón Miguel Perez
Sveriges Riksbank	Reimo Juks Gabriel Söderberg
Swiss National Bank	Robert Oleschak Loriana Crasnic
Central Bank of the Republic of Türkiye	Büşra Ercan Beyza Cantemir
Bank of England	Sasha Mills** Emma Butterworth

Board of Governors of the Federal Reserve System	Jean Flemming*
	Melissa Leistra
Federal Reserve Bank of New York	Leslie Conner Warren
	Jenny McMahan

Observers

Bank for International Settlements	Sang Hyuk Lim
Financial Stability Board	Jennifer Fowler (until January 2026)
	Lara Douglas (since January 2026)
	Richard Senner
International Monetary Fund	Tommaso Mancini-Griffoli (until February 2026)
	Marcello Miccoli (since February 2026)
	Yaiza Cabedo
	André Reslow
World Bank Group	Ahmed Faragallah
	Maria Teresa Chimienti
BIS Innovation Hub	Codruta Boar (until February 2026)
	Henry Holden (since February 2026)

Secretariat

CPMI Secretariat	Anneke Kosse*
	Takeshi Shirakami*
	Peter Wierts*

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