



# What makes money, money? Ensuring trust in the next-generation financial ecosystem<sup>1</sup>

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## Introduction

Trust in money is the foundation of any financial system. As digital innovations, such as tokenisation, reshape the payments landscape and finance more generally, preserving this anchoring trust is more critical than ever.

Today, I will address three key questions:

- What defines and sustains trust in money across its different forms and functions – or, what makes money “money”?
- What role can stablecoins play?
- How can tokenisation enhance, rather than disrupt, the two-tier monetary architecture?

These questions are at the core of research that we at the Bank for International Settlements (BIS) conduct to support policymakers. If you want to know more about the inner workings of money in a digital age, check out our newly published chapter on digital money in our *Annual Economic Report 2026* (BIS (2026a)).

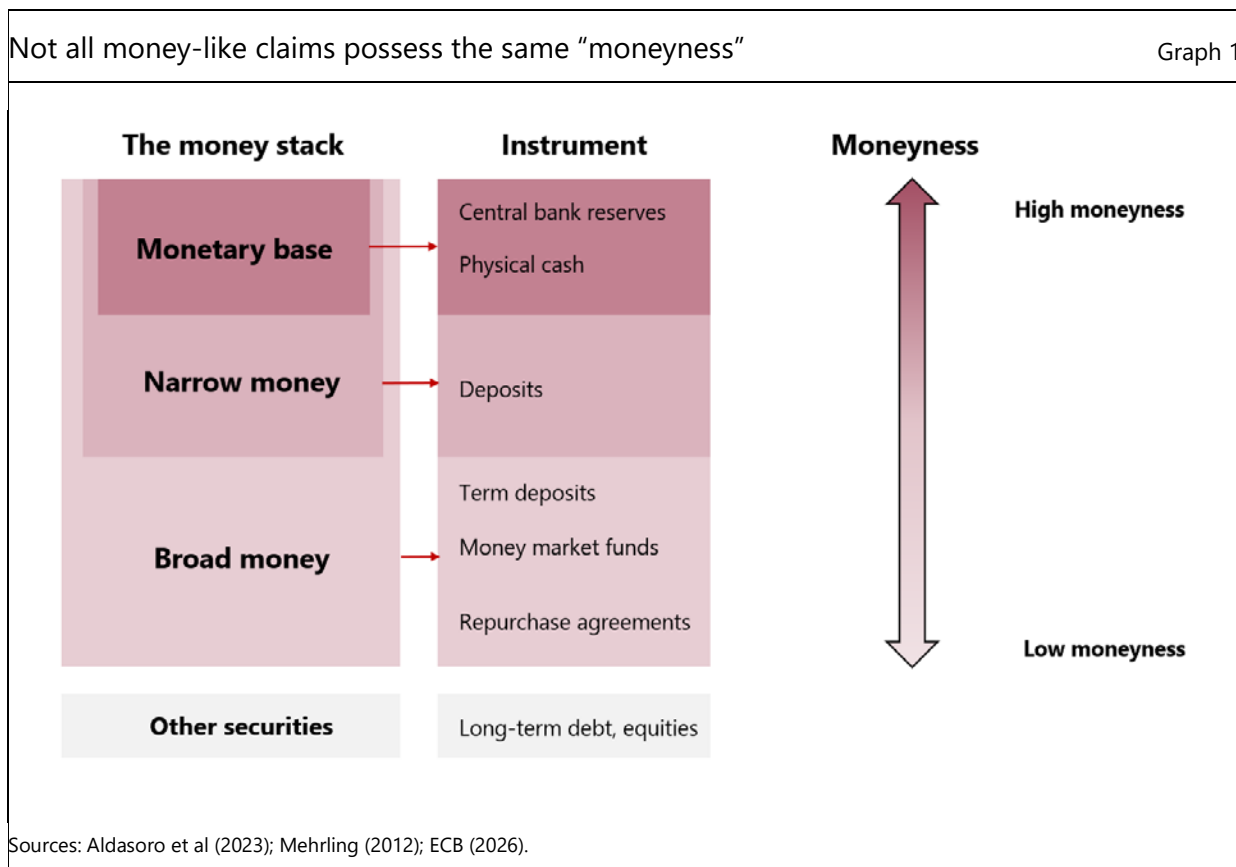
## What is money and “moneyness”?

The financial system contains a broad range of monetary and financial claims (Aldasoro et al (2023); Mehrling (2012)). As shown in the “money stack” (Graph 1), these claims range from central bank reserves and cash at the top, to bank deposits, to broader money-like instruments such as money market funds (MMFs) and repurchase agreements (repos) (ECB (2026)). There are also non-money-like assets outside of the money stack, such as longer-term debt securities and equities, as shown by the bottom grey rectangles in Graph 1. While these instruments coexist within the

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financial system, they serve different economic functions and exhibit different degrees of “moneyness”.



What is moneyness? It refers to the degree to which an instrument can serve as a trusted means of payment at scale, settle obligations at par and circulate seamlessly throughout the economy with “no questions asked” regarding its credibility or source.

As shown by the spectrum on the right of Graph 1, the degree of moneyness is highest for central bank reserves and bank deposits and declines further down the money stack. Central bank reserves and physical cash are considered the safest form of money and the ultimate risk-free asset because they essentially carry no credit or default risk. At a deeper level, they are supported by the credibility of the central bank and the country’s fiscal position.

Being liabilities of private institutions with credit and default risk, bank deposits exhibit lower moneyness than central bank reserves. However, their high degree of moneyness compared with other private claims in the financial system derives from their ability to settle at par against central bank reserves and their regulation (elaborated on in the next section). As a result, deposits can be used directly for payments and settlement and are accepted at par across the economy.

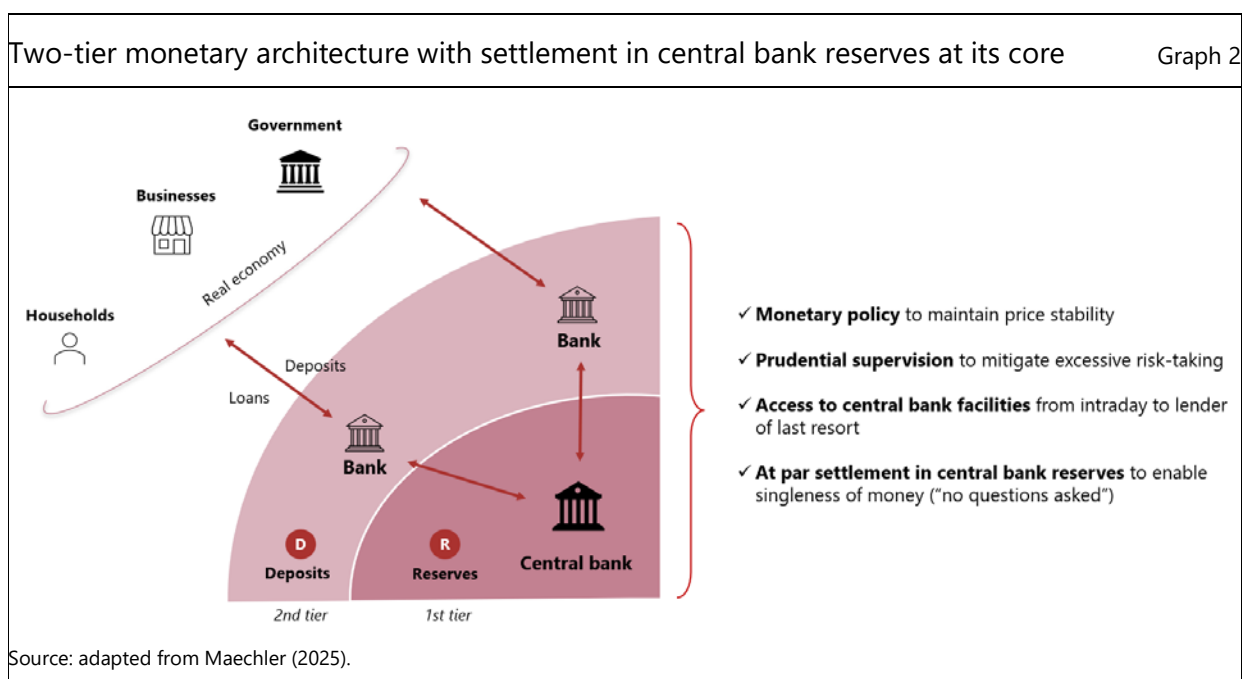
History reminds us that because of their private nature, the moneyness of bank deposits can be questioned during times of stress and result in bank runs. This is why upholding the moneyness of deposits requires banks to function within a set of stringent guardrails, including regulation, oversight and a minimum set of backstop mechanisms, such as central bank liquidity facilities and deposit insurance.

Money-like instruments such as MMFs, short-term government paper and repos are highly liquid and often perceived as high-quality assets. In contrast to bank deposits, however, they cannot be used as a means of payment or to settle transactions. Instead, their money-like qualities derive from their lower risk and more liquid characteristics compared with other assets, and hence the confidence that they can easily be redeemed or sold to convert into deposits.

This naturally raises the question: what underpins high moneyness – the trust that money can be used to settle transactions safely, at scale and at par with no questions asked?

### Trust in private money is underpinned by the two-tier monetary architecture

Today's two-tier monetary architecture is at the core of trust in money, which includes both public money (from central banks) and private money (from commercial banks). As shown in Graph 2, central banks sit at the core of the system, issuing public money in the form of central bank reserves (and physical cash). Regulated financial institutions, such as commercial banks, form the second tier. Banks issue private money to serve the needs of the private sector. They do so by issuing deposits to provide credit to households and businesses, which can be used as a means of payment for goods and services in the real economy.



Trust in money builds on a broad institutional framework, including the rule of law, central bank independence and a country's sound fiscal position. It derives from the key role of central banks at the core of the two-tier monetary architecture. First, through monetary policy, central banks fulfil their price stability mandate, providing trust in the purchasing power of money. By setting the policy interest rate, they drive the demand for money, thereby affecting monetary conditions and risk-taking more generally in a way to keep price inflation low and stable. Sound monetary policy also leads to a unit of account that is kept stable over time and gives all prices a common language.



Second, through their financial stability and prudential supervision mandates, central banks and supervisory authorities safeguard against excessive risk-taking by banks and enhance the resilience of the banking sector in the face of shocks. This strengthens depositors' trust that their deposits are safe over time, while providing a sound framework within which banks are encouraged to provide an elastic supply of credit to the economy.

Third, central bank liquidity facilities from intraday to lender of last resort ensure that banks can access reserves, even in times of crisis. This requires an elastic provision of central bank liquidity to flexibly meet the economy's dynamic payment needs, together with sound regulatory guardrails to mitigate moral hazard.

Fourth, by guaranteeing par settlement with central bank reserves through their real-time gross settlement (RTGS) systems, central banks ensure the singleness of money – the principle that one Swiss franc (or dollar or euro) issued by a particular bank is worth the same as a Swiss franc (or dollar or euro) issued by another bank, even in times of crisis. In particular, banks do not typically exchange each other's customer deposits to settle their interbank claims (there is no arrow between the banks in Graph 2). Instead, they settle these claims using central bank reserves, which are accepted on a "no questions asked" basis by any other bank (represented by the inner red arrows in Graph 2). In other words, by ensuring that deposits are always convertible at par into central bank reserves, central banks ensure that deposits can be used as a trusted means of payment throughout the economy.

So far I have depicted a bank-based financial system. What about the role of non-banks? Market-based finance has been playing an increasingly important role in the financial system. Graph 3 illustrates this structural shift: the assets of non-bank financial institutions (NBFIs) now account for more than half of total global financial assets (FSB (2025)). This means that an increasing share of savings and credit intermediation occurs outside traditional bank balance sheets. If this is the case, you may wonder, what does this mean for the two-tier system? I will argue that the two-tier system continues to be a foundation for providing a trusted means of payment to settle financial transactions safely, including from NBFIs.

Both banks and NBFIs play important roles in financing the real economy. The balance sheets, funding models and risk management practices of NBFIs differ markedly from those of banks. There is also significant variety among different NBFIs, with some playing a more direct financing role than others (BIS (2026b)). A key difference in the credit intermediation by NBFIs and banks is that only bank-intermediated credit creates money – deposits that can be used directly for payments and settlement.

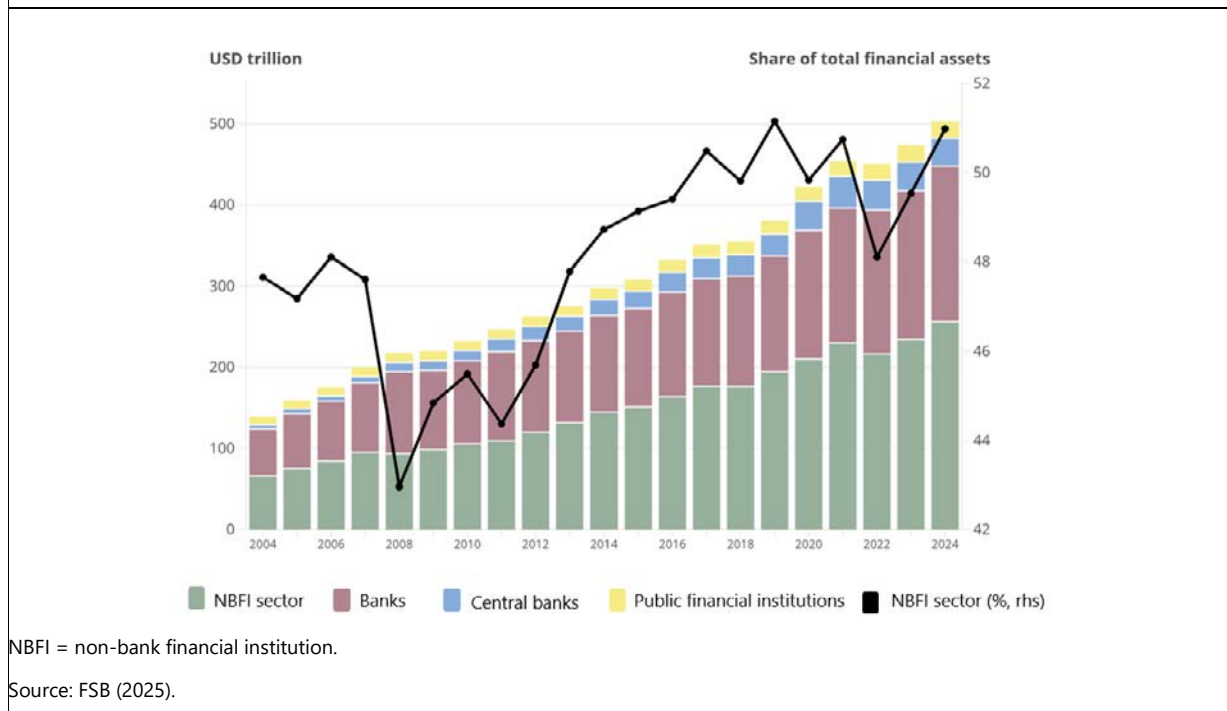
To be clear, not every financial claim needs to exhibit a high degree of moneyiness. In fact, a well-functioning and robust economy requires a broad range of instruments to flourish – from money-like instruments such as MMFs to higher-risk instruments. Today, central bank money and commercial bank deposits represent only a small share of total financial assets in the broader financial system.<sup>2</sup>

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<sup>2</sup> For example, bank deposits account for around 13% and 17% of the total financial assets in the United States and the euro area, respectively, while central bank reserves account for roughly 2–3% in both economies based on the latest figures (Federal Reserve Data Portal, [Federal Reserve Board - Data](#); ECB Data Portal, [Homepage | ECB Data Portal](#); FSB (2025)).

Credit intermediation occurs increasingly through NBFIs

Graph 3

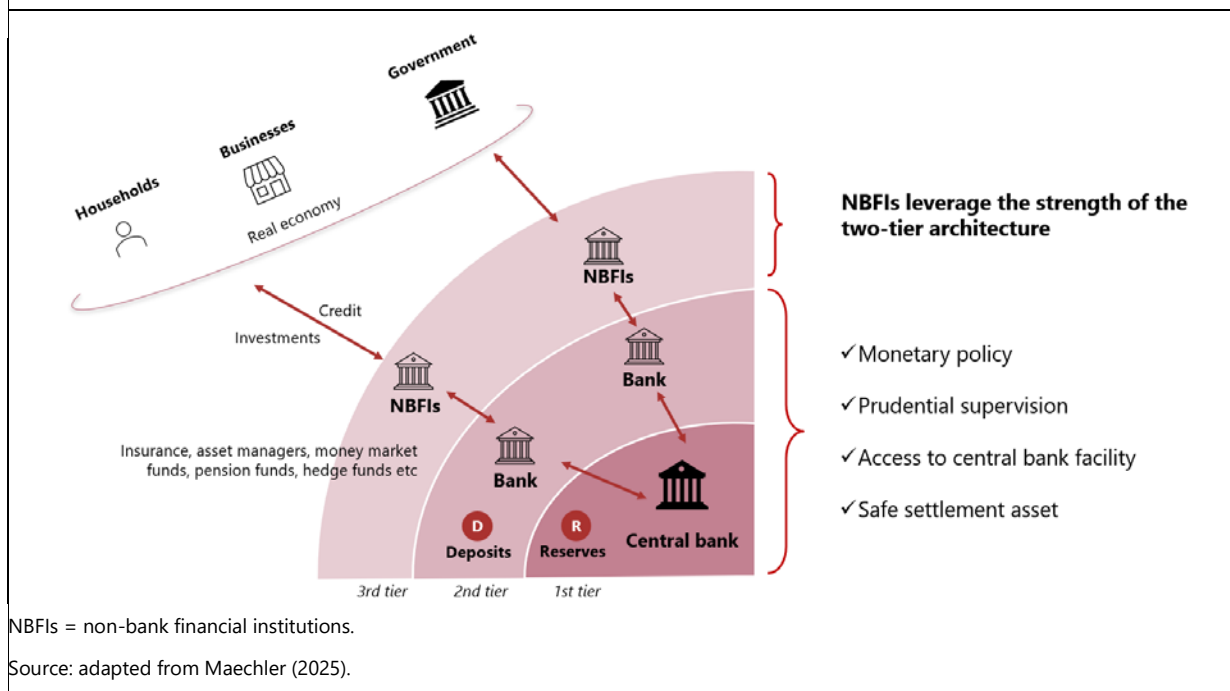


What is critical is that money is available at the points where settlement, convertibility and trust matter most. This is when financial claims (and assets) are transacted and need to be settled safely using a trusted means of payment, and the two-tier monetary architecture comes into play.

If we consider the two-tier monetary architecture, NBFIs can be thought of as a third, outer tier, as shown in light pink in Graph 4. NBFIs can extend credit through market-based finance (security-like instruments) and provide more liquid “money-like” instruments, such as MMFs (see the outer arrows). These instruments cannot be used directly for payments and settlement and need to be redeemed or sold to convert into bank deposits. Hence, they remain in the outer circle of the two-tier architecture.<sup>3</sup>

NBFIs remain closely connected to banks, as shown by the middle arrows in Graph 4. They rely on banks not only for critical functions such as loans, credit lines and repo financing, but also to settle their payments through wholesale bank deposits. These close connections ensure that NBFIs are part of the monetary policy transmission mechanism.

<sup>3</sup> Total MMF asset size reached about \$12 trillion at the end of 2024, or around 2% of total global financial assets (FSB (2025)), and total sovereign bonds outstanding were roughly \$75 trillion–80 trillion at the end of 2025 or around 15% of total financial assets (BIS Data Portal, [Debt securities statistics, tables and dashboards](#)).



The greater share of credit being intermediated by NBFIs could amplify systemic risks during periods of stress. Liquidity mismatches, procyclicality in lending and greater sensitivity to market conditions may increase the likelihood of runs and fire sales, especially if redemption pressures arise.<sup>4</sup> This could necessitate central bank intervention to ensure adequate market liquidity in the financial system. This happens primarily through the regulated institutions in the second tier of the monetary architecture, because access to backstop facilities requires robust oversight and supervision to keep moral hazard in check and maintain the resilience of the financial system.

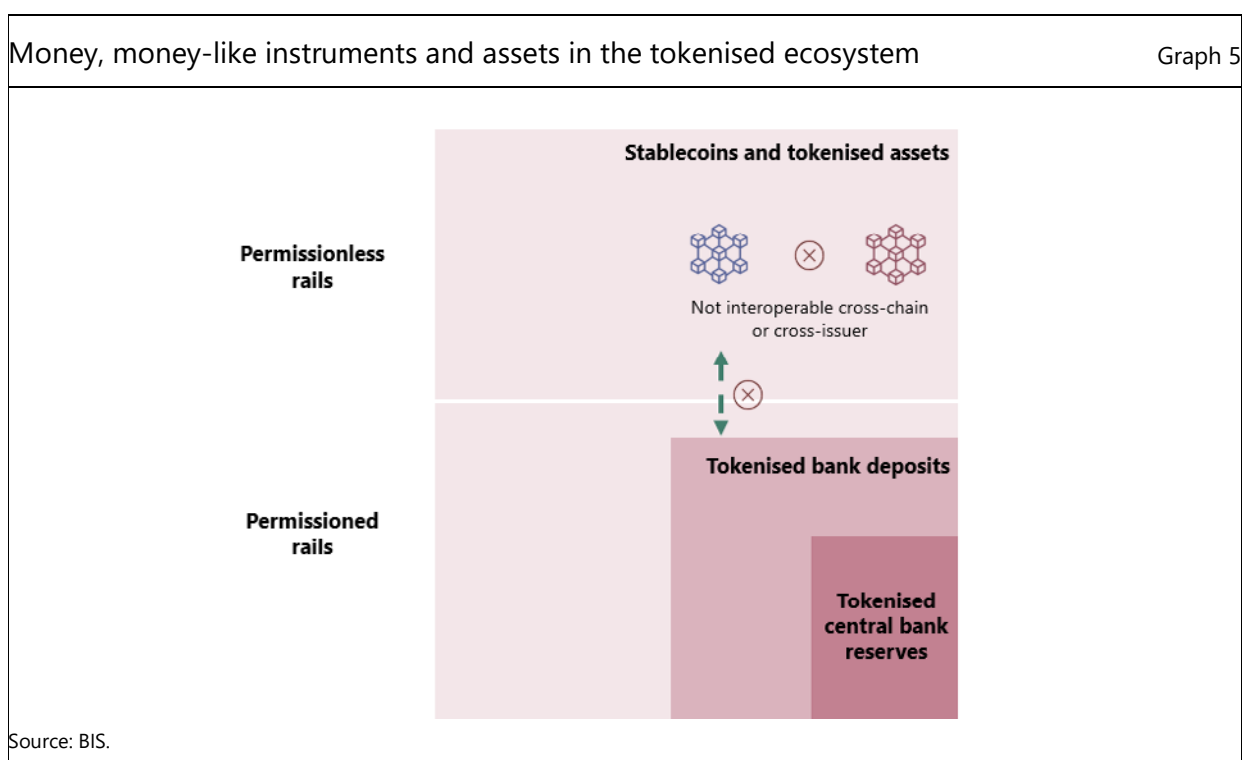
The two-tier architecture continues to underpin trust in money even in a world where NBFIs play an important role in credit intermediation. What about new technological advances such as tokenisation and stablecoins? How can we maintain trust in money in a next-generation financial system, just like NBFIs leverage the trust in the settlement in central bank reserves? As more assets become tokenised, how can we ensure that financial transactions can be settled safely in a new tokenised ecosystem?

<sup>4</sup> That being said, there is significant heterogeneity in NBFIs and their associated risks. See BIS (2026b) for more details.

## The tokenised ecosystem: what role can stablecoins play?

Tokenisation has the potential to fundamentally improve how payments and financial transactions are conducted. The benefits arise not simply from digitalising assets but also from bringing money and assets together on common programmable infrastructures and leveraging innovative features like atomic settlement,<sup>5</sup> composability and 24/7 execution.

Stablecoins have emerged as privately issued tokens circulating on public, permissionless rails, as shown by the top, light-pink layer of Graph 5. They have demonstrated attractive technological features and several potential use cases, including as an open, borderless payment instrument and store of value in the tokenised ecosystem.



However, stablecoins also inherit some of the undesirable properties of their underlying public, permissionless rails. For one, public, permissionless networks rely on consensus among dispersed and often anonymous validators. They tend to suffer from congestion rents and are often not interoperable across chains or issuers (Shin (2026)), as shown by the x icon in Graph 5. This hampers network effects and undermines the singleness of money. In contrast, permissioned systems depend on identified intermediaries, legal accountability and regulatory oversight, which makes them more amenable for regulated finance with access to backstop facilities.

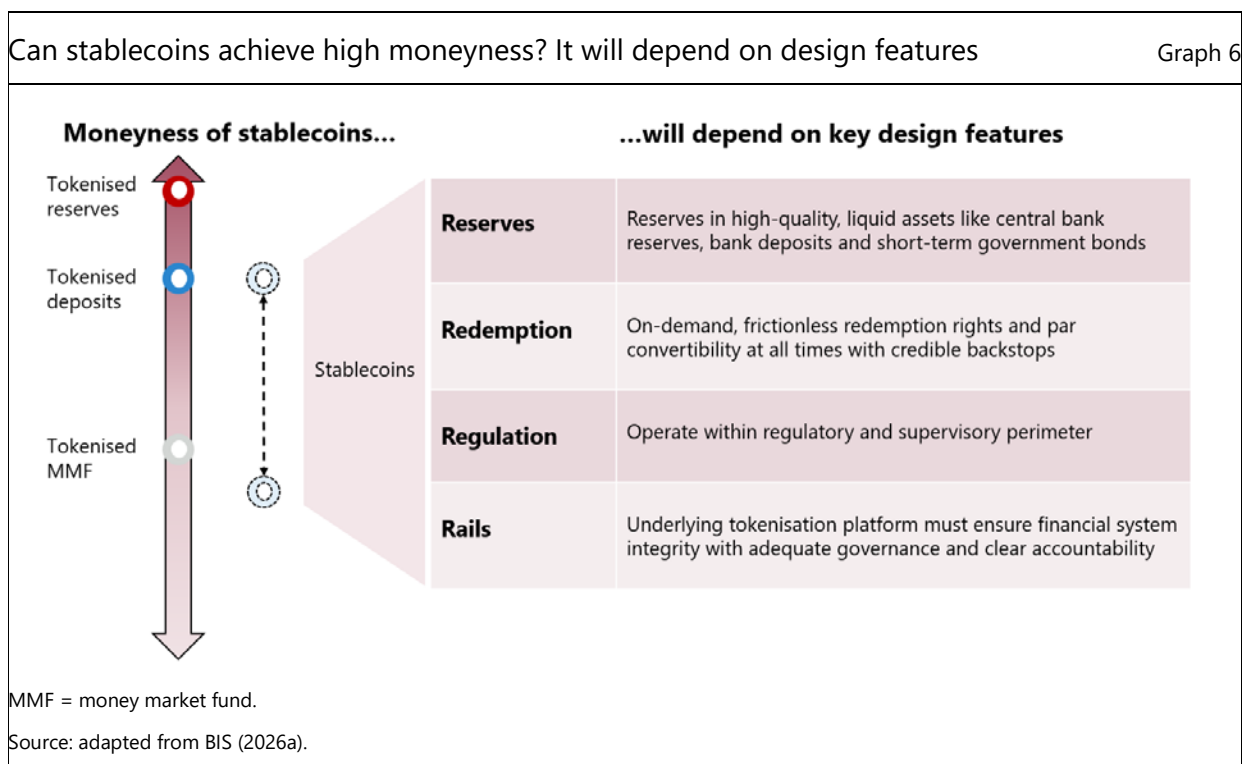
Second, integrity challenges are particularly acute on permissionless infrastructures with the use of unhosted wallets, fragmented governance arrangements and the absence of embedded compliance controls. There are some means to combat illicit activity, with blockchain analytics and

<sup>5</sup> Atomic settlement ensures all balances update or none at all, eliminating settlement risk (BIS (2026c)).

the ability to freeze detected illicit funds, but they have a hard time keeping up with the scale of illicit activity in practice.

Furthermore, in their current form, stablecoins lack the anchor of the two-tier system and exhibit limitations in functioning as money at scale. Standing outside the settlement sphere of the central bank, stablecoins struggle to maintain singleness at par, which can lead to a rapid disintegration of trust when stress hits. Unlike bank deposits, today's stablecoins lack the support of a robust framework of public backstops and prudential regulation and supervision, further increasing their vulnerability. In addition, their capacity to expand and contract elastically with payment needs is constrained by their inherent pre-funding requirement for issuance. And last, redemptions depend on the liquidation of underlying reserve assets, and therefore, their credibility depends on the credibility of their reserve assets.

This leads to the question of whether stablecoins can serve as a trusted form of private money in the broader tokenised ecosystem. In order to play this role, the limitations of current stablecoin designs need to be addressed in a coordinated manner. In other words, where stablecoins will be positioned on the moneyness spectrum will depend critically on their design, as indicated along the left-hand arrow in Graph 6.



Greater moneyness will require several features:

- **Reserves.** Reserves are in high-quality, liquid assets like central bank reserves, bank deposits and short-term government bonds.
- **Redemption.** On-demand, frictionless redemption rights and par convertibility are available during normal times and times of stress; credible backstops can also mitigate run risk, provided they are complemented by regulatory safeguards to limit moral hazard.

- **Regulation.** Safeguards ensure that transactions operate within regulatory and supervisory perimeters.
- **Rails.** Certain limitations may be more difficult to resolve because they are inherent to the permissionless nature of the rails on which stablecoins circulate. The underlying platforms need to ensure financial system integrity with adequate governance and clear accountability, which is particularly challenging on permissionless rails.

Furthermore, widespread stablecoin adoption could have material implications for macro-financial policy. Let me first focus on a domestic economy perspective, where households and firms channel their deposits into local currency stablecoin purchases. The overall impact on economic growth could be modest, but stablecoins may reshape financial intermediation. As retail deposits migrate into stablecoins, bank funding could shift towards less stable wholesale sources,<sup>6</sup> altering funding dynamics, credit supply and how shocks propagate across the financial system.

Stablecoins could also pose challenges to financial stability during periods of stress if large-scale redemptions and reserve liquidations are triggered, transmitting pressure into funding markets and raising questions around liquidity arrangements, similar to those observed in the NBFIs sector. Stablecoins can have implications for fiscal policy as well (Hofmann et al (2026)). Greater demand for short-dated government debt can expand fiscal space, but it could also reduce fiscal discipline and create avenues for tax evasion and private seigniorage.<sup>7</sup> In addition, stablecoins raise financial integrity risks if activity takes place outside of regulatory frameworks through “self-hosted” wallets available on permissionless infrastructures.

From a foreign economy perspective, the implications may be particularly salient for emerging market and developing economies. The same points on funding dynamics, credit supply, financial stability and integrity challenges apply. In addition, the widespread use of foreign currency stablecoins could drive faster, larger and more volatile capital outflows, circumventing capital controls and other legal restrictions. “Stablecoin dollarisation” could lead to a large outflow of domestic savings, weakening monetary policy transmission and ultimately threatening monetary sovereignty. Similar to existing forms of dollarisation, this is more likely in economies with high inflation or other macroeconomic vulnerabilities (Aldasoro et al (2026)).

The relative importance of these effects, and the channels through which they propagate, will depend critically on reserve composition, whether stablecoins are more money-like or security-like, and how other parts of the system react. This underscores the importance of addressing stablecoin risks and preserving trust in money in the tokenised ecosystem. In this respect, international coordination will be key to avoid regulatory arbitrage and disruptive cross-border spillovers.

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<sup>6</sup> If the reserves of stablecoins are to be held partly in the form of bank deposits, the retail deposits that migrate to stablecoins return to the banking sector in the form of wholesale deposits. Wholesale deposits tend to be more concentrated, more interest rate sensitive and a less stable source of medium-term funding. See BIS (2026a) for more details.

<sup>7</sup> Seigniorage is the net income that central banks earn on assets funded through currency issuance (Bell et al (2023)). In the case of stablecoins, these benefits mostly accrue to the issuers (depending on how reserves are allocated (Hofmann et al (2026))), giving rise to a form of “private seigniorage”.

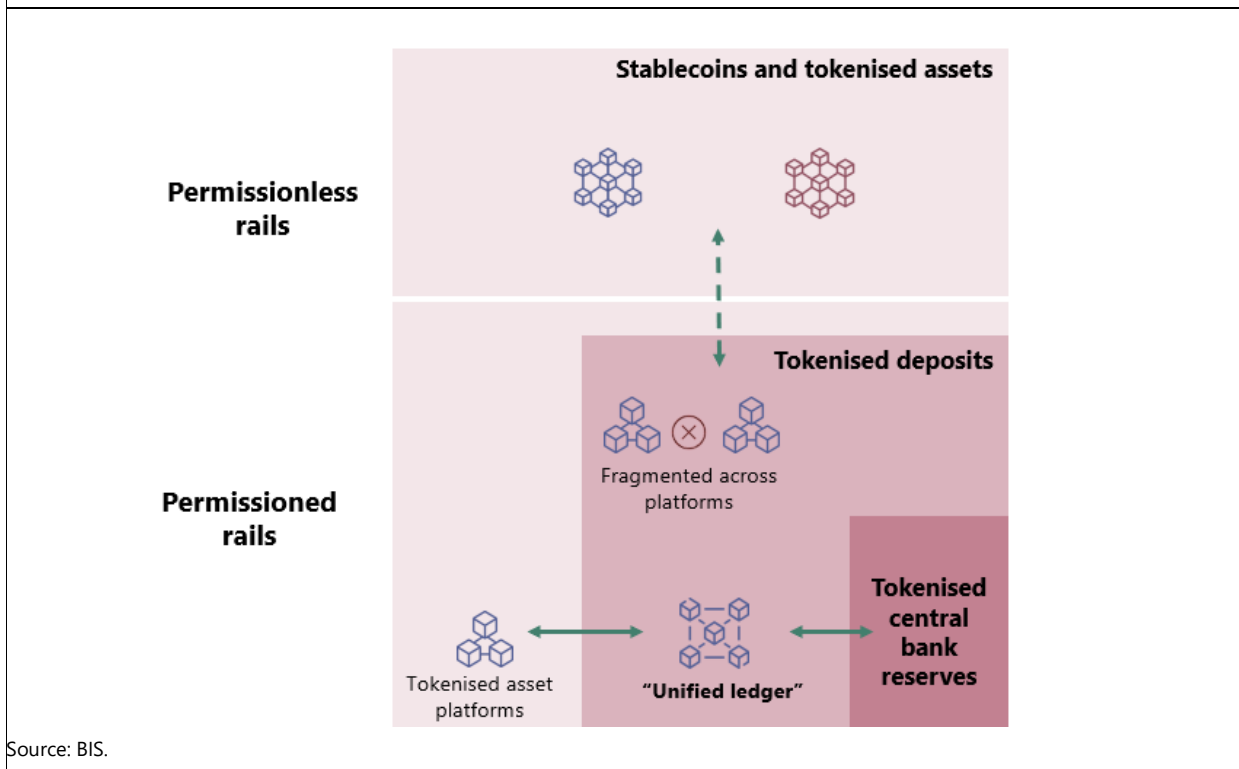
## How do we preserve trust in money in a tokenised ecosystem?

Tokenisation initiatives are taking off across money and assets, and across permissionless and permissioned infrastructures. As previously noted, stablecoins have demonstrated promising use cases. But as they exist today, they lack the key features that make money “money”. While some of their limitations can be addressed by design and regulation, others are much more difficult to overcome and are rooted in the nature of their public, permissionless rails. This raises the question: how do we preserve trust in money in a tokenised ecosystem?

I will argue that we can realise the benefits of tokenisation while preserving trust in money within a two-tier architecture. This is shown in Graph 7, which builds on the architecture shown in Graph 5. Tokenised deposits represent a natural extension of commercial bank money in a tokenised two-tier architecture (as shown in the medium-pink area). However, they remain fragmented across platforms, circulating only among their own clients. As you see in the middle layer of Graph 7, bank-specific or consortium-based platforms are not interoperable.

Realising the benefits of tokenisation while preserving trust in money within a two-tier architecture

Graph 7



Source: BIS.

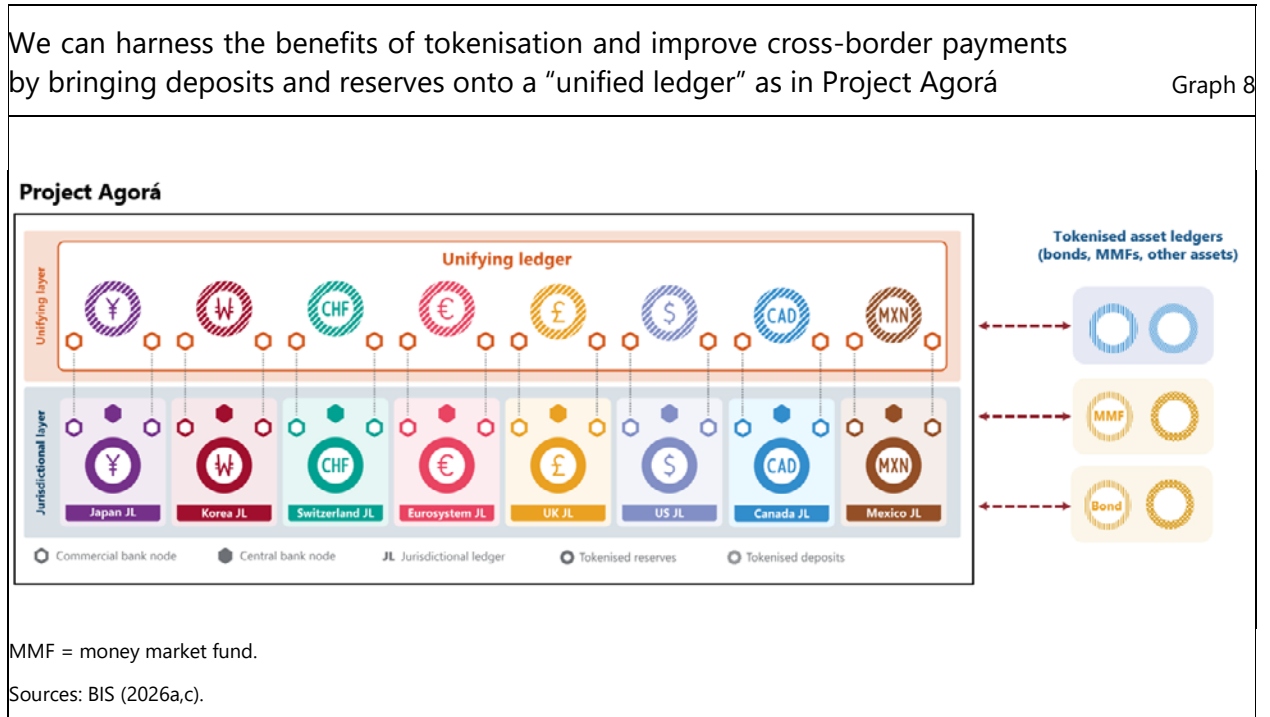
By replicating the role of central bank reserves as the safe settlement asset, it is possible to achieve interoperability in a tokenised ecosystem and uphold the singleness of money. For this, tokenised deposits require tokenised reserves as a trusted settlement asset (shown by the green arrow to and from the dark pink square on the bottom right of Graph 7). This allows tokenised deposits to become fungible across banks.

A tokenised version of the two-tier system could be the basis for a broader tokenised ecosystem, where tokenised assets and other forms of tokenised private money can be held and traded (as shown by the green arrow to the bottom left of Graph 7).

A key question is how we bring together tokenised deposits, reserves, assets and even regulated stablecoins into a well-functioning tokenised ecosystem. A unified ledger (as shown at the bottom of Graph 7) is one potential way to achieve this.

In fact, we have tested this unified ledger concept at the BIS in Project Agorá, together with our eight partner central banks and more than 40 financial institutions. We integrated tokenised deposits and reserves on a programmable platform for multi-currency, cross-border settlement. Let me highlight some of the key findings of the recently published project report (BIS (2026c)).

An Agorá-type architecture is shown in the diagram on the left of Graph 8. All participants access a shared unifying layer (at the top of the diagram), which enables interaction between tokenised deposits issued by commercial banks across jurisdictions. Meanwhile, each central bank has its own jurisdiction-specific ledger on which it issues its tokenised reserves (the individual rectangles along the bottom of the diagram). This enables the safe settlement of tokenised deposits across different banks in tokenised central bank reserves, making tokenised deposits interoperable, while preserving both singleness and trust and ensuring that central banks maintain full autonomy over their tokenised reserves.



By combining tokenised deposits and tokenised central bank money, the prototype enables multi-currency atomic settlement<sup>8</sup> across jurisdictions, offering the promise of significant efficiency

<sup>8</sup> By bringing the multiple steps inherent to a multi-currency cross-border payment on a programmable platform, tokenisation allows to decouple and bring forward all of the payment-related information needed to settle a trade. Once this information is aligned and checked, the movement of funds can be triggered on an all-or-none basis (BIS (2026c)).



benefits in cross-border payments. The project also looked at the institutional and legal arrangements for tokenisation and concluded that legally binding settlement finality is achievable across participating jurisdictions on a shared programmable platform. This can take place without the need to alter the legal classification of central bank reserves and commercial bank deposits.

An Agorá-type platform can act as the foundation for a broader tokenised ecosystem with tokenised assets on separate (and, in some cases, jurisdiction-specific) ledgers, as shown by the diagram on the right of Graph 8 (BIS (2026a); BIS (2026c)). In this way, tokenisation can strengthen – not disrupt – trust in money when it is embedded in the time-tested two-tier architecture with central bank reserves as the trust anchor.

## **The way forward: how do we ensure trust in the next-generation financial ecosystem?**

A tokenised ecosystem will need a trusted monetary anchor to settle financial transactions safely and efficiently and ensure singleness of money. This will require coordinated efforts by policymakers along a number of key dimensions. First, we can bring the two-tier monetary architecture into the tokenised ecosystem, to safeguard money as a safe settlement asset accepted on a no questions asked basis. This entails replicating the singleness of money with settlement in tokenised central bank reserves as the trust anchor, sound institutional arrangements, consistent legal frameworks and strong supervision. Second, we need to address the limitations and risks of current stablecoin designs to achieve redeemability at par, robust governance, financial system integrity and appropriate regulatory measures.

In both cases, international coordination will be key to spearhead efforts to integrate tokenisation into the two-tier system and avoid regulatory arbitrage. A promising way forward is a coordinated, phased approach in which central banks offer tokenised reserves and facilities on permissioned, interoperable platforms. By articulating clear governance and access policies, central banks can anchor a next-generation monetary and financial system that improves the old while enabling the new. Such an approach can be calibrated to national circumstances and should take into account cross-border spillovers through close cooperation among authorities.

Another question will be how to bridge fundamentally different trust architectures in permissionless and permissioned systems. Making these environments interoperable is not simply a technical challenge but also a governance one. Public-private collaboration, common standards and rigorous experimentation will be essential to ensure interoperability and unlock desired network effects, both domestically and across borders.

For a deeper exploration of these themes and their policy implications, I encourage you to review Chapter III of the *Annual Economic Report 2026*, which delves into how digital innovation, including tokenisation and stablecoins, is reshaping the monetary and financial system. This chapter highlights the critical need for global coordination and the integration of these innovations into the two-tier architecture to safeguard trust in money.

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