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The international role of the euro in the digital age

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Digital innovations are progressively reshaping monetary and payment infrastructure. Stablecoins, tokenised deposits, and central bank digital currencies represent three dimensions of this transformation, with direct implications for the international role of the euro. This Focus supplements the *Note* «Our euro, your solution. How to strengthen the international role of the euro» by setting out the main recent developments and detailing the characteristics, uses, and regulatory framework of the principal instruments of digital finance.

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Digital finance: key concepts

The digital transformation of financial systems rests on a set of technologies and instruments. Three concepts are developed here: distributed ledger technology, tokenisation, and the various forms of digital currency that flow from them.

Distributed ledger technology

Distributed ledger technologies (DLT) are protocols that allow transactions to be recorded, validated, and updated in a synchronised manner across multiple computers located in different places. Unlike conventional distributed databases, they can operate without a central trusted authority, relying instead on consensus mechanisms and cryptography (BIS, 2017). Blockchain is the best-known form: it is a specific type of DLT in which transactions are grouped into blocks, cryptographically chained together, making them tamper-proof after the fact. A distinction is generally drawn between permissionless DLTs, open to all, and permissioned DLTs, where access and validation are restricted to authorised participants (Aquilina et al., 2025). Crypto-assets are digital representations of a value or a right that can be transferred and stored using DLT. Bitcoin, NFTs, and stablecoins are all examples of crypto-assets.

Tokenisation

Tokenisation refers to the process of recording rights or claims on real or financial assets on a programmable platform, in the form of digital tokens circulating on a DLT-type infrastructure. These tokens can be transferred and used in automated transactions, making it possible to combine messaging, reconciliation, and settlement into a single operation (BIS, 2023). Tokenisation thus improves the efficiency of the financial system by reducing frictions and reliance on intermediaries, thereby lowering costs, delays, and operational risks, while opening the door to new use cases. According to the BIS, the tokenisation of money and assets has the potential to profoundly transform the monetary and financial system, allowing central bank money and tokenised deposits to coexist on a shared programmable platform (BIS, 2025).

Forms of digital money

These new infrastructures have given rise to several forms of digital money, which must be distinguished from one another as they differ in terms of issuer, legal status, and associated risks:

- Stablecoins are crypto-assets issued by private entities, whose value is pegged to an official currency. They circulate on blockchains, typically public ones.
- Tokenised deposits are conventional bank deposits represented as digital tokens on a DLT. They remain claims on a regulated commercial bank.

Central bank digital currencies (CBDCs) are issued directly by a central bank in dematerialised form.

Stablecoins, tokenised deposits, and the MiCA regulation

Stablecoins

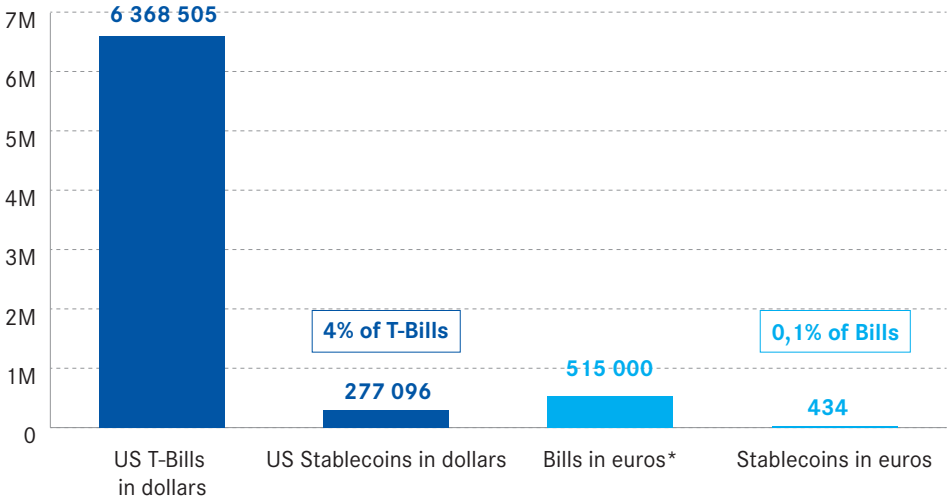
Stablecoins are crypto-assets designed to maintain a stable value, typically pegged to an official currency such as the dollar or the euro (IMF, 2025). Unlike conventional cryptocurrencies such as Bitcoin, whose value fluctuates sharply, a dollar-pegged stablecoin is intended to be worth one dollar at all times. This stability is maintained through the holding of reserves — liquid assets or official currency — intended to cover the tokens in circulation. These instruments circulate on blockchain-type infrastructure and are issued by private entities, not by central banks.

Stablecoins offer several economic benefits (IMF, 2025). They enable faster and cheaper cross-border payments than traditional bank transfers. They also serve as an exchange instrument on crypto-asset markets. Finally, by stimulating

competition with established payment providers, they are likely to accelerate innovation in digital payment services and broaden financial access in regions underserved by traditional banking infrastructure.

In terms of scale, the global stablecoin market today represents several hundred billion dollars in outstanding issuance, the vast majority denominated in US dollars (**Figure 1**). According to the ECB (Altavilla et al., 2026), more than 99% of stablecoins in circulation are pegged to the dollar, which indirectly reinforces global demand for US Treasuries (notably short-term Treasury bills – see Note). The two main issuers are Tether (USDT) and Circle (USDC), whose reserves are primarily invested in US Treasury bills.

Figure 1: Issuance volumes of stablecoins and bills in dollars and euros



Note: Short-term issuances from Germany, France, Italy, Spain, the Netherlands, Belgium, Austria, and Ireland.
Sources: LSEG Workplace, RWA.xyz, Allianz Research

However, stablecoins carry significant risks: liquidity risk in the event of mass withdrawals («runs»), opacity or variable quality of reserves, operational and cyber risks, and risks of monetary fragmentation. The Financial Stability Board (FSB, 2023) and the International Monetary Fund (IMF, 2025) accordingly stress the need for strict prudential oversight to limit systemic risks. The case of Tether illustrates these risks concretely. Incorporated outside the United States (in El Salvador since 2025) and subject to foreign jurisdiction, Tether has gradually broadened the composition of its collateral – partly to offset declining yields – beyond US Treasury bills to include commercial paper, Bitcoin, private debt, bank deposits, and other potentially less safe assets. S&P risk assessments have been revised downward, now placing it in the low-quality segment (S&P Global Ratings, 2025).

Tokenised deposits

Tokenised deposits differ from stablecoins: they are conventional bank deposits issued by regulated institutions, but represented as digital tokens on a blockchain infrastructure (EBA, 2024). Unlike stablecoins, they are legally a claim on a commercial bank and remain integrated within the existing banking system. They are 100% backed by funds held by the issuing institution and covered by deposit guarantees, Basel capital requirements, and lender-of-last-resort support. Tokenised deposits can also bear interest and, by virtue of their fractional reserve model which allows banks to reallocate these resources towards lending, are significantly more capital-efficient for banks. European institutions already view these instruments as strategic tools for preserving payment sovereignty and participating in tokenised finance. The BIS has noted that these instruments could modernise interbank payments and collateral management without creating an independent private monetary substitute (BIS, 2025).

Compared to stablecoins, the advantages of tokenised deposits include better integration with banking systems, existing prudential supervision, and reduced disintermediation risks. They enable near-instantaneous, programmable settlement while retaining the regulatory protections associated with bank deposits. Nevertheless, they raise technical challenges (interoperability (FSB, 2024), cybersecurity), legal challenges (token status), and potentially competitive ones, if large banking groups capture significant volumes of digital liquidity.

What regulatory framework?

Looking ahead to the future of the euro and the dollar, both innovations raise strategic questions. Dollar stablecoins can reinforce dollar internationalisation through private digital channels, while euro-denominated tokenised deposits or stablecoins could support the international role of the euro (see Note). European authorities have responded through the MiCA regulation, while the US President signed the GENIUS Act into law. According to several international institutions including the FSB, the BIS, and the IMF, the central challenge remains striking the right balance between innovation, financial stability, and monetary sovereignty in a context of rapidly transforming global payment infrastructure.

Regulation (EU) 2023/1114, known as MiCA (Markets in Crypto-Assets), is the regulatory framework adopted by the EU to govern the issuance of and provision of services on crypto-assets. Its objective is to harmonise rules in order to provide legal certainty, strengthen investor protection, and safeguard financial stability in the face of rapid crypto-asset market growth (EU Council, 2023; European Commission, 2023). MiCA applies to issuers of crypto-assets as well as to crypto-asset service providers, such as trading platforms, custody services, and advisory services. It sets out requirements for authorisation, governance, risk management, and transparency. Once authorised in one member state, providers benefit from a «European passport» mechanism allowing them to operate across the entire EU.

The regulation pays particular attention to stablecoins, distinguishing between electronic money tokens (EMTs), pegged to an official currency (euro, dollar), and asset-referenced tokens (ARTs), pegged to another asset, including one or more official currencies, other crypto-assets, or a combination thereof (EBA, 2025). So-called «significant» stablecoins are subject to enhanced supervision.

MiCA does not apply to financial instruments already covered by existing financial services legislation (MiFID), nor to central bank digital currencies. It nonetheless marks a structuring step in the international regulation of crypto-assets, positioning the European Union as one of the first major jurisdictions to adopt a comprehensive and harmonised framework.

By way of comparison, the GENIUS Act in the United States (text s.1582), signed in July 2025, pursues a similar objective of regulating stablecoins.

The two pieces of legislation share a common fundamental principle: regulated stablecoin issuers must maintain reserves in a one-to-one ratio against all stablecoins in circulation (World Economic Forum, 2025). However, they diverge on several points. First, in terms of scope, MiCA provides a unified regulation covering all crypto-assets across the EU, whereas the GENIUS Act focuses exclusively on payment stablecoins. Regarding the nature of reserves, MiCA is stricter, requiring that 30% of reserves be held as bank deposits (60 % for «significant deposits»), while the GENIUS Act is more flexible (Monnet, 2025) and favours the holding of reserves in dollars and Treasury bills, creating additional demand for US debt.

The digital euro project

In a context where digital innovations such as stablecoins and tokenised deposits are reshaping the forms of money, the question arises as to whether public money itself must evolve. Making central bank money available in digital form would represent an adaptation of the public monetary instrument to the age of dematerialised payments.

Central bank money refers to money issued directly by a central bank, in the form of banknotes and coins for the general public, and reserves for commercial banks. It constitutes the safest form of money, as it represents a direct claim on the central bank with no counterparty risk. A central bank digital currency (CBDC) is the fully dematerialised transposition of this instrument.

Two types of CBDC are distinguished, serving distinct purposes. The retail CBDC is intended for the general public – individuals and businesses – for everyday payments online, in stores, or between individuals. It plays the role of a trusted public anchor in the digital world, analogous to that of the banknote in the physical world. The wholesale (or interbank) CBDC is reserved for central banks, commercial banks, and other financial institutions: it aims to improve cross-border payments and foreign currency transactions, and to serve as a settlement asset in the tokenisation of

financial securities. It is this latter instrument that could contribute the most to strengthening the international role of the euro (see Note).

The retail digital euro project

The digital euro project, led by the ECB, is designed as a digital version of central bank money accessible to the public. It fits within a logic of modernising payment infrastructure, with the aim of ensuring financial stability and European monetary sovereignty.

Following the Commission's proposal in June 2023, the Council endorsed the legal framework for the digital euro in December 2025. Negotiations with the European Parliament are continuing. The ECB will decide on issuance once the legislation is adopted, with an operational launch targeted for 2029.

The project rests on a two-tier model: the Eurosystem would issue the currency and manage the central infrastructure, while banks and payment service providers would handle customer onboarding, digital wallet management, and merchant services. Basic services for individuals would be free of charge, and fees applied to merchants would initially be capped at levels comparable to those of existing comparable payment instruments, with the prospect of lower costs – particularly for small merchants who currently bear higher card fees (Cipollone, 2025).

The introduction of a digital euro raises financial stability concerns, particularly those related to the risk of bank disintermediation – that is, the substitution of deposits into central bank money perceived as safer, especially during periods of stress. To mitigate this risk, the ECB has adopted several design choices: the digital euro would be non-remunerated and subject to a holding limit, while strong privacy protections are envisaged, including a level of confidentiality close to that of cash for offline payments. ECB analyses conclude that with appropriate caps, the impact on bank deposits and liquidity should remain moderate, even under stress conditions, and could be preferable to the expansion of unregulated alternatives such as stablecoins (ECB, 2025a). However, holding and transaction limits that are too restrictive for individuals while understandable in light of monetary transmission and banking intermediation concerns, could prove counterproductive in terms of adoption. A balance will need to be found between a ceiling that is sufficiently attractive for users and financial stability considerations, potentially reaching up to €100,000 (the level covered by deposit insurance). At this stage, no definitive limit has been set: the European Central Bank has notably referred to a €3,000 ceiling in its analytical work (ECB, 2025a), but this issue remains under negotiation among Member States.

The Eurosystem would fund the central infrastructure (approximately €1.3 billion in development costs and €320 million per year, according to the ECB, 2025b), while estimated implementation costs for banks would, according to the ECB, amount to between €4 and €5.8 billion (ECB, 2025c) – a figure substantially lower than initial industry estimates. For comparison, this corresponds to the annual amount collected by US payment companies (Visa, Mastercard) in transaction fees in Europe.

With an operational launch expected in 2029, the digital euro will have no direct impact on euro internationalisation in the near term, but may ultimately serve as a trusted public anchor, strengthen the resilience of the European payment system, and consolidate the euro's international standing (see Note).

The wholesale digital euro project

Alongside the retail digital euro project, the Eurosystem has been working on the settlement of financial transactions in wholesale central bank money on DLT platforms. This work builds on an exploratory phase conducted in 2024, which led the ECB Governing Council to approve in July 2025 a two-track strategy built around two complementary initiatives: Pontes and Appia (ECB, 2025d). Pontes is the near-term component: it will enable the settlement of DLT-based wholesale transactions in central bank money from the third quarter of 2026 onwards. Appia is the Eurosystem's long-term initiative, aimed at establishing a tokenised wholesale financial ecosystem at European scale. It will build on Pontes, and its roadmap – published in March 2026 – is expected to deliver a live project in 2028 (ECB, 2026).

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