DIGITAL EURO ASSOCIATION

Digital Euro Association Working Group

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The Role of Stablecoins in Financial Sovereignty

Strategic Considerations for EU Policymakers

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Digital Euro Association Working Group

Executive Summary

Introduction

Stablecoins stand at a critical intersection of traditional finance and emerging digital economies, presenting both profound enhancements and complex challenges for financial sovereignty. Designed to maintain stable value relative to fiat currencies, they have rapidly evolved from niche crypto solutions into mainstream instruments — clearing more than $6 trillion over the past 12 months in adjusted transactions (excluding purely trading activity), commanding a market capitalisation above $225 billion (mid 2025), and driving cross-border remittance use-cases that have grown over 40% year-on-year in traditional corridors.

Their swift proliferation across global financial ecosystems — driven by accelerating financial digitalisation and geopolitical shifts in economic influence — warrants urgent and thorough analysis of how these digital assets interact with national and supranational control over financial sovereignty dimensions. To address this imperative, the Digital Euro Association's Working Group on Stablecoins has prepared this paper, offering strategic considerations for policymakers.

Financial sovereignty — defined as the effective control exercised by governing authorities over financial and monetary systems within their jurisdiction — has become increasingly prominent in contemporary policy discourse. This heightened focus is in response to recent geopolitical and economic shifts that have highlighted the strategic importance of maintaining control over national and regional financial systems.

The traditional model of financial sovereignty has been fundamentally transformed by globalisation and digitalisation, shifting from territorial absolutism toward a more complex reality of constrained autonomy. Within this context, stablecoins occupy a fundamentally distinct position. Their global reach, operation on permissionless networks, and function as digital bearer instruments allow them to bypass traditional financial intermediaries and jurisdictional boundaries in ways that many other forms of money cannot.

This executive summary previews these analyses, outlining the primary impacts of stablecoins on the core dimensions of financial sovereignty — Monetary, Payments, Regulatory, and Digital — and highlights the paper's key recommendations.

Stablecoin Growth and Classifications

The sheer scale and trajectory of stablecoin adoption become even clearer when compared to established financial infrastructures. Indeed, as Figure 1 below shows, stablecoin transaction volumes are rapidly approaching and are, in some comparative measures, beginning to rival those of long-standing payment networks. This significant expansion underscores not only their growing market penetration but also their emerging systemic importance and potential to significantly reshape global payment dynamics and challenge traditional financial sovereignty.

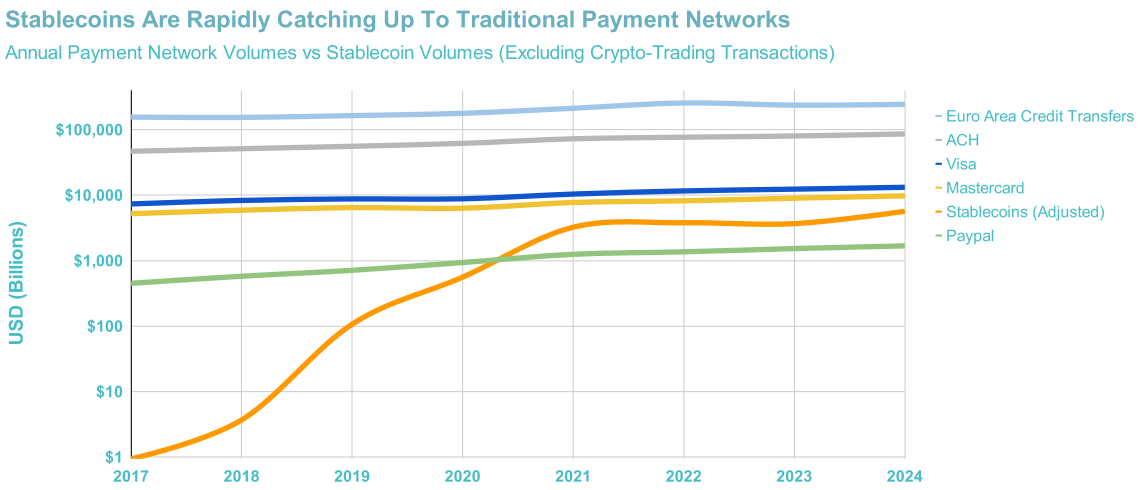

Figure 1: Stablecoin Growth Trajectory vs. Established Networks (2017-2024)
(Corresponds to Figure 4 in the main report).
Source: Visa, ECB, Mastercard, NACHA, and Business of Apps; Authors' elaboration. (Inspired by Nic Carter)

Given this profound impact and growing systemic relevance, a nuanced understanding of stablecoin types is essential for policymakers.

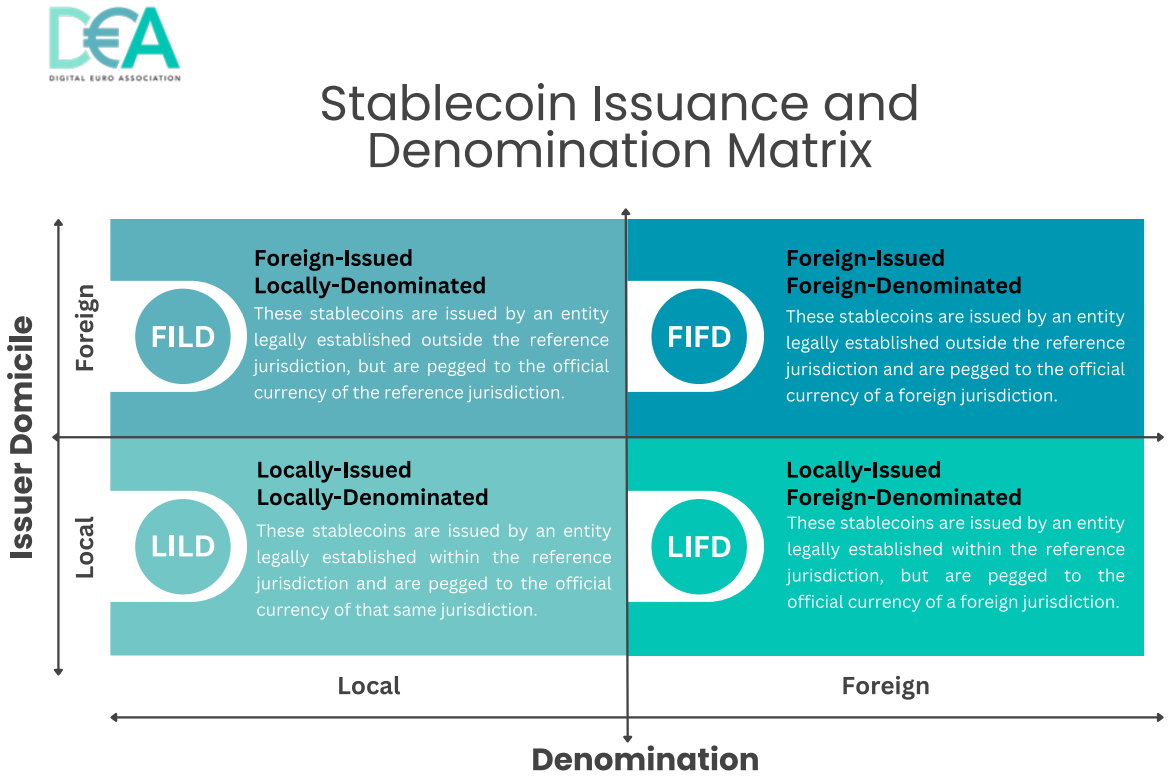

Figure 2: Stablecoin Issuance and Denomination Matrix (Corresponds to Figure 3 in the main report)
Source: Authors' elaboration

The Stablecoin Issuance and Denomination Matrix provides a critical framework for this analysis, categorising stablecoins based on the issuer's location and the currency denomination relative to a specific jurisdiction, generating four key categories (LILD, LIFD, FILD, FIFD) as shown in the matrix above. This matrix provides policymakers with an essential analytical tool to examine stablecoin impacts on financial sovereignty, as

each category presents distinct implications for the various dimensions of financial sovereignty. It clarifies how enhancements and challenges can differ between stablecoin types, enabling more targeted policy interventions.

Core Impacts on Financial Sovereignty

Stablecoins impact financial sovereignty across four key dimensions: Monetary, Payments, Regulatory, and Digital. This analysis assesses how different types of stablecoins can enhance or challenge a state's effective control over its financial and digital domains, with specific attention to the European context and Markets in Crypto-Assets Regulation (MiCAR).

Monetary Sovereignty: Pertaining to a jurisdiction's ability to control its currency and implement monetary policy, stablecoins offer potential enhancements while also posing significant challenges.

Potential Enhancements:

- Modernising the domestic currency, ensuring its relevance in digital ecosystems.
- Enhancing the currency's international role and competitive positioning against foreign alternatives.
- Potentially increasing demand for sovereign debt through reserve asset composition.

Potential Challenges:

- Risk of currency substitution (e.g., "digital dollarisation")
- Potential disruption to monetary policy effectiveness and traditional credit creation channels (commercial bank disintermediation).
- Threats to financial stability stemming from run risks, de-pegging events, or contagion.

Payments Sovereignty: Concerning a jurisdiction's control over its payment infrastructure, data, and strategic autonomy in payment flows, stablecoins offer potential enhancements while also posing significant challenges.

Potential Enhancements:

- Providing regulated domestic network alternatives to foreign network dominance.
- Enhancing resilience and innovation of payment systems through diversification.
- Reducing reliance on foreign intermediaries in cross-border transactions.

Potential Challenges:

- Loss of infrastructure control if domestic systems are bypassed via global rails.
- Strategic dependencies on foreign technology, networks, and providers.
- Monitoring and oversight gaps, especially for peer-to-peer (P2P)/foreign transactions.
- Difficulties in setting domestic standards and ensuring interoperability, leading to fragmentation.

Regulatory Sovereignty: Relating to a jurisdiction's capacity to establish and enforce financial rules and oversight, stablecoins offer potential enhancements while also posing significant challenges.

Potential Enhancements:

- Assertion of sovereign standards in digital finance through proactive regulation.
- Enhanced supervision through immutable audit trails and programmable compliance.
- Development of advanced SupTech/RegTech capabilities.

Potential Challenges:

- Transaction monitoring difficulties for P2P transfers.
- Regulatory arbitrage and market fragmentation.
- Exposure to extraterritorial pressures through foreign-issued(FILD,FIFD) stablecoins.

Digital Sovereignty: Encompassing a jurisdiction's control over its digital infrastructure, data, and technological capabilities, stablecoins offer potential enhancements while also posing significant challenges.

Potential Enhancements:

- Catalyst for domestic infrastructure ecosystem development, reducing reliance on foreign entities.
- Increased infrastructure optionality by strategically leveraging global platforms alongside domestic development.
- Potential for increased resilience in certain areas due to decentralisation, immutability, and transparency.

Potential Challenges:

- Infrastructure dependence on non-domestic blockchain networks, cloud providers, and technical standards.
- Data governance challenges, particularly tensions between blockchain characteristics (immutability, pseudonymity) and GDPR principles (e.g., right to erasure).
- Cybersecurity vulnerabilities from exposure to global threats targeting underlying infrastructure potentially outside direct regulatory reach.

Strategic Considerations for Policymakers

1. **Balanced Regulatory Approach:** Refine MiCAR implementation to balance robust oversight with innovation-friendly provisions that enable European stablecoin issuers to compete globally.

2. **Strategic Euro Stablecoin Development:** Actively support the development of European-issued euro-denominated stablecoins to enhance the euro's international role and reduce dependence on foreign-issued payment instruments.

3. **Complementary Public-Private Collaboration:** Develop frameworks for collaboration between the public and private sectors, leveraging their complementary strengths.
4. **EU Infrastructure Investment:** Increase investment in European infrastructure to reduce technological dependencies and enhance digital sovereignty.

5. **International Coordination:** Lead efforts for international regulatory coordination on stablecoins while maintaining European strategic interests.

Conclusion

Stablecoins represent both an enhancement and challenge for financial sovereignty. Their impact is contingent upon the strategic, proactive, and coherent policy choices made by jurisdictions like the EU. Inaction or purely reactive measures risk ceding global influence, while a well-calibrated strategy can harness innovation to reinforce sovereignty.

For the EU specifically, stablecoins offer potential pathways to enhance the euro's international role and reduce dependence on foreign payment infrastructures. However, realising these benefits requires a strategic approach that balances robust regulation with innovation support, and public infrastructure development with private sector collaboration.

By adopting a forward-looking, balanced approach to stablecoins, EU policymakers can harness their numerous potential benefits while safeguarding European financial sovereignty in an increasingly digital and contested global financial landscape.

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List of Abbreviations

AML/CFT	Anti Money Laundering and Counter Terrorist Financing
AMLD	Anti-Money Laundering Directives
B2B	Business to Business
BIS	Bank for International Settlements
CBDC	Central Bank Digital Currency
DeFi	Decentralised Finance
DLT	Distributed Ledger Technology
DORA	Digital Operational Resilience Act
EDPB	European Data Protection Board
EMD	Electronic Money Directive
EMT	E-Money Token
EU	European Union
EUDI	European Digital Identity Wallet
FILD	Foreign Issued, Locally Denominated stablecoin
FIFD	Foreign Issued, Foreign Denominated stablecoin
GDPR	General Data Protection Regulation
HQLA	High Quality Liquid Assets
IoT	Internet of Things
LIFD	Locally Issued, Foreign Denominated stablecoin
LILD	Locally Issued, Locally Denominated stablecoin
MiCAR	Markets in Crypto Assets Regulation (Regulation (EU) 2023/1114)
MiFID	Markets in Financial Instruments Directive
P2P	Peer to Peer
SupTech	Supervisory Technology
TFR	Transfer of Funds Regulation
UNODC	United Nations Office on Drugs and Crime

Introduction

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1. Introduction

The accelerating digitalisation of finance, coupled with evolving geopolitical considerations surrounding projections of economic influence, makes an examination of stablecoins and their impact on national financial sovereignty both timely and essential. This urgency is driven by transformations within the global financial system, significantly propelled by cryptocurrencies, blockchain technology, and asset tokenisation. These innovations offer profound opportunities but also complex challenges to traditional monetary and financial structures.

Among these developments, stablecoins have swiftly moved into the global spotlight. Unlike volatile crypto-assets such as Bitcoin, stablecoins aim to maintain a stable value relative to a specified asset, typically a sovereign fiat currency like the USD, often through reserve holdings denominated in the referenced asset (FSB, 2023; Bindseil & Malekan, 2025). Their unique value proposition — aiming to combine the efficiency of blockchain efficiency with the stability of traditional currency — positions them at the intersection of established financial systems and emerging digital paradigms. This dual nature allows stablecoins to address inefficiencies in cross-border payments, settlement processes, and financial inclusion while enabling new possibilities for automated financial services through programmability, smart contracts, and decentralised applications. As both sovereign entities and commercial organisations recognise that stablecoins offer an increasingly compelling alternative to legacy structures, they have evolved from a niche crypto solution to a catalyst for broader financial innovation, prompting significant regulatory attention and strategic positioning.

As shown in Figure 1, stablecoins are now transcending their origins, with transaction activity and adoption outside of crypto-asset markets surging dramatically.

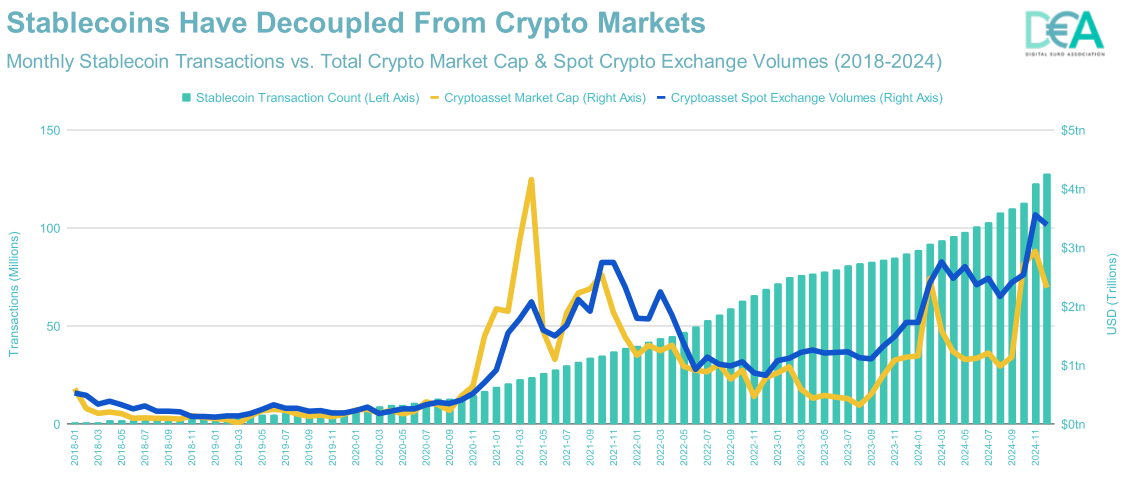

Figure 1: Stablecoin Transactions vs. Crypto Market Cap and Exchange Volume Trends (2018-2024)
Source: Authors' elaboration

In May 2025, their total supply surpassed $240 billion (DeFi Llama, n.d.), and adjusted annual transaction volumes — excluding automated activity (bots'), internal transactions, exchange rebalancing, and high-frequency trading to offer a clearer estimate of payment and settlement flows — reached over $6.9 trillion over the past 12 months (Visa, n.d.). These statistics, taken along with a steady rise in transaction activity, underlines stablecoins'

growing decoupling from their original use cases and their expanding influence within traditional finance.

Recent actions by prominent bank and non-bank financial institutions further illustrate stablecoins' emerging mainstream significance. In early 2025, payments giant Stripe acquired stablecoin infrastructure firm Bridge for $1.1 billion. This was quickly followed by a new product line giving businesses in 101 countries the ability to open USD stablecoin accounts and manage funds similarly to traditional fiat bank accounts. During the same period, Bank of America's CEO announced plans for the bank to issue stablecoins, pending regulatory clarity, and stablecoin issuer Circle announced a payments network with four globally important systemic banks — Société Générale, Santander, Deutsche Bank and Standard Chartered — serving as advisors (Stripe, 2025; Claman, 2025; Circle, 2025; Ledger Insights, 2025). Such developments reflect increasing recognition of stablecoins' potential to enhance payment efficiency, reduce costs and settlement times (particularly for cross-border transactions), and enable new types of automated financial applications.

Yet, the very characteristics underpinning their appeal – rapid global circulation outside traditional channels, programmability, and their growing function as stores of value and mediums of exchange – carry implications that extend far beyond innovation and efficiency, intersecting directly with core tenets of national financial sovereignty.

Policymakers increasingly acknowledge that stablecoins have the capacity to influence economic and strategic objectives. While some, for instance the current US administration, view stablecoins as an attractive means to achieve their desired ends, other stakeholders raise concerns about stablecoins' potential threats to monetary independence, financial stability, and regulatory efficacy, given their circulation via global, permissionless networks (FSB, 2023; BIS, 2022; Trump, 2025). These viewpoints highlight both the complexity surrounding, and the critical importance of, stablecoins' impacts on financial sovereignty, analysed in this paper across four interconnected dimensions: Monetary Sovereignty, Payments Sovereignty, Regulatory Sovereignty, and Digital Sovereignty (Zimmermann, 2013; Lastra, 2015; BIS, 2020; Shaw, 2021; Cheung, 2022).

For Europe, stablecoins present particularly acute challenges and strategic opportunities. Europe's historical reliance on foreign-controlled payment networks has already catalysed the European Central Bank's (ECB) exploration of a retail central bank digital currency (CBDC) colloquially known as the digital euro, aimed at bolstering payment autonomy (Panetta, 2022). Concurrently, the European Union has enacted the comprehensive Markets in Crypto-Assets Regulation (MiCAR) attempting to balance innovation with consumer protection, financial stability, and monetary sovereignty (European Parliament & Council, 2023; European Commission, 2020). However, ongoing debates suggest certain aspects of MiCAR may have inadvertently weakened the competitive position of European stablecoin issuers relative to global competitors (see, e.g. Hansen, 2024; Egilsson & Fritsche, 2025; Lian, 2025). These concerns are amplified by a perceived prioritisation of the digital euro — and indifference towards European stablecoins — by some policymakers, highlighting ongoing tensions regarding the roles of public and private actors in shaping the future of monetary infrastructure (e.g. Lane, 2025; Cipollone, 2025; Munster & Faggionato, 2025). The critical need to understand stablecoins' true implications for financial sovereignty by

separating facts from both market hype and ingrained, potentially outdated, stereotypes — especially within the European context — motivates the focused examination in this paper.

In this context, this paper critically examines the multifaceted impact of stablecoins on financial sovereignty, applying a globally applicable analytical framework with a particular focus on Europe. It argues that stablecoins' unique combination of attributes necessitate the development of nuanced stablecoin strategies at national and supra-national levels that proactively harness their numerous potential benefits while safeguarding jurisdictional autonomy. To address these complexities, the paper first defines financial sovereignty (Section 2), examines the current stablecoin landscape (Section 3), analyses specific impacts of stablecoins across sovereignty dimensions (Section 4), and finally offers considerations for policymakers seeking to achieve this delicate balance (Section 5).

The Digital Euro Association (DEA) supports the continued development of a diverse and competitive stablecoin landscape, encompassing a wide array of denominations and technological approaches. Within this dynamic environment, this paper aims to provide a focused analysis on a crucial dimension: the role of stablecoins in shaping financial sovereignty.

Financial Sovereignty: Definitions and Current Landscape

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2. Financial Sovereignty: Definitions and Current Landscape

Sovereignty, in its broadest sense, refers to the supreme authority of a state within its own territory, often symbolised by national emblems such as a flag, a distinct legal framework, or the authority to issue currency. Historically, financial sovereignty centered on a state's exclusive rights to issue currency, levy taxes, manage national debt, and regulate domestic financial institutions — powers that were largely unchallenged within territorial boundaries. Today, this traditional model has been fundamentally transformed by globalisation and digitalisation, shifting from territorial absolutism toward a more complex reality of constrained autonomy.

Within this evolving context, financial sovereignty has become an increasingly prominent topic in contemporary policy discourse. This heightened focus is largely a response to a confluence of recent geopolitical and economic shifts that have starkly highlighted the strategic importance of maintaining control over national and regional financial systems. Factors such as the strategic leveraging of economic interdependence, evolving debates around global currency arrangements, the imposition of significant financial sanctions, and the resurgence of tariff-centric trade disputes (expanded on in Section 2.2) have collectively brought the issue of financial sovereignty to the forefront of contemporary policy discourse and underscore the drive for national economic control. These events collectively highlight the evolving challenges to and assertions of financial control by states. Despite this growing prominence, financial sovereignty lacks a universally agreed definition (Li & Zhou, 2015).

In this paper, financial sovereignty is defined as the effective control exercised by relevant governing authorities (whether national or supranational) over the financial and monetary systems within their jurisdiction. Emphasising 'effective control' rather than absolute Westphalian autonomy acknowledges the practical constraints jurisdictions face in today's globalised and digitally interconnected world (Pistor, 2019; Feibelman, 2021; Braun & Gabor, 2022).

As such, financial sovereignty is best understood as existing on a spectrum rather than as a binary condition (Murau & van 't Klooster, 2022), highlighting the crucial distinction between a state's de jure financial sovereignty (its formal legal powers) and its de facto financial sovereignty (its actual capacity to exercise those powers effectively in practice, often limited by both internal and external constraints). It should also be noted that a perceived reduction in de facto financial sovereignty is not inherently negative. States frequently choose to cede certain aspects of financial autonomy in order to achieve strategic goals such as access to cross-border payment networks, participation in free-trade agreements, or even full currency harmonisation through monetary unions like the Eurozone.

2.1 A Brief Taxonomy of Financial Sovereignty

To effectively assess the potential impacts of stablecoins on financial sovereignty, this paper dissects it into four primary dimensions relevant to this study:

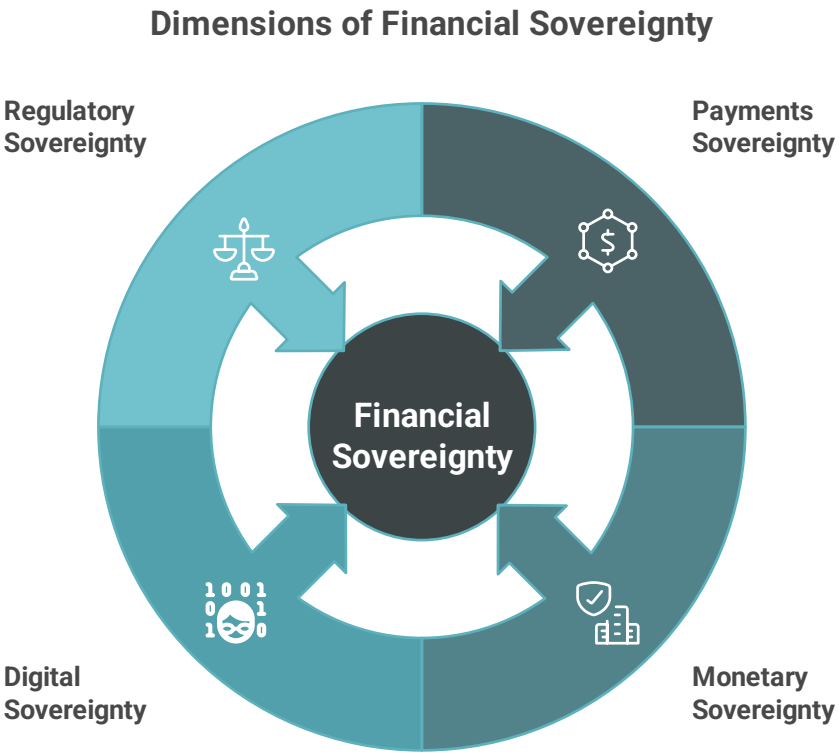

Figure 2: Dimension of Financial Sovereignty
Source: Authors' elaboration

Monetary Sovereignty is a state's authority to issue and regulate its own currency and conduct independent monetary policy (including control over money supply, interest rates, exchange rates), combined with normative responsibilities to uphold financial integrity and ensure monetary and financial stability (Zimmermann, 2013).

Payments Sovereignty refers to a state's authority over the infrastructure and systems that underpin financial transactions within its territory (BIS, 2020). It encompasses control of payment networks, clearing systems, interoperability standards, and the frameworks that govern the movement of money — enabling governments to support economic resilience, enforce financial regulations effectively, monitor transactions for security, and mitigate strategic vulnerabilities that may arise from dependence on foreign-controlled networks.

Regulatory Sovereignty in the financial sector denotes a state's capacity and effectiveness in designing, implementing, and enforcing legal frameworks for all financial activities (Shaw, 2021). Its remit extends beyond supporting monetary policy to ensuring systemic stability, preserving market integrity, protecting consumers and investors, and preventing illicit finance (Armour et al., 2016). Crucially, it hinges on the practical ability to assert domestic rules effectively, particularly when faced with cross-border capital flows and rapid technological innovation that can challenge traditional supervisory boundaries (Auer, 2022).

Digital Sovereignty is a state's ability to exercise control over the digital technologies, infrastructures, and data flows crucial to its society and economy. Although extending beyond finance, digital sovereignty is vital in this context. Indeed, a state's financial and payments sovereignty are increasingly impacted by the degree of digital (and associated

regulatory) sovereignty it can exercise. This is because control over these digital realms directly influences the foundational components of modern financial systems – including communication systems, data centres, cloud services, and, potentially, distributed ledgers. Key policy areas falling under the umbrella of digital sovereignty include ensuring national cybersecurity readiness, data governance frameworks, and managing critical digital infrastructure resilience (Cheung, 2022; Chander & Sun, 2021).

2.2 Geopolitical Context

Financial sovereignty is inherently intertwined with broader economic and geopolitical dynamics. Control over financial networks, currency flows, and monetary access play an ever more critical role as instruments of national strategy, through which states seek to exert global influence and achieve strategic objectives (Blackwill & Harris, 2016; Farrell & Newman, 2019).

The current geopolitical landscape is characterised by a shift towards leveraging global economic interconnectedness for strategic advantage, transforming these networks into arenas for state competition (Farrell & Newman, 2019). This 'weaponised interdependence' (Farrell & Newman, 2025) manifests in various forms: ongoing de-dollarisation efforts and the pursuit of alternative currency arrangements by groups like BRICS (Kaur, 2025); the imposition of significant financial sanctions, including SWIFT access restrictions against nations like Iran and Russia (Lawyer Monthly, 2025; Carey Business School, 2022); resurgent tariff-centric trade disputes, such as the US-China economic confrontation with its 2025 escalations (Al Midfa, 2025); and even state-coordinated cybercrime, like that attributed to North Korea's Lazarus Group. These economic instruments are increasingly pivotal in asserting influence and contesting power. Indeed, these developments have led some to argue that financial sovereignty now rivals or even surpasses territorial sovereignty in geopolitical importance (Pistor, 2019), and that economic weaponry has become more critical to statecraft than conventional military force (Singh, 2022).

This increasing reliance on economic statecraft intersects with the rise of digital currencies. Recent events demonstrate that the geopolitical ramifications of stablecoins are being recognised globally. The United States, for example, frames its stablecoin policy explicitly as a strategic measure to maintain the global dominance of the USD (Trump, 2025). Italy's finance minister believes that foreign stablecoin policies may pose even greater risks than trade tariffs (Reuters, 2025), while Russian policymakers call for domestically controlled stablecoins to mitigate potential vulnerabilities arising from foreign-issued counterparts (Reuters, 2025).

European policymakers are increasingly vocal in their response to these developments. ECB President Christine Lagarde advocates for a European-controlled payments infrastructure, framing the initiative as both 'a march towards independence' and part of an 'existential moment for Europe' in securing financial sovereignty against dominance by American and Chinese firms such as Visa, MasterCard, PayPal, and Alipay (Lagarde, 2025). The perceived threats from such foreign dominance — including exposure to external policy leverage, compromised control over critical data, and diminished economic resilience and security — are fuelling the calls for increased European financial sovereignty. This drive for sovereignty is reflected in Europe's MiCAR framework, one of the world's first comprehensive regulatory

packages targeting stablecoins. Yet, despite MiCAR's implementation, key European policymakers increasingly advocate for the digital euro CBDC project as Europe's primary path towards achieving payments independence (Cipollone, 2025).

Within this complex landscape, stablecoins occupy a fundamentally distinct and potentially disruptive position. Their global reach, operation on permissionless networks, and function as digital bearer instruments allow them to bypass traditional financial intermediaries and jurisdictional boundaries in ways other forms of money, both existing and emerging, may not. Their rapid growth may demand strategic foresight from nation-states and supranational entities, analogous to more established domains like energy security, requiring proactive strategies — encompassing but exceeding regulation — to harness their benefits while mitigating their risks.

Stablecoins: Definitions and Current Landscape

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3. Stablecoins: Definitions and Current Landscape

3.1 Definition and Scope

Stablecoins are a class of digital asset designed to target a stable value relative to a specified reference asset, typically a major sovereign fiat currency (FSB, 2023). Unlike CBDCs, stablecoins represent liabilities of private issuers (Auer et al., 2020). The primary goal of stablecoins is to minimise the price volatility characteristic of most crypto-assets by maintaining a one-to-one peg with a fiat currency like the USD, or (to a much lesser extent) other currencies such as the euro, or the yen.

This paper specifically examines single currency fiat-denominated, HQLA-backed stablecoins, which comprise approximately 92% of the stablecoin market (DefiLlama, n.d., retrieved 15 April, 2025) and hold particular relevance for monetary and financial stability discussions. These stablecoins aim to maintain their peg to the reference currency through reserve holdings, predominantly composed of high-quality, liquid assets (HQLA) such as short-term government bonds, cash, or bank deposits. Within the European Union, they fall under the MiCAR definition of E-Money Tokens (EMTs), similar to electronic money under the EU's E-Money Directive[1] (European Parliament & Council, 2023; Martínez Nadal, 2025). Although other models exist, for the remainder of this paper, unless otherwise noted, the term 'stablecoins' will refer specifically to the above model.

3.2 A Jurisdictional and Currency-Based Classification of Stablecoins

In-scope stablecoins can be classified according to issuer location and currency denomination relative to a particular jurisdiction, a method particularly valuable when examining their impacts on financial sovereignty. This classification generates four categories:

- **Locally-Issued Locally-Denominated (LILD):** issued by an entity legally established within the reference jurisdiction and are pegged to the official currency of that same jurisdiction.
- **Locally-Issued Foreign-Denominated (LIFD):** issued by an entity legally established within the reference jurisdiction, but are pegged to the official currency of a foreign jurisdiction.
- **Foreign-Issued Locally-Denominated (FILD):** issued by an entity legally established outside the reference jurisdiction but are pegged to the official currency of the reference jurisdiction.

[1] e.g. MiCAR states: "E-money tokens should be deemed to be 'electronic money' as that term is defined in Directive 2009/110/EC…electronic surrogates for coins and banknotes [that] are likely to be used for making payments."

- **Foreign-Issued Foreign-Denominated (FIFD):** issued by an entity legally established outside the reference jurisdiction and are pegged to the official currency of a foreign jurisdiction.

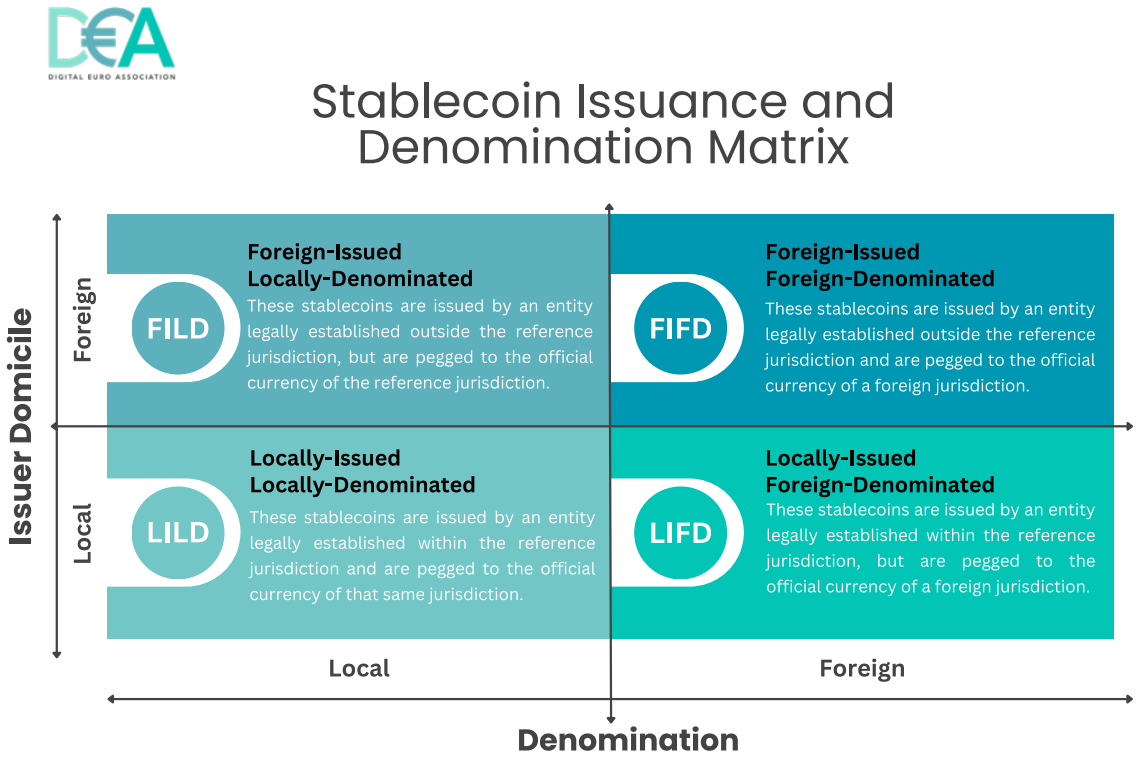

Figure 3: Stablecoin Issuance and Denomination Matrix
Source: Authors' elaboration

It should be noted, however, that while this framework is analytically useful, it may sometimes oversimplify complex operational realities. For example, an issuer may operate via locally-regulated institutions even though the ultimate parent company is headquartered outside those jurisdictions. Such structures highlight a common feature of global finance: effective cross-border regulatory cooperation and information-sharing are essential to achieve comprehensive oversight of multinational stablecoin groups.

3.3 Operational Foundations

Understanding the business models of private stablecoin issuers is key to analysing both their incentives and market impact. The defining feature underpinning the stability of in-scope stablecoins is their reserve management. Unlike fractionally reserved commercial banks that create credit through lending, stablecoin issuers typically operate more akin to a 'narrow bank' model (Waller, 2021). They aim to back their outstanding stablecoin liabilities at a minimum 1:1 ratio with segregated, high-quality liquid assets (HQLA). These reserves are generally held in the reference currency and primarily consist of assets like cash deposits at regulated credit institutions and short-term, highly rated government securities. Regular attestations or audits by third parties are usually required by regulators or adopted as best practice to provide transparency and assurance regarding the sufficiency and composition of these reserves (Bains et.al, 2022).

The primary business model for stablecoin issuers derives from the yield or interest earned on the HQLA held in reserve[2] (Waller, 2025). The stablecoins held by users, however, are typically non-interest-bearing; indeed, regulatory frameworks like MiCAR often explicitly prohibit the payment of interest to holders, reinforcing their intended role as payment instruments rather than investment products. The profitability potential from reserve yields is significant, particularly in high-interest-rate environments. For instance, Tether, the largest stablecoin issuer by supply, reportedly generated nearly $13 billion in profits from reserve holdings in 2024 (PYMNTS, 2025).

However, for many issuers, this revenue stream must be considered against rising operational costs and competitive pressures. Navigating the evolving and increasingly stringent regulatory landscape imposes significant expenses. Achieving and maintaining authorisation, particularly across multiple jurisdictions, requires substantial investment in compliance personnel, legal expertise, robust internal controls, independent audits, and ongoing adaptation to new supervisory requirements.

Achieving widespread adoption also presents significant costs. Unlike sovereign or traditional bank money, stablecoins lack the inherent network effects of traditional payment schemes, requiring issuers to actively cultivate acceptance networks. This involves establishing numerous, often costly and complex, bilateral relationships with exchanges, payment processors, and wallet providers, significantly impacting net profitability (Ledger Insights, 2025). Responding to market dynamics and incumbent advantages, newer collaborative models are emerging. For example, the Global Dollar Network's USDG — a collaborative effort including Standard Chartered, DBS, Nuvei, Paxos, and Robinhood — incentivises ecosystem growth by distributing up to 97% of its net reserve interest profits to these partners, aiming to counter established network effects.

The need to actively cultivate such networks relates closely to how stablecoins function in — and as — informal payment schemes, differing markedly from other forms of privately issued money. Payments using bank deposits or traditional e-money require facilitation from the intermediaries, such as settlement systems like FedWire or TARGET2, making them indirect payments with pre-established networks. Stablecoins differ significantly by enabling direct peer-to-peer (P2P) payments between users. In this sense, they function as digital bearer instruments, somewhat akin to cash, which also functions as a payment object with an inherent direct transfer mechanism.

However, unlike cash, stablecoins do require more operational infrastructure than a pair of hands. Typically, stablecoins leverage public blockchains as the underlying infrastructure, many of which enable permissionless open access, near real-time settlement, 24/7 operation, programmable functionality, and global reach. This combination of a stable asset with a (near) direct, global payment system contributes to their success (Liao & Caramichael, 2022).

The issuer's role remains vital for maintaining value, primarily through managing reserves and processing redemptions for eligible parties. However, the transfer mechanism relies on

[2] Other examples of secondary revenue models include Paxos, who offer a sublicense/whitelabelled service for other issuers, e.g. PayPal's PYUSD; and Circle's 'Wallets-as-a-Service' product.

the underlying blockchain network (see Section 3.4.4) which often operates under rules independent of the issuer and national jurisdictions.

3.4 Market and Adoption Patterns

The narrative surrounding stablecoins is often filled with headlines and considerable hype, making it challenging to separate genuine signals from pervasive market noise. However, a focus on the underlying data reveals a clear picture of their significant and accelerating real-world adoption.

The sector has experienced remarkable growth, particularly since 2020, moving beyond their initial niche within crypto markets. By mid-April 2025, the total supply of in-scope stablecoins reached approximately $225 billion (DeFi Llama, n.d., retrieved May 15, 2025). Transactional activity has also surged with adjusted annual on-chain volumes (filtering out automated activity ('bots'), internal transactions, exchange rebalancing, and high-frequency trading, etc.) now exceeding $6.9 trillion (past 12 months) (Visa, n.d., retrieved May 15, 2025).

This adjusted volume highlights stablecoins' increasing significance in global financial flows, already exceeding half the total volume processed by established networks like Visa (Visa Inc., 2024). Although the supply of stablecoins remains modest compared to broad money measures (e.g., USD stablecoins ≈ 1.2% of U.S. M2 supply) (Stablewatch, n.d., retrieved April 15, 2025), the rapid expansion of their transaction volumes, illustrated in Figure 4, underscores their growing scale and potential systemic importance.

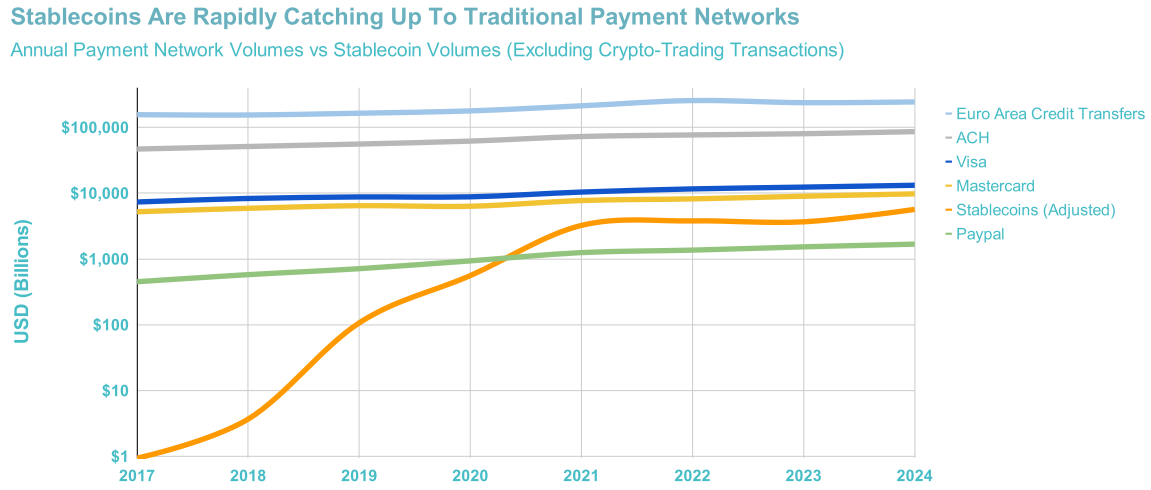

Figure 4: Stablecoin Growth Trajectory vs. Established Networks (2017-2024)
Source: Visa, ECB, Mastercard, NACHA, and Business of Apps; Authors' elaboration.

3.4.1 Predominant Use Cases

Currently, although other models are fast emerging, stablecoin adoption is concentrated in several key areas:

1. **Crypto Trading and Decentralised Finance (DeFi):** Stablecoins serve as the primary bridge between traditional fiat currencies and volatile crypto-assets. They serve as

the principal unit of account, medium of exchange, and an easily accessible 'safe haven' store of value, having largely supplanted Bitcoin as the standard for pricing and settlement within crypto markets.

2. **Monetary Store of Value:** Demand for stablecoins is particularly pronounced in regions facing local currency instability or capital controls. In areas like Latin America and Sub-Saharan Africa, for instance, USD-pegged stablecoins are increasingly embraced as a tool for hedging against inflation and preserving value (Chainalysis, 2024; Carter, et.al., 2024).

3. **Cross-Border Payments and Remittances:** Addressing marked inefficiencies in legacy correspondent banking, stablecoins are increasingly used for cross-border payments, offering faster settlement (often minutes versus days) and lower transaction costs. These costs are frequently significantly below the 3% United Nations Sustainable Development Goal target (United Nations, 2024; Duong, 2025), compared to traditional averages near 6.6% (World Bank, 2024). This improved efficiency underpins rapid adoption growth, exceeding 40% year-over-year in certain emerging markets (Chainalysis, 2024), where stablecoin usage also correlates positively with remittance volume (Ante, 2025). These efficiencies are also expanding B2B uses like international payroll, potentially reducing capital friction associated with pre-funding some $10 trillion in traditional structures like Nostro/Vostro accounts (PaymentsCMI, 2025).

4. **Settlement for Tokenised Assets:** A newer but fast-growing use case involves stablecoins serving as the native "cash leg" for transactions involving tokenised 'real-world' assets – such as tokenised bonds, funds, or commodities — a market that has grown ≈4500% in the past 4 years to a market capitalisation of over $22bn (RWA.xyz, n.d.). Using stablecoins for settlement on the same blockchain infrastructure as the tokenised asset can enable atomic settlement (instantaneous exchange of asset and payment) and may reduce counterparty risk and settlement times compared to traditional finance. While this market is still nascent, growth in this area is expected to drive significant future demand for regulated, scalable stablecoins as tokenisation matures (Ripple & Boston Consulting Group, 2025).

3.4.2 Key Issuers and Market Concentration

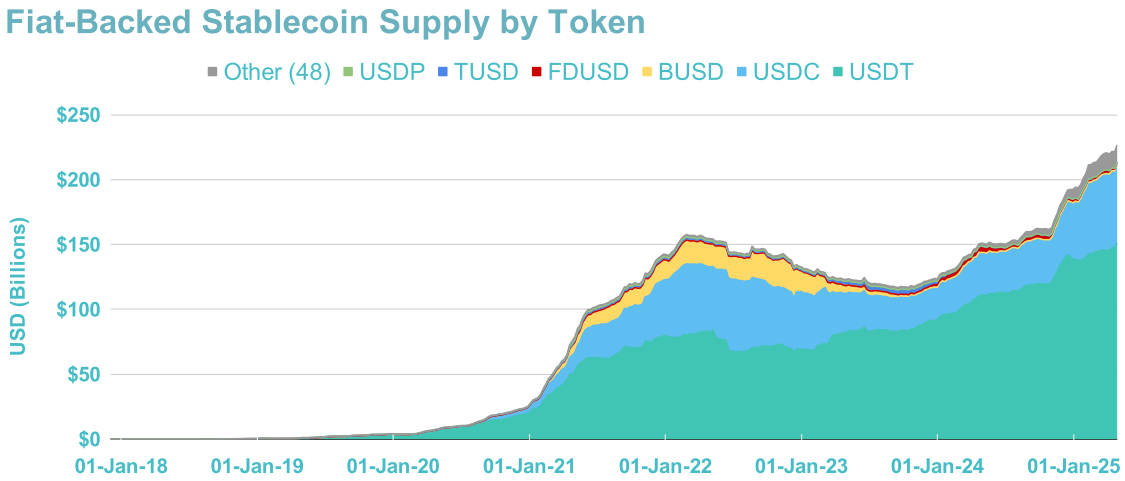

Figure 5: In-Scope Stablecoin Supply by Token (2018-2025)
Source: Artemis; Authors' elaboration.

The stablecoin market, particularly for USD-pegged tokens, is highly concentrated, dominated by two main issuers: Tether (USDT) and Circle (USDC). As shown in Figure 5, Tether, the earliest major entrant, initially held a near-monopoly position. Circle's USDC gained considerable market share from 2021 onwards, adopting a more 'regulator-first' strategy compared to Tether's historically offshore approach. While other issuers have emerged, the market structure reflects strong network effects typical of payment systems, where liquidity and acceptance tend to coalesce around dominant players.

3.4.3 Currency Peg Dominance: Primacy of the US Dollar

The market is overwhelmingly dominated by USD-pegged tokens; as of early 2025, the combined supply of major stablecoins pegged to other currencies (euro, yen, pound, etc.) totalled only ≈$486 million, under 0.3% of the USD-pegged market (see Figure 6). This concentration significantly surpasses the USD's share in traditional global finance, for example roughly 57% of foreign exchange reserves (IMF, n.d.) and 49% of SWIFT payment flows (SWIFT, 2025).

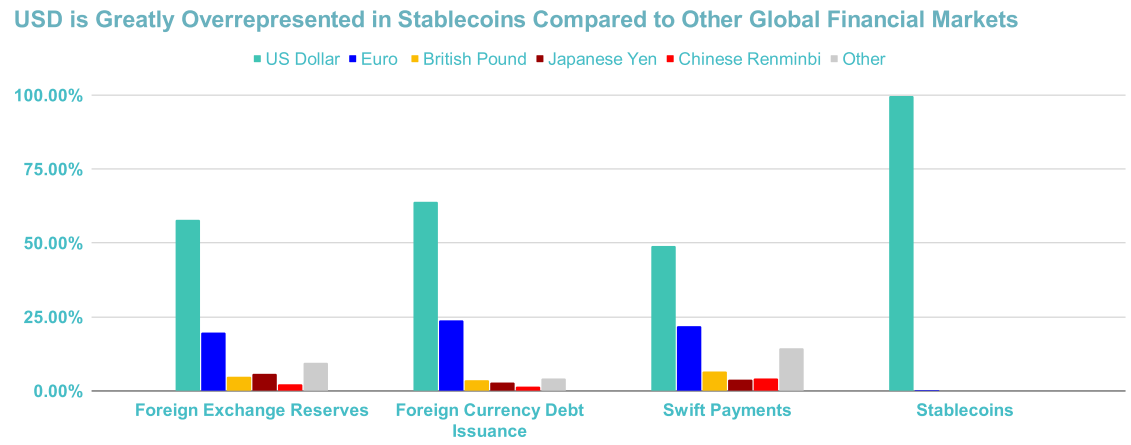

Figure 6: Currency Percentage Share in Global Markets
Source: BIS, IMF, Swift, DefiLlama; Authors' calculation

As shown in Figure 7, the non-USD stablecoin segment has struggled, peaking below $900 million and shrinking considerably since its 2022 high. This illustrates the difficulty issuers face in building sufficient liquidity and network effects for non-USD stablecoins, leading to the dollar's disproportionate over-representation in the stablecoin ecosystem compared to its role in the traditional global economy.

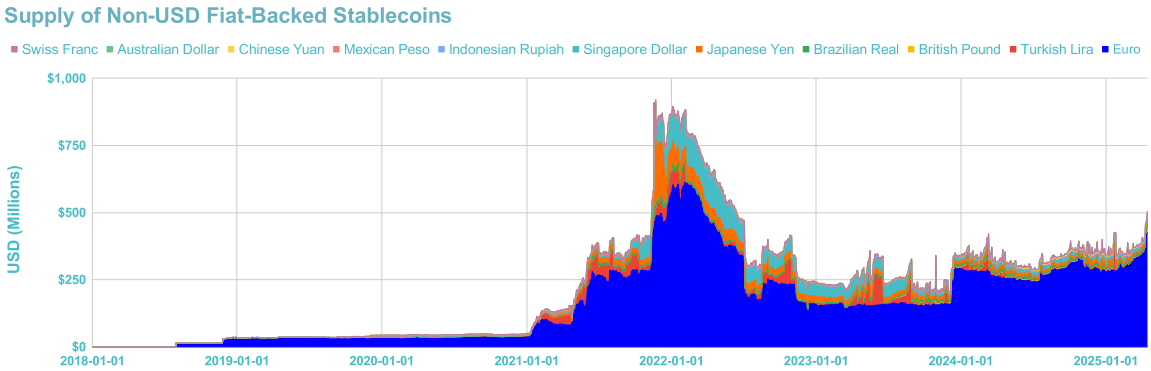

Figure 7: Non-USD Stablecoin Supply (2018-2025)
Source: RWA.xys; Authors' calculation

3.4.4 Blockchain Infrastructure

Traditional financial infrastructures often comprise a number of siloed private ledgers, each typically designed for specific asset types (e.g. wholesale euros on TARGET2 or US securities on The National Securities Clearing Corporation). Interoperability between these systems can present significant challenges, and access is usually restricted to a select few regulated institutions, with other market participants accessing them through intermediaries. In sharp contrast, public-permissionless blockchains like Ethereum or Solana function as shared, multi-asset ledgers capable of settling a potentially infinite variety of digital assets. Their permissionless design theoretically allows anyone to connect and interact peer-to-peer, bypassing many traditional intermediaries. A further key differentiator is their native programmability via smart contracts, which allows for complex, automated logic directly on the settlement layer (Bindseil & Malekan, 2025).

Leveraging this novel infrastructure, stablecoins operate across a diverse (and sometimes fragmented) landscape, as they are not typically tied to a single network. The first major smart-contract platform, Ethereum, initially dominated and still hosts the majority of stablecoin liquidity. However, its high transaction fees and network congestion spurred major issuers like Circle and Tether to adopt multi-chain strategies, deploying stablecoins natively across various networks to maximise reach and serve different application ecosystems. As illustrated in Figures 8 and 9, this diversification trend has accelerated since 2018, with alternative networks steadily capturing increasing portions of both the total stablecoin supply and active wallet share across multiple blockchains.

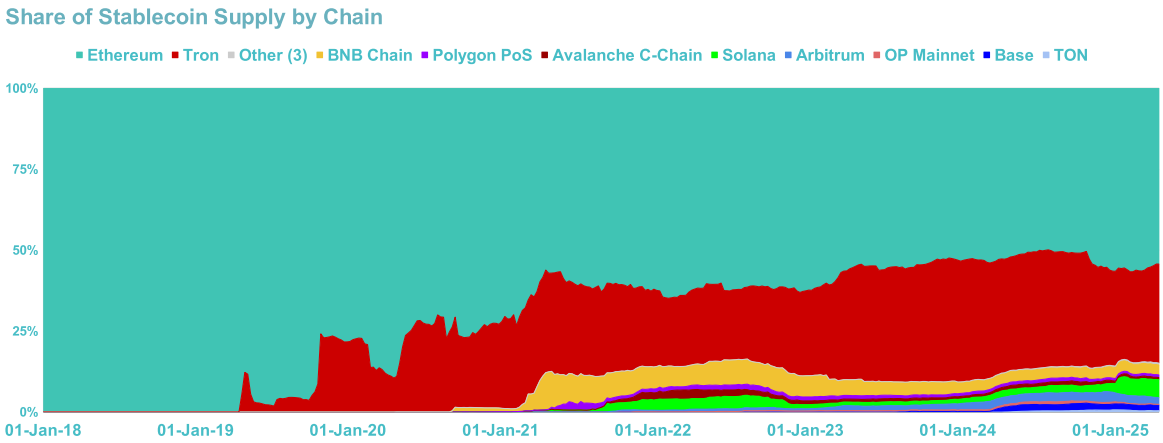

Figure 8: Percentage Share of Total Stablecoin Supply by Blockchain Network (2018-2025)
Source: Artemis; Authors' elaboration.

Interestingly, while the majority of stablecoin supply remains on Ethereum mainnet, most transactional activity now occurs on other blockchains.

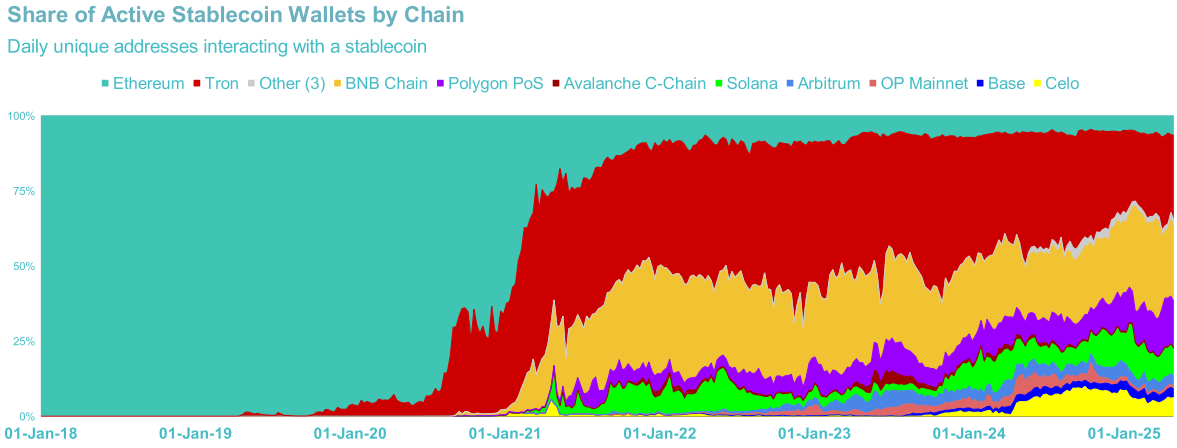

Figure 9: Share of Active Stablecoin Wallets (2018-2025)
Source: Artemis; authors' elaboration.

These newer platforms often aim to overcome the cost and scalability limitations that hindered wider adoption on earlier networks, with some achieving significantly higher throughput and/or faster finality. However, in some cases, achieving this higher performance involves architectural trade-offs that can diminish attributes traditionally valued in blockchain

design — such as decentralisation and credible neutrality — potentially concentrating operational control within specific organisations or jurisdictions.[3]

[3] For example, some popular stablecoin chains have few block producers (dozens vs. Ethereum's ~5.5k); many L2s also use centralized, single-entity sequencers, creating control points (Token Terminal, 2024; Crypto Briefing, 2025; L2BEAT, n.d.)

Stablecoin Impacts on Financial Sovereignty: Enhancements and Challenges

DIGITAL EURO ASSOCIATION

The Role of Stablecoins
in Financial Sovereignty

4. Stablecoin Impacts on Financial Sovereignty: Enhancements and Challenges

Having defined financial sovereignty and surveyed the stablecoin landscape, we now analyse how these assets interact with the four dimensions of Monetary, Payments, Regulatory, and Digital Sovereignty. We assess how stablecoins, classified in Section 3, may enhance or challenge sovereign functions. We explore these dynamics first from a global/general perspective before concentrating on Europe, assessing the implications within the context of the MiCAR.

Within the European context, MiCAR is central, representing the primary mechanism through which the EU seeks to assert regulatory control against digital asset developments. As the first major jurisdiction to adopt a comprehensive regulatory framework for crypto-assets, notably stablecoins, MiCAR is a clear assertion of the EU's intention to retain control over the digital evolution of its financial system and sovereignty. It establishes stringent requirements on stablecoin issuers, mandating transparency, reserve backing and redemption rights. Its aim is to ensure that these instruments can be monitored, trusted and safely integrated into the broader monetary and financial system. To achieve these aims, MiCAR imposes several key requirements on issuers, such as:

1. **Authorisation:** Issuers must be authorised as a credit institution or an electronic money institution by a national competent authority (NCA).

2. **White Paper Disclosure:** Stablecoin issuers must submit a white paper to their NCA, detailing key aspects of operations such as governance structures, risk factors, reserve management, and redemption mechanisms.

3. **Reserve Backing:** Stablecoins must be fully backed at a minimum 1:1 ratio by secure, liquid, and low-risk assets. For stablecoins classified as significant[4] at least 60% of reserves must be held as deposits with regulated credit institutions (Katz & Rice, 2024). For smaller issuers, the minimum deposit requirement is 30%, though NCAs can raise this limit to 60%. Remaining reserves may be invested in low-risk, sufficiently liquid assets denominated in the same official currency as the stablecoin. All reserve assets must be clearly segregated from the issuer's other holdings and held with a third-party credit institution or other authorised custodian. The valuation of reserve assets must be conservative.

4. **Prudential Capital Requirements:** Issuers must have own funds equal to an amount of at least the highest of (i) €350,000, (ii) 2 percent of the average amount of the reserve of assets (rising to 3% for significant stablecoins), and (iii) a quarter of the fixed overheads of the preceding year. They must also conduct regular stress tests

[4] An e-money token may be classified as significant based on quantitative and qualitative criteria including a customer base exceeding 10 million, the value of issued tokens or reserve assets exceeding €5 billion, transactions exceeding 2.5 million per day, significant use in cross-border payments, or interconnectedness with the wider financial system. This classification triggers stricter prudential, governance, liquidity, and supervisory requirements.

to assess the adequacy of their reserve assets and ensure they can withstand market shocks.

5. **Redemption Rights:** Issuers are obligated to ensure that stablecoin holders can redeem their tokens for fiat currency at par value at any time, without incurring any costs, other than those strictly necessary to carry out the redemption.

6. **Transaction Caps:** MiCAR imposes a daily volume limit on transactions with non-EU currency-denominated stablecoins, when used as a medium of exchange for goods and services within the EU, capped at 1 million transactions or €200 million in value per day.

Beyond these specific examples, MiCAR also mandates comprehensive frameworks for internal governance, risk management, and operational resilience, all of which are critical to ensuring that stablecoin issuers operate in a manner consistent with the EU's financial stability and sovereignty objectives.

4.1 Stablecoin Impacts on Monetary Sovereignty

At a Glance

Stablecoin impacts on monetary sovereignty vary significantly by type. FIFD and FILD present the most direct challenges, though they too may offer ancillary enhancements. Conversely, well-regulated LILD offer the clearest potential benefits, but their implementation and scale also require careful management to mitigate financial stability risks.

POTENTIAL ENHANCEMENTS	POTENTIAL CHALLENGES
Currency Modernisation: Ensuring the domestic currency remains useful and relevant.	**Monetary Policy Disruption:** Parallel financial systems outside central bank control; bank disintermediation.
Competitive Positioning: Regulated domestic alternatives to counter foreign-issued stablecoins.	**Currency Substitution:** Foreign currencies replacing domestic ones; 'digital dollarisation'.
Leveraging Private Innovation: Benefit from private sector efficiency, networks, and potentially faster adaptation	**Financial Instability:** Run risks; violation of the money singleness principle via a depeg; contagion.
Extend Global Reach/Influence: Potentially enhance the currency's international role and project associated 'soft power'.	**Commercial Bank Disintermediation:** Flight from deposits to stablecoins may constrict credit creation.

Sovereign Debt Demand: Stablecoin reserves create demand for government bonds.	**Conversion Difficulties:** Difficulty integrating with traditional finance and achieving at-par conversion with other forms of money central bank control; bank disintermediation.

Table 1: Potential Enhancements and Challenges of Stablecoins for Monetary Sovereignty
Source: Authors' elaboration

4.1.1 Potential Stablecoin Enhancements to Monetary Sovereignty

Modernising the Domestic Currency

A key potential enhancement to monetary sovereignty comes from leveraging LILD stablecoins to modernise the national currency, ensuring its continued relevance. Historically, the monetary system relied predominantly on central bank-issued cash and commercial bank deposits. The advent of e-money subsequently powered much of the first wave of FinTech innovation, particularly in payments (Adrian & Mancini-Griffoli, 2019). Today, the rise of blockchain technology, asset tokenisation, and decentralised systems presents a new imperative for adaptation. LILD stablecoins offer a crucial pathway for this upgrade by providing a stable, efficient, programmable, and natively digital representation of sovereign fiat, making the official currency functional and attractive within these new domains. This modernisation is vital for enabling participation in emerging and future use cases, such as automated payments, tokenised asset settlement, and DeFi applications (as discussed in Section 3.4.1). While CBDCs and tokenised commercial bank deposits represent important parallel innovations, well-regulated LILD stablecoins offer a potentially faster-to-market, private-sector complement, leveraging different distribution models and feature sets. Ensuring the national currency is 'fit-for-purpose' across various digital formats may be crucial for maintaining its relevance in an evolving landscape.

A Necessary Tool for Competitiveness

Greater utility directly boosts competitiveness by providing a domestic alternative to dominant foreign-denominated stablecoins. By offering a reliable, regulated tokenised form of their local currency, LILDs mitigate currency-substitution risks, especially in stable economies such as Europe. In developed economies with stable currencies, LILDs primarily offer technological advantages and payment efficiency, while in emerging economies with volatile currencies, users may still prefer foreign-denominated stablecoins as inflation hedges, even when LILDs exist (Carter et al., 2024). These context-specific incentives show that LILDs' ability to preserve monetary control varies widely.

Even so, the competitive role of LILD stablecoins is now of critical importance worldwide. They are arguably necessary tools to protect monetary policy effectiveness from foreign stablecoins, as effective countermeasures must operate on the same technological 'playing field'. Waiting for public alternatives such as a CBDC (e.g., the digital euro) risks ceding ground to already-entrenched global stablecoins (see Section 3.4.3). A CBDC may also lack coverage for many use cases where LILDs can compete today. Supporting the development of a domestic LILD ecosystem therefore offers an immediately available tool to defend monetary sovereignty.

Alongside LILDs, jurisdictions receiving large inflows of FIFDs — often those with weaker currencies, significant inbound remittances, or currency instability — may require a strategy to actively manage these flows and convert them into the domestic currency, whether as LILDs or other established forms of domestic currency.

Leveraging Private Innovation under Public Oversight

Well-regulated LILD stablecoins allow the central bank or monetary authority to benefit from private sector innovation, efficiency, and distribution networks, while still maintaining regulatory control (as envisaged under frameworks like MiCAR). Harnessing these private capabilities advances public policy goals: they potentially enable the sovereign currency to evolve more rapidly or with broader reach than alternatives like CBDCs, without shifting the full operational burden to the public sector. The success of this approach, however, hinges on effective regulation that fosters innovation and integrates stablecoins into the broader financial system.

Extending Currency Reach

LILD and FILD stablecoins can broaden domestic currency use on new digital platforms and across borders. For instance, if a Euro-denominated stablecoin gains significant traction for international remittances, trade finance, or within DeFi platforms, it could enhance the Euro's international role and influence. This expanded reach, embedding the currency (and potentially associated regulatory standards) deeper into global digital finance, can be viewed as a form of economic 'soft power,' projecting influence and enhancing the geopolitical standing of the currency's home jurisdiction (Paul & Markova, 2025).

Strengthening Sovereign Debt Markets

Locally denominated stablecoins increase demand for domestic government debt used as backing assets, creating 'a new channel for the national currency to act as a reserve currency in digital form' (OMFIF, 2025). As outlined in Section 3.3, issuers typically hold substantial portions of their reserves in short-term government debt corresponding to the currency peg. Given the scale of the stablecoin market, this can translate into significant demand for such instruments.

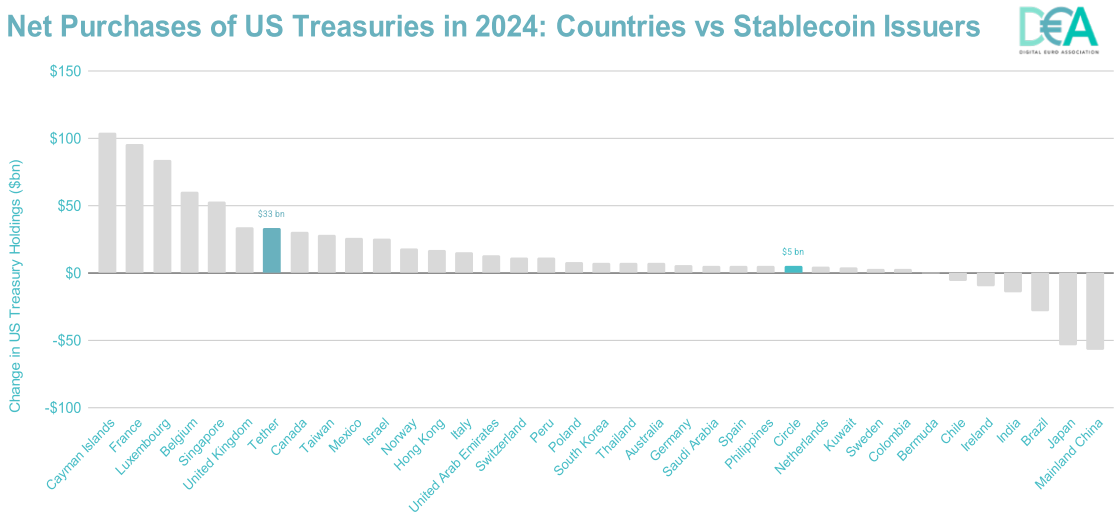

Figure 10. Net Purchases of US Treasuries in 2024: Countries versus Stablecoin Issuers. (2024)
Source: US Department of the Treasury, Paolo Ardoino, Circle; Authors' elaboration.

For example, as seen in Figure 10, Tether (primarily holding USD assets despite its non-US domicile) was reportedly among the largest buyers of US Treasury securities in 2024, with $33.1 billion in purchases exceeding those of major nation-states like Canada (Ardoino, 2025) whilst Circle accounted for nearly $5bn in net purchases (Circle, 2025).

In fact, with an estimated $120bn between them, as illustrated in Figure 11, stablecoin issuers are the 19th largest holder of US treasuries, as measured against nation states (U.S. Department of the Treasury, 2024). This underscores how stablecoins can function as significant buyers of sovereign debt, potentially strengthening the issuing jurisdiction's financial position while also creating new channels for currency internationalisation.

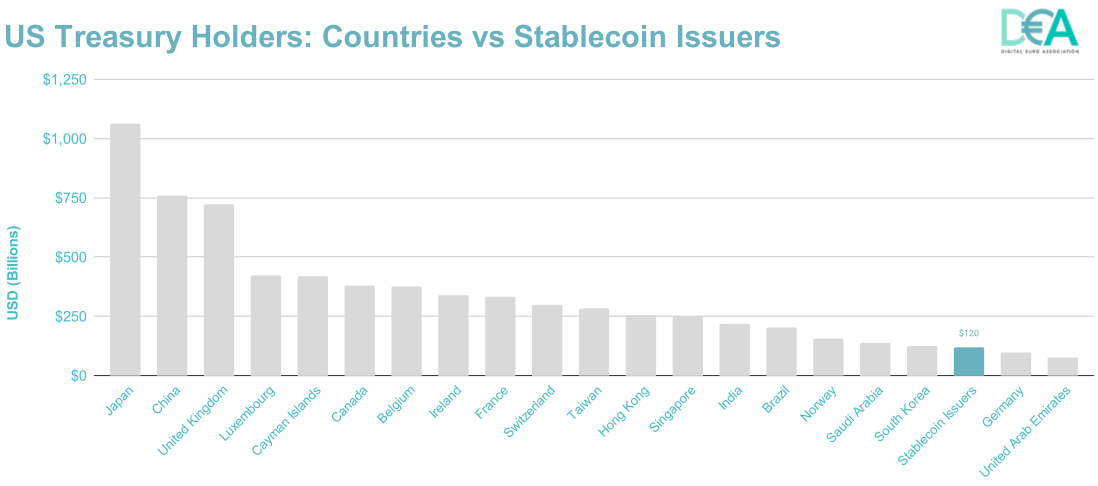

Figure 11. Countries versus Stablecoin Issuers. (2025)
Source: US Department of the Treasury, Authors' elaboration.

When large stablecoin issuers, irrespective of their own jurisdiction, invest heavily in the government debt of the currency they track, they become major external financiers. Therefore, both LILDs and FILDs can directly support government financing and may contribute to lower rates on government debt, particularly for issuers of major reserve currencies.

4.1.2 Potential Stablecoin Challenges to Monetary Sovereignty

Disruption of Monetary Policy Implementation

A frequently cited concern is that stablecoins could disrupt monetary policy implementation (e.g., Arner et al., 2020; ECB, 2022; G7 Working Group, 2019) though the nature and severity of this risk vary significantly based on the stablecoin's specific characteristics and the economic context. These concerns intensified following the 2019 announcement of Facebook's proposed Libra project (see, e.g., Browne, 2019; Chan, 2019), which combined global platform reach with a design pegged to a currency basket instead of a single fiat currency. This model was a direct challenge to monetary sovereignty and was ultimately ceased. Today, the market focus has solidified around single-currency stablecoins.

While concerns over the effect of stablecoins on monetary policy continue to be voiced, without the currency and issuance-jurisdiction classification system introduced in Section 3 of this paper, these analyses may lack precision.

Well-regulated LILD stablecoins function similarly to traditional e-money, which has not been widely recognised as disrupting monetary policy transmission. In fact, an IMF Working Paper found that greater adoption of e-money can enhance monetary policy transmission, particularly in emerging and developing economies. The risk of disruption may be greater in advanced economies such as Europe.

Even FILD stablecoins, due to their reserve asset compositions, are still affected by standard policy tools like interest rate changes. Recent BIS research shows that stablecoin supply tends to decline sharply after U.S. rate hikes, indicating continued sensitivity to central bank levers (Aldasoro et al., 2024).

While well-regulated LILDs and FILDs may remain sensitive to domestic monetary policy levers, a distinct set of challenges arises from two primary sources. Firstly, the widespread adoption of foreign-denominated stablecoins (primarily FIFDs and LIFDs) can significantly impair monetary policy effectiveness by fostering currency substitution; this critical issue is explored in detail in the section under Currency Substitution. Secondly, the increasing use of stablecoins of any denomination within decentralised finance (DeFi) protocols and peer-to-peer transactions presents a cross-jurisdictional challenge, potentially creating parallel financial ecosystems less responsive to traditional monetary policy levers if not appropriately overseen.

Disintermediation of Credit Institutions

Large shifts of funds from commercial bank deposits to stablecoins – including regulated LILDs – could substantially shrink banks' funding base. Such a development could impair the bank lending channel, potentially leading to a contraction in credit availability for the wider economy. This risk is higher for stablecoins linked to foreign currencies (FIFD, LIFD), as they not only divert deposits from credit institutions but potentially channel them out of the domestic currency system altogether, linking directly to currency substitution risks and further impairing monetary policy effectiveness (Bindseil & Pantelopoulos, 2022).

To directly counter incentives for bank disintermediation, MiCAR prohibits the payment of interest to stablecoin holders, in part to make them less attractive as a store of value than interest-generating bank accounts. To manage risks associated with large-scale foreign currency stablecoin use, the regulation imposes quantitative caps on LIFDs, when used as a medium of exchange. These caps aim to prevent such stablecoins from achieving systemic dominance as payment instruments within the EU.

Currency Substitution

Currency substitution – the replacement of domestic currency with foreign alternatives for money's core functions – fundamentally impairs monetary sovereignty and policy efficacy (Calvo & Végh, 1992). Stablecoins, especially easily accessible foreign-denominated variants (FIFD, LIFD), introduce potent new vectors for this phenomenon. Specifically, they bypass traditional barriers: stablecoins require no physical distribution, can often be acquired instantly via digital platforms without a traditional banking relationship, and facilitate low-friction cross-border value transfers outside regulated banking channels. These features can accelerate currency substitution, often beginning with use as a store of value before potentially expanding into a medium of exchange (Levy Yeyati, 2006). While this risk is most acute in economies with histories of instability or less developed financial systems (Edwards,

2021), strategic autonomy concerns arise even in major economies. However, the substitution threat there is considered substantially lower due to factors like strong public trust in the domestic currency and the powerful network effects of established payment systems.

MiCAR includes provisions designed to minimise this currency substitution threat within the EU. A primary tool employed by MiCAR to counter this threat is the quantitative transaction cap placed on non-EU currency stablecoins when used for payments, as detailed previously. This protection is reinforced by MiCAR's authorisation framework, which structurally favours stablecoins denominated in an official EU currency, including the possibility of delisting non-compliant stablecoins from EU crypto-asset service providers (CASPs).

Digital Dollarisation: A Modern Form of Currency Substitution

Beyond the traditional concern of currency substitution where foreign fiat might displace the local currency for everyday transactions like buying groceries, a distinct subset of this phenomenon has already emerged. The growing digital economy – including Decentralised Finance (DeFi), crypto-asset trading, and tokenised real world asset trading – already facilitates a significant volume of daily transactions. However, the currency anchoring these internet-native capital markets is overwhelmingly USD. As seen in Section 3.4.3, over 99% of stablecoins are USD-pegged, making it the de facto unit of account and medium of exchange for these digital markets.

Looking ahead, this trend of digital dollarisation could continue to expand into numerous future digital use cases. These could encompass complex economies emerging within expanded metaverses, transactions carried out by autonomous AI agents, the funding and data exchange in decentralised science (DeSci), automated payments within supply chains, and potentially even mainstream micropayments. This pervasive 'digital dollarisation' means the Euro is currently significantly sidelined in this high-growth technological frontier, weakening its international standing and influence within frontier digital markets. Notably, as many of these emerging verticals fall outside the limits of MiCAR's transaction cap perimeter, there are no limits on the usage of USD-denominated LIFDs by EU residents for these purposes.

Systemic and Financial Stability Risks

Stablecoins may introduce financial stability risks stemming from the possibility of runs if users lose confidence in the issuer's ability to honor redemptions in the primary market or maintain acceptable proximity to the pegged asset's price in secondary markets (BIS, 2021). While robust frameworks like MiCAR mandating universal, no-cost, redemption rights aim to mitigate this risk, runs can still be triggered by various factors, such as perceived weaknesses in reserve assets, remaining liquidity mismatches, operational failures, poor governance, liquidity or duration mismatches between reserve assets and immediate redemption demands, or the failure of a reserve custodian. Furthermore, contagion effects are a concern if stablecoins become deeply interconnected with the traditional financial system or if the failure of one entity erodes trust in others. Managing failures and cross-border resolution also becomes inherently more complex for structures involving foreign issuers or denominations (FILD, FIFD).

Within Europe, potential financial stability impacts may be exacerbated by the high degree of interconnectedness expected between stablecoin issuers and traditional banking. As noted previously, MiCAR requires LILD issuers to hold between 30% and 60% of reserve assets as deposits with credit institutions, albeit with concentration limits on exposures to individual counterparties holding reserve assets, to reduce vulnerability to failures at deposit-holding institutions.

The need for robust counterparty risk management was underscored during the March 2023 U.S. banking turmoil, when a stablecoin temporarily de-pegged to $0.87 after news revealed that 8% of its reserves were held as deposits at the failing Silicon Valley Bank (The Guardian, 2023). This incident shows that failures at banks holding reserve assets can destabilise stablecoins, adding to the better-known risks stablecoins pose to banks. Bank or custodian failures can also trigger self-reinforcing feedback loops. If a bank holding part of a stablecoin's reserves fails, confidence in the coin may crumble, prompting large redemptions, which may lead to contagion, sparking outflows from otherwise sound banks. Applying this understanding to the European context, it has been argued that MiCAR's requirement to hold large portions of reserve balances as bank deposits, even when spread across several institutions, can itself inadvertently create financial-stability risks (Egilsson & Fritsche, 2025). These risks would be amplified for 'significant' stablecoins, that could become systemically important – effectively 'too big to fail, given that financial stability impacts could spread from LILD stablecoins to the wider financial system (much like banks in a financial crisis) or begin in the traditional financial system and spread to stablecoins.

Integration & Conversion Difficulties

The practical realities of how stablecoins function as a digital bearer instrument also introduce challenges to integration with more established financial norms. Unlike traditional forms of money, stablecoins frequently 'trade' on secondary markets, where their prices can deviate from the intended par value. Historically, direct at-par redemption from issuers has often been restricted by factors like $100,000 minimum thresholds (Tether, n.d.) or demanding client onboarding. Regulations such as MiCAR aim to rectify this by mandating direct, no-cost redemption for any holder, irrespective of the amount. However, this user-centric requirement imposes significant operational burdens on issuers; for instance, a basic know-your-customer (KYC) check might cost €2.50 (KYCAID, n.d.), an expense that could surpass the value of small redemption requests.

The operational costs associated with regulatory compliance can lead to the emergence of indirect redemption barriers, even among compliant issuers. These can include processing delays of up to two months or requiring notarised copies of identification (S&P Global, 2023). Consequently, most users bypass the complexities of direct redemption, and 'off-ramp' by selling (rather than redeeming) their stablecoins to third-party intermediaries like exchanges. This alternative involves selling at prevailing market rates, foregoing the guaranteed 1:1 par redemption, and often incurring significant fees for convenience — similar to the trade-off between using a costly 24-hour cheques-cashing service versus depositing a check into a standard bank account. Ultimately, this widespread lack of seamless, direct, and cost-effective convertibility between stablecoins and other forms of money at par poses a significant and inherent risk to the crucial concept of the 'singleness of money,' and may challenge the uniformity and interchangeability that underpins a trusted and stable

monetary system, unless new market structures or technological innovations emerge that can more effectively enable such at-par convertibility for all users (McLaughlin, 2025).

4.2 Stablecoin Impacts on Payments Sovereignty

At a Glance

Stablecoins introduce both significant enhancements and potential challenges to payments sovereignty. Unregulated or foreign-controlled stablecoins operating on global infrastructures can undermine domestic control over payment flows, standards, and strategic autonomy. However, domestically regulated stablecoins (notably LILDs) offer potential avenues to bolster autonomy, resilience, and innovation within the national or regional payments framework.

POTENTIAL ENHANCEMENTS	POTENTIAL CHALLENGES
Network Alternatives: Providing regulated options to counter foreign network dominance.	**Loss of Infrastructure Control:** Bypassing domestic systems via global rails.
Strategic Resilience: Enhancing system robustness via diversification.	**Standard Setting Challenges:** Fragmentation, lack of interoperability.
Domestic Innovation: Facilitating advanced payment services within the EU framework.	**Monitoring & Oversight Gaps:** AML/CFT difficulties, esp. P2P/foreign.
Reduced Intermediary Reliance: Streamlining cross-border flows vs. correspondent banks.	**Strategic Dependencies:** Reliance on foreign tech, networks, providers.

Table 2: Potential Enhancements and Challenges of Stablecoins for Payments Sovereignty
Source: Authors' elaboration

4.2.1 Potential Stablecoin Enhancements to Payments Sovereignty

Providing Alternatives to Existing Payment Methods

A challenge faced by many jurisdictions is the significant market share held by a small number of dominant, often foreign-headquartered, international payment networks, particularly concerning card transactions and mobile wallets (The Paypers, 2025). In Europe, this reliance on non-European payment solutions — including Visa, Mastercard, Apple Pay, and Google Pay — has been explicitly identified as a challenge to the region's strategic autonomy. Such concentration can create strategic dependencies for national economies, potentially limiting consumer and merchant choice while exposing payment flows to decisions made by external corporate entities or the impacts of foreign geopolitics. The

emergence of new payment technologies, including stablecoins, presents a potential opportunity worldwide to diversify the landscape of payment providers and foster greater competition.

MiCAR provides the foundation for domestically regulated stablecoins to emerge and to be fostered as alternatives to preserving payments sovereignty, reducing reliance on non-EU payment providers. For certain use cases (including, and beyond, those listed in Section 3.4.1), this would ensure that a growing segment of digital transactions involving European users remains anchored within the EU's regulatory and supervisory sphere, enhancing strategic autonomy with respect to payment instruments and providers.

Enhancing Strategic Resilience

The ability of a nation's or region's payment system to operate reliably is fundamental to payments sovereignty. Payment systems around the world face a range of risks, including technical failures, cyberattacks, natural disasters, and geopolitical disruptions that could affect critical domestic or cross-border infrastructure. A widely recognised principle for improving resilience is the diversification of payment methods, technologies, and providers, to ensure there are fallback options if one component fails. Stablecoins represent a potential source of such diversification outside traditional banking and card network infrastructures. Although the blockchain networks that support stablecoins may not be domestically governed in the conventional sense, some public blockchains are argued to be more credibly neutral (e.g., Buterin, 2020) or more resistant to censorship by a single entity than centralised systems (Al Shehabi & Ahmad, 2021), offering different or potentially reduced infrastructure risks for payments operations.

Furthermore, resilience may be enhanced by the common practice of major stablecoin issuers deploying their tokens across multiple, separate blockchain networks. This multi-network approach means that disruptions on one blockchain do not necessarily stop all payment activity using that stablecoin, increasing robustness within the stablecoin ecosystem.

Within the EU, MiCAR aims to support these potential diversification benefits in a controlled framework. Although the underlying blockchain infrastructure is global, the regulation of stablecoin issuers and the oversight of payment flows anchor key functions within the EU. However, non-custodial peer-to-peer transactions, especially involving foreign-issued stablecoins, may still fall outside this regulatory perimeter. Nevertheless, for transactions within its scope, MiCAR's framework for stablecoins offers a significant step towards diversifying the payments landscape and bolstering resilience by bringing key oversight to these novel payment instruments.

Facilitating Innovation in Domestic Payment Services

The programmability and digital nature of stablecoins are unlocking new possibilities in payment services, enabling functionalities such as automated conditional payments, cost-effective micropayments, payments supporting the Internet of Things (IoT) ecosystem, autonomous agent-to-agent transactions, and smoother integration with other digital platforms (Bank of England, 2023). These advancements are driving expectations for more sophisticated and efficient payment solutions worldwide. Consequently, jurisdictions face a strategic imperative to ensure their own financial sectors can harness these innovations;

failure to cultivate domestic capacity risks technological lag, increased reliance on foreign technology providers, and a potential diminishing of sovereign influence over the national payments landscape's evolution.

Fostering Europe's own capacity for payment innovation is a strategic priority for the EU. MiCAR enables European firms to build upon regulated stablecoins to develop and deploy advanced payment solutions directly within the Single Market. This allows the European payments ecosystem itself to evolve and incorporate cutting-edge functionalities driven by domestic innovation and tailored to regional needs. It enables vital future payment services to develop within the EU's supervisory reach, preventing reliance on external technology providers or platforms operating outside the established regulatory structure.

Reducing Reliance on Foreign Intermediaries in Cross-Border Transactions

Traditional pathways for international payments often rely on complex correspondent banking relationships, frequently involving multiple intermediary financial institutions to complete a single transaction. This system, while functional, is globally recognised for potential inefficiencies including settlement delays, high transaction costs, and a lack of end-to-end transparency (FSB, 2020). It can also create dependencies on the operational stability, risk management, and jurisdictional policies of these intermediary banks, which may often be located outside the remitting or receiving party's home jurisdiction (CPMI, 2016). Stablecoins present a potential mechanism to streamline these flows and bypass segments of the conventional intermediary chain for certain types of transactions.

For the EU, leveraging regulated stablecoins could offer a means to enhance strategic autonomy in international payments. Under MiCAR, European businesses might utilise regulated stablecoins for faster or more cost-effective payments to external partners, reducing the steps involved compared to some traditional correspondent routes. Similarly, pathways could be developed within the EU for efficiently receiving and converting incoming stablecoins originating from abroad, ensuring these flows are handled securely within the European regulatory perimeter (McLaughlin, 2025). By fostering these more direct channels for international value transfer — whether facilitating outflows via Euro EMTs or managing inflows through supervised entities — the EU can lessen its operational reliance on non-EU intermediary banks that play key roles in traditional correspondent banking. Reducing external dependencies could enhance the EU's control over cross-border payment interfaces and mitigate vulnerabilities associated with foreign intermediaries, thereby contributing positively to payments sovereignty.

4.2.2 Potential Stablecoin Challenges to Payments Sovereignty

Sovereign Control, Network Dependencies, and Strategic Autonomy

A core element of payments sovereignty includes state control over payment infrastructure and economic independence. The adoption of stablecoins, especially non-domestic (FILD, FIFD) or foreign currency-pegged (LIFD) ones, challenges these aspects. These stablecoins often use global, permissionless blockchains as alternative rails, potentially creating peer-to-peer channels that bypass more tightly controlled domestic payment systems. As previously noted, peer-to-peer channels are unlikely to constitute the majority of transaction volume, however their existence may still somewhat dilute national control over payment flows, while their underlying infrastructures may be seen to deepen dependencies on external

technology, corporations, and government policies. Therefore, operational disruptions, cyber incidents, or external policy shifts could significantly impact domestic payments and challenge strategic autonomy if reliance is substantial.

MiCAR addresses these challenges by requiring authorisation for stablecoin issuers and intermediaries in the EU, subjecting them to EU operational and governance rules. This includes stringent issuer requirements for operational resilience, risk management, and potential EU-based reserve custody, giving regulators key oversight of entities interfacing with traditional systems and operating within the EU.

However, this entity-focused approach cannot fully mitigate dependencies or ensure complete control. Firstly, regulated and unregulated stablecoins can operate outside supervised systems (e.g., via P2P transactions), creating residual risks. Secondly, MiCAR does not regulate the underlying global blockchain technology. As these global blockchains are often developed, maintained, and governed predominantly in foreign jurisdictions, a fundamental dependency on this 'outside infrastructure' persists. The EU thus remains susceptible to risks from external technical or policy decisions at the blockchain level, potentially impacting its payment flows even for MiCAR-compliant stablecoins. The digital euro project is partly a strategic response to provide a sovereign-led digital payment alternative, aiming to reduce such technological reliance long-term (see, e.g. Lane, 2025).

Setting Standards and Ensuring Interoperability

Payments sovereignty also involves setting technical and operational standards to ensure efficiency and interoperability within the national payments landscape. For instance, these could include common API specifications for payment initiation or standardised data formats for transaction reporting. The fragmentation of domestic standards across jurisdictions required a significant lift for the creation and implementation of ISO 20022 to harmonize traditional financial messaging. Stablecoins operating on diverse global blockchains often adhere to standards set by international developer communities or the issuing entities themselves (World Economic Forum, 2020) risk creating new silos. Their individual standards may not align with domestic requirements — such as specific needs for integration with national identity schemes or existing real-time gross settlement systems — or easily interoperate with other regulated stablecoins, potentially leading to fragmentation rather than integration. This lack of interoperability, for example, could mean a user cannot seamlessly transfer value from a stablecoin issued by one entity to another, or use it easily with traditional bank accounts, mirroring the challenges faced before initiatives like SEPA unified Euro payments. This can hinder the smooth flow of payments across different systems and complicate regulatory oversight. LILD and LIFD stablecoins, being under domestic purview, may offer a greater chance for alignment with national standards and interoperability goals — such as seamless conversion with other forms of money via the traditional banking sector or ensuring all regulated stablecoins can communicate via a common messaging layer; although, FILD and FIFD coins could also be integrated through international harmonisation, or 'capture' in the domestic system in a manner similar to traditional foreign exchange (McLaughlin, 2025).

MiCAR attempts to create harmonisation within the EU by imposing common operational, governance, and transparency standards on all authorised stablecoin issuers. The European Banking Authority (EBA) is tasked with developing further regulatory technical standards

(RTS), which should promote a degree of issuer-level consistency among regulated stablecoins in the EU (Regulation (EU) 2023/1114). However, MiCAR does not mandate the use of specific blockchain protocols or technical interoperability between different stablecoins or between stablecoins and legacy systems. Therefore, while standardising the conduct and operations of regulated issuers, the risk of technical fragmentation within the payments landscape persists if market forces alone do not drive sufficient interoperability between different regulated offerings.

Strategic Ownership

European payments sovereignty and strategic autonomy also warrant attention in light of the ownership structures shaping the emerging European stablecoin landscape. The issue mirrors wider anxieties about foreign-controlled financial infrastructure: ECB President Christine Lagarde has repeatedly urged Europe to cultivate domestic payment platforms and reduce dependence on non-EU providers such as Visa and Mastercard thereby furthering the Union's "march towards independence". While MiCAR requires that stablecoins be issued through EU-licensed entities, ultimate beneficial ownership — and thus strategic direction — may still rest with parent companies headquartered outside the Union. Should this pattern become widespread, and if coupled with continued under investment by European capital (European Investment Bank, 2021; DigitalEurope, 2024), it could present considerations for the Eurozone 's economic independence, echoing the very concerns already voiced about reliance on external card networks.

4.3 Stablecoin Impacts on Regulatory Sovereignty

At a Glance

Stablecoins present both opportunities to strengthen and significant challenges to a jurisdiction's regulatory sovereignty — its capacity to establish and enforce financial rules. While domestically anchored stablecoins (LILDs, LIFDs) can be brought under frameworks like MiCAR to assert control, the proliferation of foreign-issued or foreign-influenced stablecoins (FILDs, FIFDs) on global networks complicates enforcement, creates risks of regulatory arbitrage, and can expose the jurisdiction to extraterritorial pressures.

POTENTIAL ENHANCEMENTS	POTENTIAL CHALLENGES
Assertion of Sovereign Standards in Digital Finance: Proactive regulation establishes domestic control over new financial technologies.	**Transaction Monitoring & Oversight Difficulties:** Challenges in monitoring P2P transfers and foreign-issued stablecoins, despite MiCAR's intermediary focus.
Enhanced Supervision & Compliance: Blockchain's immutable audit trails and potential for programmable compliance improve oversight and enforcement.	**Regulatory Arbitrage & Market Fragmentation:** Issuers may seek lenient jurisdictions or use DeFi to bypass rules, undermining consistent application of EU standards.

Advanced SupTech/RegTech Capabilities: DLT's data-rich nature enables sophisticated tools for real-time monitoring and risk detection.	**Exposure to Extraterritorial Pressures:** FILD and FIFD Stablecoins linked to foreign entities may subject EU users/systems to external policy objectives and sanctions.

Table 3: Potential Enhancements and Challenges of Stablecoins for Regulatory Sovereignty
Source: Authors' elaboration

In the era of digitalisation, maintaining regulatory sovereignty does not only depend on the ability to regulate domestic institutions and activities, but also cross-border digital instruments that can operate beyond national control.

4.3.1 Potential Stablecoin Enhancements to Regulatory Sovereignty

First Mover Advantages: Shaping Global Norms
Acting as a first mover to establish regulatory frameworks for novel financial instruments like stablecoins can strengthen a jurisdiction's domestic regulatory sovereignty in several key ways. By proactively defining rules and establishing clear oversight mechanisms for emerging technologies, authorities assert their sovereign power to govern financial activities within their borders. This proactive stance ensures regulatory control is maintained rather than ceding ground to unregulated market development or disparate international approaches (Zetzsche et al., 2021).

Successful pioneering regulatory frameworks can establish de facto global standards. The UK's Financial Conduct Authority (FCA) has been recognised for fostering innovation, contributing to the UK's reputation as a global fintech leader and influencing how other regulators approach emerging technologies (Kalifa, 2021). Early leaders in digital currency regulation may gain similar advantages in setting technical standards, establishing network effects, and influencing regulatory norms (Jean-Noel, 2025).

As an early mover in stablecoin regulation, the New York State Department of Financial Services (NYDFS) has set influential precedents. NYDFS began regulating stablecoins in 2018 and formalised its approach in 2022 by issuing comprehensive guidance on reserve backing, redemption rights, and attestation requirements (New York State Department of Financial Services [NYDFS], 2022), creating a de facto global standard (Jean-Noel, 2025). Other major financial centers such as Singapore and Hong Kong have subsequently developed their own frameworks broadly in line with the standards set by NYDFS (Peak, 2025). The influence of NYDFS regulations may have also played a role in shaping proposed US national regulations. The framework in the GENIUS Act aligns closely with existing NYDFS standards (Bastion, 2025), which may in turn influence the UK, which aims to align its forthcoming regulation with the US rather than the EU (Milliken & Reggiori Wilkes, 2025; Reeves, 2025).

As stablecoin adoption grows, consideration of regulations in foreign jurisdictions is becoming increasingly crucial for second-movers, in order to prevent regulatory arbitrage, facilitate cross-border connectivity, and ensure both domestic issuers and the domestic currency remain competitive internationally (Breeden, 2025). This requires careful analysis

and collaboration between foreign jurisdictions and their regulators, meaning late movers may need to sacrifice some sovereign discretion to conform with emerging global norms.

While MiCAR was a first mover in creating a comprehensive package to consolidate crypto-asset and stablecoin oversight, its approach to stablecoins were set later than those of the influential NYDFS model. MiCAR's framework contrasts in numerous ways with approaches taken by other key financial centers. Although it establishes a harmonised framework within the EU, its influence outside the bloc currently appears limited. Concerns have been raised about potential market fragmentation and operational constraints for domestic stablecoin issuers (Egilsson & Fritsche, 2025). Notably, MiCAR is a rare piece of EU financial services regulation that lacks an equivalence regime, which may illustrate that a push for greater internal sovereignty could lead to negative external outcomes, such as reduced global fungibility and competitiveness (Coelho & Ringer, 2024; Wright, 2025). Therefore, while being a first mover in stablecoin regulation represents an opportunity for enhanced sovereignty, being a late mover may somewhat constrain it.

Ultimately, global standards for stablecoins are still taking shape and opportunities remain. This evolving landscape may still present jurisdictions with avenues to both align with international approaches and to strategically enhance their own distinctive regulatory frameworks, improving their competitiveness.

Enhanced Supervision and Compliance

A crucial dimension of regulatory sovereignty is the capacity to effectively enforce financial regulations and monitor transactions to uphold financial integrity. This involves preventing illicit activities, with a key focus on combating money laundering and terrorist financing (AML/CFT) and ensuring compliance with financial sanctions.

As will be further examined in Section 4.4.1, current AML/CFT oversight regulations have at times been described as 'the world's least effective policy experiment' (Pol, 2020). Estimates place annual illicit financial flows at between $800 billion and $2 trillion USD (United Nations Office on Drugs and Crime. (n.d.). Yet despite over $200 billion USD spent globally each year on AML/CFT compliance (Leiden Security & Global Affairs, 2025; Lucinity, 2025), studies show that less than 1% of these funds are intercepted (e.g., Lucinity, 2025; Pol, 2020).

Even when suspicious activity is flagged and reported, authorities often face major challenges in processing and analysing the vast volume of data. These difficulties are compounded by the fragmented nature of reporting systems and the limitations of traditional analytical methods (see e.g., Lucinity, 2024; Leiden Security & Global Affairs, 2025).

While, today, the pseudonymous nature of many blockchain accounts can complicate regulatory tracking (as discussed in the following section), this limitation is far from inherent to the technology. The programmability of stablecoins and smart contracts introduces the potential for 'programmable compliance'. Certain regulatory requirements (e.g., transaction limits, holding restrictions, or automated checks against sanction lists, or pattern matching algorithms to flag illicit activity) could be embedded directly into code (Duffie, Olowookere, & Veneris, 2025), particularly for LILDs and LIFDs issued under specific jurisdictional mandates. While potentially complex to implement, this 'compliance-by-design' could offer

supervisors granular visibility into financial flows, while simultaneously improving end-user privacy through technologies like zero-knowledge proofs or fully homomorphic encryption (HAL Privatbank, 2022). It could automate certain aspects of compliance, support more effective investigations into illicit activity, and strengthen the enforceability of financial rules by providing a clearer, shared ledger of relevant activities.

On-chain activity is inherently transparent, traceable and often machine-readable, creating ideal conditions for more automated, real-time regulatory oversight. Regulatory technology (RegTech) solutions, for example, can support the implementation of MiCAR by enabling crypto and stablecoin issuers to comply more efficiently with obligations around automated reporting, KYC/AML checks, and live risk monitoring (Circle, 2024). At the same time, supervisory technology (SupTech) can empower regulators with advanced data analytics, blockchain tracing tools, and AI-driven alerts. The Financial Stability Board (FSB) has acknowledged the potential of SupTech and RegTech to enhance regulatory and supervisory capabilities in the context of stablecoins (FSB, 2022). These capabilities are especially critical in decentralised or transnational environments, where traditional supervisory models and tools reach their limits of effective visibility and control.

4.3.2 Potential Stablecoin Challenges to Regulatory Sovereignty

Transaction Monitoring and Oversight

Despite the potential for stablecoin technology to enhance supervisory capabilities, as highlighted in the preceding analysis, the practical implementation of effective transaction monitoring for certain types of stablecoin activity encounters significant operational hurdles. Stablecoin transactions via regulated intermediaries can largely align with existing oversight mechanisms; however, P2P transfers on public blockchains present distinct challenges to monitoring and regulatory enforcement compared to traditional, account-based systems (FATF, 2020). Linking transactions to real-world identities can be difficult, even though they are often transparent on the ledger. This challenge is amplified for stablecoins issued or managed from abroad (FILD, FIFD), where the primary entity responsible for implementing controls is outside the direct supervisory reach of domestic authorities. Locally issued stablecoins (LILD, LIFD) provide a clearer domestic anchor for regulatory supervision of the issuer's AML/CFT processes.

Within the EU, MiCAR significantly strengthens oversight by requiring all authorised stablecoin issuers and related CASPs to comply fully with the EU's Anti-Money Laundering Directives (AMLD) and the Transfer of Funds Regulation (TFR), which includes the 'travel rule' for crypto transactions (European Parliament & Council, 2023a, 2023b). This mandates robust KYC procedures and transaction monitoring by the regulated entities that act as gateways (on/off ramps, custodians) between the stablecoin ecosystem and the traditional financial system. While monitoring purely peer-to-peer transactions on the blockchain remains inherently complex, MiCAR focuses on regulating the intermediaries, thereby enhancing the authorities' ability to monitor and control flows entering and exiting the regulated financial sphere within the EU. Furthermore, while the effectiveness of conventional AML/CFT measures is already highly debated (see, e.g. Pol, 2020), the architecture of shared blockchain ledgers holds significant future potential to overcome the limitations of today’s frameworks.

Regulatory Arbitrage and Market Fragmentation

Stablecoins pose a fundamental challenge to regulatory sovereignty by decoupling financial infrastructure from territorial jurisdiction. Operating on global blockchain networks, stablecoins exemplify the difficulty of applying geographically bound regulation to borderless financial instruments (Asscheman, 2023). This undermines a jurisdiction's ability to ensure that financial rules and monetary policy apply consistently across its internal market, as stablecoins have the 'real potential to heavily disrupt the current ways value is stored and exchanged on a global scale' (A&O Shearman, 2023).

The lack of globally harmonised standards allows stablecoin issuers to engage in regulatory arbitrage, choosing jurisdictions with more permissive rules. Even within MiCAR's framework, foreign-issued (FILD,FIFD) stablecoins can attempt to bypass restrictions through complex issuance structures or through DeFi platforms which currently fall outside the regulatory scope. Absent explicit rules for DeFi, the potential for regulatory arbitrage grows, as actors may shift toward pseudo-decentralised structures to avoid oversight.

Exposure to Extraterritorial Pressures

MiCAR requires stablecoin issuers to establish an EU-based entity, yet this does not preclude stablecoins issued by entities headquartered outside the EU to be affected by foreign jurisdictional control. While issuers are placed under European supervision for local operations, key decisions and compliance practices may still follow the parent company's legal obligations and strategic direction. This introduces the risk of extraterritorial measures, such as sanctions, being applied to EU users.

If widely used in Europe, stablecoins tied to foreign jurisdictions could become channels for similar pressures, particularly if foreign authorities demand issuer compliance with external policy objectives. This weakens regulatory sovereignty and highlights the strategic importance of fostering robust EU-based alternatives – particularly euro stablecoins. MiCAR offers a regulatory framework, but true sovereignty also depends on the availability and uptake of domestically anchored digital instruments that align with European monetary, legal and policy objectives (Clifford Chance, 2024). Supporting the growth of compliant, euro-backed stablecoins offers a way to reinforce autonomy, reduce dependence on foreign stablecoin infrastructures, and ensure that digital payment systems evolve within the EU's regulatory orbit. One significant policy question is whether MiCAR 'will lead to market fragmentation and encourage stablecoin issuers to operate outside of the Union' (Ashurst, 2024). A second question, as previously noted, is whether it will become necessary for Europe to update its stablecoin regulation to remain integrated, and competitive, with international developments.

4.4 Stablecoin Impacts on Digital Sovereignty

At a Glance

Stablecoins significantly impact digital sovereignty, primarily by increasing reliance on global digital infrastructure — such as non-EU cloud services and external technical standards — which can create dependencies and cybersecurity vulnerabilities. This also introduces complex data governance challenges, particularly with EU principles like GDPR. Conversely, frameworks like MiCAR aim to foster domestic stablecoin capacity (LILDs) to mitigate these

risks, while the inherent transparency of blockchain technology offers potential for enhanced supervisory insight.

POTENTIAL ENHANCEMENTS	POTENTIAL CHALLENGES
Improved Supervisory Insight: Potential for SupTech/RegTech via blockchain data transparency	**Infrastructure Dependence:** Reliance on non-domestic blockchain networks, cloud providers, and technical standards.
Fostering Domestic Capacity: MiCAR encourages EU-based stablecoin initiatives (banks, fintechs), reducing reliance on foreign entities	**Data Governance Conflicts:** Tension between blockchain data (immutability, transparency, pseudonymity) and GDPR principles (e.g., right to erasure)
Increased Infrastructure Optionality: Strategic consideration of leveraging credibly neutral global platforms alongside domestic development	**Cybersecurity Vulnerabilities:** Exposure to global threats targeting underlying infrastructure potentially outside regulatory reach

Table 4: Potential Enhancements and Risks of Stablecoins for Digital Sovereignty
Source: Authors' elaboration

4.4.1 Potential Stablecoin Enhancements to Digital Sovereignty

Improved Data Flow Oversight

A primary challenge within existing anti-money laundering (AML) frameworks stems from the nature and structure of financial data. Traditional systems often operate with significant data fragmentation, where crucial information is siloed within specific institutions or even departments (Fenergo, 2024; Lucinity, 2024). Financial institutions typically possess only a partial view of transaction chains, particularly those involving multiple intermediaries or crossing jurisdictional borders (FATF, 2022). Integrating data from disparate legacy systems can be difficult, hindering a holistic view of customer activity and making it challenging to trace complex illicit financial flows that exploit these information gaps (Alloy, n.d.; Tookitaki, 2025).

These data limitations directly impact the effectiveness of financial crime detection. The siloed nature of information makes identifying sophisticated, multi-stage money laundering schemes exceptionally difficult, as no single institution may see the complete pattern. This contributes to the widely cited ineffectiveness of the current AML regime, as discussed in Section 4.3.1.

In contrast to these traditional data limitations, the data generated by stablecoin transactions on many public blockchains (drawing on the characteristics of traceability and immutability detailed in our discussion on Enhanced Supervision and Compliance) offers inherent advantages for comprehensive oversight (OSL, 2025; J. Ecohumanism, 2024). The nature of this data can directly address the fragmentation and opacity issues previously outlined, providing a more unified and transparent view of financial flows. This enhanced data environment, as noted in its potential to empower SupTech and RegTech (see section on

Enhanced Supervision and Compliance), is conducive to more effective applications enabling advanced analytics for real-time risk assessment and the detection of illicit patterns across networks (ADGM, 2025; Cambridge Centre for Alternative Finance, 2024); Banco de España, 2025). While regulatory frameworks like MiCAR provide essential supervisory anchors for intermediaries (as detailed previously under Transaction Monitoring and Oversight) and the challenge of linking pseudonymous on-chain activity to verified identities persists, the fundamental improvement in data accessibility for flow analysis remains significant By leveraging these richer data streams and the regulatory hooks provided by frameworks like MiCAR, authorities can develop more powerful analytical capabilities. This strengthens the capacity for effective oversight within the digital financial ecosystem, thereby bolstering regulatory and digital sovereignty. Fully realising these benefits, however, necessitates significant investment in technological infrastructure, analytical expertise, and continued attention to balancing oversight with data privacy principles.

Fostering Domestic Technological Capacity and Ecosystem

A key aspect of increasing digital sovereignty involves actively cultivating a domestic technological ecosystem capable of providing critical financial infrastructure and services. MiCAR serves as a strategic tool in this regard. By providing unified legal clarity across the EU earlier than other major jurisdictions like the United States – MiCAR is intended to encourage the development and adoption of digital services, including stablecoins, from within the Union. This regulatory environment facilitates institutional participation, enabling established European financial players and innovative fintech firms alike to develop and offer compliant stablecoins anchored within the EU regulatory perimeter. Notable examples include launched euro-denominated stablecoins from entities such as Société Générale (EURCV) and Banking Circle (EURI), alongside reported plans from others like BBVA and ING (Fortune, 2024; PYMNTS, 2025). The emergence and growth of these European private initiatives, operating under harmonised EU rules and supervision, directly contribute to building domestic capacity. This reduces strategic dependencies on non-EU enterprises and platforms, thereby strengthening Europe's digital sovereignty and competitiveness in the evolving global financial landscape.

Increased Optionality Through Credibly Neutral Infrastructure

Another perspective concerns the nature of the underlying infrastructure itself. Some public blockchain protocols are designed with the aspiration of achieving 'credible neutrality' – that is, operating as platforms whose rules are applied fairly and predictably, without discriminating for or against specific users based on their identity, according to the system's transparent design (Buterin, 2020). While achieving perfect neutrality is complex and debated, infrastructure that demonstrably resists arbitrary control or censorship by any single entity might offer certain advantages from a digital sovereignty perspective, when considered on a spectrum.

It could be argued that, from a European perspective, relying on relatively neutral global infrastructure offers certain advantages over dependence on digital systems directly controlled by a single foreign actor. Such neutrality could potentially reduce strategic vulnerability by limiting the risk of unilateral interference, censorship, or disruption by a specific foreign power or dominant corporation. This approach, however, remains distinct from the level of direct oversight and alignment with national priorities afforded by domestically developed and controlled infrastructure. Yet, solely domestic systems might

face their own limitations; for instance, achieving the broad, international network effects necessary to project the currency's global influence could be more challenging compared to leveraging established or open global networks. Therefore, determining the optimal path requires a careful balancing act, weighing the relative benefits and drawbacks of different infrastructure models against specific strategic priorities for financial sovereignty. Assessing the genuine neutrality of any global platform also requires ongoing scrutiny. These approaches – leveraging neutral global infrastructure and developing domestic capabilities – are not necessarily mutually exclusive. Utilising credibly neutral platforms where advantageous could serve as a valuable strategic option alongside domestic initiatives in the pursuit of overall financial sovereignty.

On the domestic front of this strategy, the digital euro project serves as a prime example of an initiative aimed at maximising sovereign control. However, achieving comprehensive digital sovereignty may require an even broader strategy. Concepts such as the 'EuroStack' (Bria & Sheikh, 2025) advocate for such a holistic approach, envisioning the development of sovereign European capabilities across foundational technological layers – including cloud infrastructure, data platforms, communication networks, and potentially blockchain networks themselves – to mitigate critical dependencies. This vision for enhanced domestic capacity would not necessarily preclude interaction with credibly neutral global platforms; on the contrary, a robust EuroStack could strengthen Europe's position when engaging with such systems. For instance, it could enable significant infrastructure, such as nodes for these global networks, to be hosted within secure, EU-regulated data centers, potentially increasing resilience and European influence over platforms operating within its digital space.

Increased Resilience

While the globally distributed nature of blockchain networks can contribute to a more diverse attack surface, this same distributed architecture is also a key source of fundamental resilience advantages (see Section 4.2.1). Blockchain technology, as a cryptographic-based distributed ledger, inherently enables trusted transactions among untrusted participants, a characteristic that underpins its resilience (Al-Megren et al., 2018). Furthermore, a comprehensive review of blockchain in cybersecurity highlights that its benefits in addressing security issues stem from features such as an 'immutable ledger, distributed architecture, consensus processes... and transparency,' which collectively enhance cybersecurity resilience (Prashanth et al., 2024). The tamper-evident nature and consensus mechanisms make unauthorised manipulations difficult and detectable. When properly implemented, stablecoins operating on mature blockchain networks may actually enhance overall financial system resilience by providing alternative, technically robust payment rails that continue functioning even when traditional centralised infrastructure faces disruption.

4.4.2 Potential Stablecoin Challenges to European Digital Sovereignty

Infrastructure and Technological Dependence

Digital sovereignty challenges arise when stablecoin ecosystems rely heavily on core digital infrastructure controlled by external entities. Stablecoin ecosystems, apart from the blockchain protocols themselves, rely on critical supporting digital infrastructure. This

reliance extends to major cloud service providers used for hosting nodes and issuer operations, which are frequently dominated by large, often foreign-headquartered technology companies. For the European Union, these dependencies manifest as a strategic vulnerability, raising significant concerns about operational resilience and data residency linked to the use of non-EU controlled infrastructure (Adachi et al., 2021).

MiCAR's oversight primarily targets the service layer of stablecoin operations. Consequently, even EU-authorised issuers (LILDs and LIFDs) face ongoing dependencies on critical external elements. For instance, they rely on foundational technical standards, such as global blockchain protocols, which are often developed and governed wholly, or at least partly, outside direct EU influence. Furthermore, their operations frequently depend on non-EU cloud providers. These combined dependencies constrain Europe's long-term technological autonomy (Hansen, 2023).

Data Governance Challenges

The use of public, permissionless blockchains for stablecoin transactions presents inherent challenges for data governance frameworks (Finck, 2018; Zetzsche et al., 2019). Blockchain immutability conflicts with rights to data deletion, such as the GDPR's 'right to erasure'. The decentralised network structure complicates identifying legally responsible entities (e.g., a 'data controller' under GDPR) and adhering to rules on international data transfers.

Furthermore, while transaction data on blockchains is often pseudonymous, it can potentially be linked back to individuals. On many public blockchains, this pseudonymity combines with ledger transparency, allowing participants transacting with an address to potentially view its entire history. Moreover, the analysis of this publicly available transaction data could potentially yield economic insights benefiting external entities, particularly those controlling key infrastructure components (Zetzsche et al., 2020).

Specific interpretations from the European Data Protection Board (EDPB) highlight additional challenges. The EDPB considers even encrypted data subject to GDPR, meaning encrypting potentially identifying on-chain data (e.g., wallet addresses) may not resolve underlying compliance issues. Furthermore, the EDPB underscores the difficulty of the 'right to erasure,' stating that inadequate design for this right might necessitate deleting the entire blockchain for compliance (EDPB, 2025). This EDPB stance persists despite its acknowledgment that technical impossibility does not justify non-compliance, and the reality that deleting widely-used public blockchains is generally infeasible and contradicts their core design.

This creates a critical tension between data protection law and the operational realities of many blockchain implementations. While MiCAR strengthens oversight of off-chain data (like customer verification details) held by EU-based issuers, the effective governance of potentially personal transaction data recorded on-chain remains difficult. These unresolved on-chain issues limit the application of EU data protection principles and challenge European data sovereignty. Addressing these challenges highlights the importance of emerging solutions. New token standards (e.g., Solana's extensions, Avalanche's eERC standard) aim to enhance confidentiality and support regulatory compliance, often using advanced cryptography like zero-knowledge proofs and fully homomorphic encryption (Ava Labs, 2024; Solana, n.d.). The successful development and adoption of such technologies

may be crucial for enabling stablecoins to scale responsibly while handling sensitive financial data.

Cybersecurity and Resilience

While decentralisation can offer certain types of resilience against single points of failure, the globally distributed nature of blockchain networks creates a vast attack surface. The permissionless characteristic of many public blockchains can exacerbate this, lowering barriers for malicious actors to interact with the network, deploy potentially harmful smart contracts, or attempt exploits at scale. Malicious actors, including state-sponsored groups like North Korea's Lazarus Group (known for large-scale crypto heists), can target systems globally and operate across borders by leveraging international infrastructure. Coordinating incident response or enforcing cybersecurity standards across such globally dispersed infrastructure and diverse actors presents inherent complexities for national authorities. Ensuring the resilience of financial services reliant on these networks against disruptions – whether technical, operational, or geopolitical – becomes a significant national concern impacting digital sovereignty.

For the European Union, regulations like MiCAR and the Digital Operational Resilience Act (DORA) impose significant cybersecurity and resilience requirements on authorised stablecoin issuers and related CASPs. However, consistent with the broader challenge of overseeing underlying global infrastructure (discussed in Sections 4.2.2 and 4.4.2), the EU's direct regulatory authority does not fully extend to the cybersecurity and operational resilience of the foundational blockchain networks themselves, particularly those involving non-EU actors. Protecting EU users and financial stability therefore depends on both the robustness of regulated entities and the resilience of these networks, presenting an ongoing challenge for European digital sovereignty (ENISA, 2022; European Systemic Risk Board, 2022).

Considerations for Policymakers

DIGITAL EURO ASSOCIATION

The Role of Stablecoins
in Financial Sovereignty

5. Considerations for Policymakers

European policymakers stand at a crucial juncture, grappling with a core strategic dilemma: should the paramount objective for euro stablecoins be widespread global adoption and competitiveness, potentially vying with established international digital currencies, or should the emphasis be on ensuring robust domestic control and financial stability, even if this tempers their international footprint? The answer to what constitutes 'success' — be it significant global market share and local innovation or fortified European digital resilience — and the potential consequences if euro stablecoins remain marginal internationally, will fundamentally shape the ensuing policy choices.

The preceding analysis demonstrates that stablecoins exert a multifaceted influence across all four dimensions of financial sovereignty – Monetary, Payments, Regulatory, and Digital. Their impact is not monolithic; rather, it presents a complex interplay of potential challenges and enhancements, the balance of which is heavily contingent on the specific type of stablecoin, the robustness of the regulatory framework, and the strategic posture adopted by policymakers.

Key challenges consistently emerge, particularly concerning stablecoins issued or denominated outside the reference jurisdiction (FIFD, FILD, LIFD). These include the erosion of monetary policy effectiveness through currency substitution and potential 'digital dollarisation,' threats to financial stability stemming from run risks and contagion, the circumvention of domestic payment systems leading to diminished control over financial flows, challenges in applying national regulations and enforcing oversight across borders, and strategic dependencies on foreign-controlled digital infrastructure and data governance regimes. These challenges underscore the potential for stablecoins, if left unmanaged, to undermine a state's effective control over its financial and digital domains.

Conversely, stablecoins, especially well-regulated LILD variants operating within frameworks like MiCAR, offer tangible opportunities to bolster financial sovereignty. They can serve as vehicles for modernising the domestic currency for digital ecosystems, enhancing the efficiency and reach of payment systems, fostering domestic innovation under regulatory oversight, exerting competitive pressure on potentially less efficient incumbents, and even indirectly supporting sovereign debt markets through reserve holdings. By providing regulated, functional domestic digital currency options, LILDs can act as a crucial counterweight to the encroachment of foreign alternatives.

This complex picture illustrates that stablecoins cannot be simplistically labelled as either a net benefit or a net detriment to financial sovereignty. Their ultimate effect depends on deliberate policy choices. Inaction or inadequate regulation risks ceding ground to potentially destabilising foreign influences and technological dependencies. Conversely, a proactive, well-calibrated strategy – encompassing robust regulation, active cultivation of domestic options, and strategic engagement with underlying technologies – offers a pathway to harness stablecoin innovation in support of jurisdictional strategic objectives.

This section outlines key considerations for European policymakers, moving logically from optimising the existing regulatory framework (MiCAR) towards proactively cultivating a thriving domestic stablecoin ecosystem and strategically engaging with the underlying

technological infrastructure. The ultimate aim is to forge a coherent strategy that ensures Europe not only adapts to but actively shapes the future of digital finance, reinforcing its sovereignty in the process.

Recognising that the fundamental tensions between stablecoin innovation and national financial control are not unique to Europe, these insights, while focused on the EU context, offer valuable perspectives and potential frameworks for policymakers in other jurisdictions facing similar questions.

5.1 Optimising the Regulatory Framework: Balancing Stability, Innovation, and Competitiveness

MiCAR is a landmark achievement, establishing the EU as a global frontrunner in providing comprehensive legal clarity and a harmonised regulatory framework for crypto-assets, including stablecoins. This foundation is crucial for building consumer trust, mitigating systemic risks, and facilitating engagement from traditional financial institutions.

However, to ensure MiCAR fully achieves its objectives without inadvertently hindering European innovation or competitiveness, ongoing monitoring and potential future refinement are essential. The focus should be on maintaining a pro-innovation stance alongside robust stability mandates. Key areas for consideration include:

Ensuring Global Competitiveness and Alignment
The digital asset space is global and evolves rapidly. It is vital to continuously benchmark MiCAR against emerging regulatory regimes in key international hubs (e.g., U.S., UK, Singapore, UAE). This ensures that European rules remain effective but do not place EU-domiciled issuers at a significant disadvantage compared to competitors operating under potentially more permissive or tailored frameworks, which could risk pushing innovation and liquidity offshore. Specific provisions warrant careful, evidence-based review as the market matures to assess their real-world impact on competitiveness and the potential for unintended consequences. Key areas requiring ongoing consideration include the level of capital requirements, the overall composition and custody requirements for reserves, and the transaction caps on LIFD stablecoins. Specifically, regarding reserve composition, the mandate for 30% to 60% of reserves to be held as deposits with credit institutions is a key point. This specific mandate should be evaluated for potential financial stability implications (as discussed in Section 4.1.2) as well as potential negative impacts on issuer profitability and competitiveness, given that such deposits may offer lower yields than other permissible forms of HQLA. Such reviews should carefully evaluate effects on competitiveness and the risk of driving activity outside the EU's regulatory perimeter.

Maintaining Regulatory Agility and Clarity
While MiCAR provides a comprehensive framework, the rapid pace of technological change necessitates agile regulatory responses. Policymakers should ensure supervisory bodies (like the EBA and NCAs) have the resources and mandate to provide timely guidance and clarifications as new business models and technologies emerge within the scope of MiCAR. Consideration should also be given to the optimal pathways for future regulatory updates.

MiCAR's comprehensive structure, integrating rules for stablecoin issuance and market services within a single framework, differs from the separated approach often seen in traditional finance (e.g., Electronic Money Directive (EMD) for e-money, Markets in Financial Instruments Directive (MiFID) for markets). While comprehensive reviews of MiCAR will be necessary, relying solely on such potentially lengthy processes might pose challenges for timely adaptation in fast-moving areas like stablecoins. Therefore, exploring mechanisms for more targeted updates or enhanced supervisory guidance specifically focused on stablecoins, perhaps drawing inspiration from focused directives for payments (PSD) and e-money (EMD), could be a valuable consideration for maintaining framework responsiveness and facilitating international alignment. Clear and consistent communication from regulators remains paramount to reduce uncertainty for market participants.

Applying Proportionality and Striking the Right Balance

Ensuring that the application of MiCAR rules, particularly concerning operational burdens and capital requirements, remains proportional to the scale, risk profile, and systemic importance of different stablecoin arrangements and issuers is crucial. This helps avoid stifling smaller innovators while maintaining robust oversight of larger players and is fundamental to the core challenge of striking the right dynamic equilibrium. Regulation must safeguard consumers, ensure financial stability, and uphold monetary sovereignty, while simultaneously enabling a dynamic, innovative, and globally competitive European digital finance sector to flourish.

5.2 Proactively Cultivating a Vibrant Euro Stablecoin Ecosystem

Regulation, while necessary, is insufficient on its own to secure Europe's objectives related to financial sovereignty. Developing a cohesive strategy for digital forms of the euro should arguably be viewed as a core European strategic interest, comparable in importance to domains such as energy security, given the potential impact of digital assets on international statecraft (Massad, 2024). Such a strategy must consider the evolving landscape of digital money, encompassing various forms including a digital euro CBDC, tokenised commercial bank money, and privately issued stablecoins regulated under MiCAR. As established in Section 4, LILD stablecoins can play a valuable role within this future ecosystem. Therefore, a proactive European approach requires moving beyond merely mitigating the challenges associated with stablecoins to actively and strategically fostering the development, adoption, and utility of MiCAR-compliant, euro-denominated variants, particularly given their currently small market share compared to USD counterparts. Key elements of such a cultivation strategy include:

Supporting Private Sector Innovation as a Complement to Public Initiatives

Policymakers should clearly signal that privately-issued, MiCAR-compliant stablecoins are viewed as a vital and legitimate component of the future European payments landscape, complementary to public initiatives like the digital euro. Given the likely multi-year timeline for the digital euro's potential launch, supporting regulated private stablecoins in the immediate-term would be prudent. It leverages private sector agility, capital, and innovation to address immediate market needs, helps counter the rapid entrenchment of foreign-issued stablecoins, and strengthens European strategic autonomy in the digital payments sphere

in the crucial near-to-medium term. Clear communication, a supportive supervisory stance towards compliant innovation, and avoiding policy signals that unduly favour one model over the other are key.

Beyond fostering private sector innovation and exploring central bank digital currencies, some governmental entities are now taking a more direct role by initiating their own stablecoin projects:

Government-Led Stablecoin Initiatives

While stablecoins as typically defined as privately issued liabilities distinct from central bank money, the digital currency landscape is evolving. Alongside extensive global research into CBDCs, a different, though currently niche, category of government-led stablecoin initiatives is emerging. These projects represent early-stage, sometimes experimental efforts where governmental bodies sponsor or directly issue stablecoins, thus diverging from the private issuance model previously outlined.

Governments might pursue such initiatives instead of, or in parallel with, CBDC development for several potential reasons. This approach may be perceived as faster or less complex to implement, particularly if leveraging existing public blockchain infrastructure or forming partnerships with established private sector technology providers. It may allow for targeted experimentation on specific use cases (like improving cross-border remittances or generating specific revenues) with potentially less systemic risk and upfront investment compared to launching a full-scale CBDC. Furthermore, it enables exploration of digital currency benefits while potentially keeping the direct liability off the central bank's balance sheet and navigating different institutional or political landscapes. These government-involved stablecoins, therefore, occupy a unique space – distinct from both purely private stablecoins and central bank-issued digital currencies. Three notable examples illustrate this trend:

- **Wyoming Stable Token (WYST):** Currently in testing across seven blockchains with launch expected July 2025, this state-issued stablecoin is backed by U.S. Treasury securities at 102% overcollateralization. Interest generated from reserves will fund Wyoming's education system, creating a novel revenue stream while reinforcing dollar hegemony in digital markets (Wyoming Stable Token Commission, 2025).
- **Palau Stablecoin (PSC):** Developed with Ripple on the XRP Ledger, this initiative aims to reduce transaction costs and enhance financial inclusion for Palau's citizens. Unlike a CBDC, PSC operates on a public blockchain while maintaining government oversight through Palau's Ministry of Finance, demonstrating how smaller nations can leverage digital currencies to strengthen financial sovereignty (Ministry of Finance, Republic of Palau, 2024).
- **Abu Dhabi Dirham Stablecoin Initiative (UAE):** A Dirham-backed stablecoin is being launched by a consortium of government-affiliated entities — First Abu Dhabi BankFAB), sovereign-wealth fund ADQ, and state-linked conglomerate IHC — with FAB as the intended issuer. This initiative, driven by strategically significant state-affiliated entities and subject to full Central Bank of the UAE (CBUAE) regulatory approval, is designed to support the nation's digital economy strategy by providing a secure, efficient, and compliant digital payment instrument under direct central bank oversight, aligning with the UAE Digital Government Strategy 2025.

Fostering Adoption Beyond Crypto

While initial adoption may focus on crypto markets and related activities, unlocking the true potential lies in integrating euro stablecoins into the broader economy. Strategies might target use cases where stablecoins could offer advantages, such as more efficient cross-border remittances, streamlined B2B payments, or innovative trade finance solutions. Aligning support for these strategies with relevant policy roadmaps and offering clear political signals could help reduce market uncertainty and facilitate integration. Furthermore, fostering adoption could include proactive approaches, such as pilot projects, perhaps supported by targeted initiatives or public-private partnerships. Efforts to improve user-friendly interfaces and promote awareness among businesses and consumers are also valuable areas requiring policy attention. For key cross-border applications, exploring specific avenues for international cooperation may also prove beneficial for LILD adoption and strategic relevance.

Leveraging Strategic Use Cases for the Euro Remittances: Supporting the use of euro stablecoins for remittances offers a tangible way to reduce costs for users (potentially from average costs of 6% via traditional means to significantly lower percentages via stablecoins), enhance the euro's global reach and utility, exert soft power, and provide a competitive alternative to the dollar's dominance in this growing market (€63 billion sent annually from the EU). Targeted support, clear regulatory guidance for remittance providers using stablecoins, or public-private partnerships in this area could yield significant returns in terms of both economic efficiency and strategic influence.

Trade Finance & B2B Payments: Facilitating the use of euro stablecoins can enhance the efficiency and competitiveness of European businesses engaged in international trade by reducing friction, costs, and settlement times associated with cross-border transactions. Promoting standards and platforms that utilise regulated euro stablecoins for these purposes can strengthen the Eurozone's position in global commerce.

Enabling Complementary Infrastructure

The success of euro stablecoins will also depend on the surrounding ecosystem. Initiatives like the European Digital Identity Wallet (EUDI) could serve as powerful catalysts if designed to seamlessly integrate regulated stablecoins, providing users with secure and convenient access to hold and transact with digital euros. Ensuring interoperability between different regulated stablecoins and with existing payment infrastructures like Single Euro Payments Area (SEPA) and TARGET Instant Payment Settlement (TIPS) will also be vital for widespread adoption and avoiding fragmentation.

Reconsidering Incentives: The Strategic Case for Interest-Bearing Euro Stablecoins

The current prohibition of interest payments on stablecoins under MiCAR, while understandable from the perspective of preventing regulatory arbitrage with bank deposits and managing disintermediation risks, may warrant careful policy reconsideration based on strategic grounds.

Addressing the Concerns: The primary concerns – potential bank disintermediation and maintaining a clear distinction between payment instruments and investment products – are

valid but potentially manageable. Disintermediation risk could be mitigated through tailored prudential requirements (potentially distinct from non-interest-bearing EMTs), clear disclosure rules emphasising the nature of the instrument, and potentially concentration limits if deemed necessary. Furthermore, the reality is that unregulated, often opaque, offshore stablecoin yield products already exist and attract European users, posing greater challenges than a well-regulated domestic alternative. Offering a regulated, transparent interest-bearing option within the EU framework could channel activity away from these riskier avenues into the supervised space. It is also pertinent to consider the proposed holding limits of the digital euro which were introduced to mitigate concerns about large-scale deposit outflows from commercial banks, amongst others. Suggesting mechanisms to manage such risks could be similarly implemented for interest bearing stablecoins.

Strategic Advantages: Allowing regulated, interest-bearing euro stablecoins could offer substantial strategic advantages for Europe, particularly if other major jurisdictions maintain prohibitions:

- **Enhanced Global Attractiveness:** It could significantly increase the appeal of holding euros in digital form globally, boosting demand for the currency beyond immediate transactional needs.
- **Competitive Differentiation:** It could create a powerful competitive advantage for the EU's digital finance sector, attracting international capital and innovation focused on the euro, beyond other regimes that ban remuneration.
- **Support for Euro Debt Markets:** Issuers of interest-bearing stablecoins would likely hold significant reserves in high-quality, euro-denominated assets, including sovereign debt, potentially increasing demand and deepening liquidity in these markets, thus indirectly supporting member state financing.
- **Complementarity with digital euro:** Such instruments could productively coexist with a potential non-remunerated digital euro. The digital euro could serve core public policy goals related to universal access and basic payments, while regulated, interest-bearing stablecoins cater to different market segments seeking a secure digital store of value with a yield, leveraging private sector innovation within a robust public oversight framework.

Recommendation for Study

Given the potential strategic benefits weighed against the acknowledged risks, a dedicated, evidence-based study should be commissioned by relevant EU bodies (e.g., European Commission, EBA, ECB) to thoroughly evaluate the feasibility, potential impacts (including monetary policy transmission and financial stability), and optimal regulatory design for permitting interest-bearing euro stablecoins within the EU framework. Such a study could also assess the potential for these instruments, perhaps introduced under specific conditions or limits initially, to contribute to financial inclusion goals and serve as a valuable real-world testbed for assessing market impacts. This would allow for an informed policy decision rather than maintaining the prohibition based solely on initial assumptions or analogies with traditional e-money.

5.3 Leveraging Technology and Infrastructure for Strategic Autonomy

Beyond the stablecoin instrument itself, the underlying infrastructure carries significant implications for digital and payments sovereignty. Europe should strategically engage with these foundational layers:

Embracing Credibly Neutral Infrastructure
Public permissionless blockchains, when utilised appropriately by regulated entities, can offer open, resilient, and globally accessible infrastructure that is inherently resistant to capture by any single national or corporate interest. Strategically supporting the use of regulated euro stablecoins on such networks can augment existing payment systems, potentially reducing reliance on closed, foreign-controlled financial networks (like dominant card schemes or potentially future Big Tech platforms) and enhancing systemic resilience against geopolitical pressures or extraterritorial influence. Moreover, to further bolster digital sovereignty while leveraging these global systems, consideration should be given to strategies that encourage significant European participation in the governance and operation of such networks — for instance, through supporting EU-based entities running validator nodes or contributing to core infrastructure development — thereby enhancing resilience, technical understanding, and potential influence within these ecosystems.

Refining Prudential Approaches to Shared Digital Infrastructure
While strategically leveraging credibly neutral public infrastructure may offer advantages, current prudential regulations present a significant hurdle for banks. Standards set by the Basel Committee on Banking Supervision (BCBS) currently assign the most punitive capital treatment (a 1250% risk weighting under its 'Group 2' classification for crypto-assets) to *any* exposure involving permissionless blockchains. This stems from the Committee's current assessment that certain risks perceived as inherent in these networks are presently unmitigable by banks, thereby penalising even well-regulated instruments like MiCAR-compliant E-Money Tokens.

This stance effectively limits institutions whose core business is risk assessment from engaging with potentially transformative open networks, despite the foreshadowing of previous technological transitions in banking. In the 1990s, the prospect of banking over the seemingly chaotic public internet faced deep scepticism before becoming routine. Likewise, the migration from on-premises data centres to shared cloud infrastructure during the 2010s overcame initial risk concerns to unlock significant benefits. Public blockchains represent the next logical iteration of shared digital infrastructure; fostering the development of appropriate risk management frameworks by financial institutions, rather than imposing prohibitive capital costs that discourage engagement, should be the focus. In this context, there would be value in international conversations to evaluate exposures based not only on the underlying technology but also on the specific characteristics and regulation of the asset (like MiCAR EMTs) and the robustness of a bank's own risk management capabilities and controls. Finding pathways for regulated innovation on these networks may ultimately be critical to unlocking their potential to enhance financial infrastructure and European competitiveness.

Building a European Digital Stack
As proposed by initiatives like the 'EuroStack' concept, Europe should consider stablecoins as one component within a broader strategy to build sovereign digital infrastructure. This comprehensive approach envisions an integrated European technology stack spanning cloud computing, data infrastructure, privacy-preserving digital identity, and payment systems. By positioning euro stablecoins within this broader technological ecosystem, Europe can enhance both its financial and digital sovereignty simultaneously, creating synergies between various digital initiatives while reducing critical dependencies on foreign-controlled technologies across multiple layers of the digital economy. Supporting EU-based cloud providers and DLT infrastructure initiatives should be part of this strategy.

5.4 Global Coordination and Diplomatic Leadership

Stablecoins fundamentally challenge the traditional Westphalian model of financial regulation by operating across borders with minimal friction. Europe's leadership, demonstrated through MiCAR, must therefore extend beyond domestic rulemaking to shape the global governance landscape for these instruments:

Championing Global Dialogue and Standards
Actively lead and participate in international forums (Financial Stability Board, Bank for International Settlements, G20, International Monetary Fund, Organisation for Economic Co-operation and Development, Financial Action Task Force) to promote global dialogue and the development of common principles or standards for stablecoins. Focus areas should include reserve transparency and auditing standards, interoperability, supervisory cooperation, cross-border resolution planning, and AML/CFT consistency.

Pursuing Regulatory Cooperation
Engage proactively with key international partners (especially the US, UK, Switzerland, Singapore, UAE) to foster regulatory cooperation, mutual recognition where appropriate, and information sharing regarding stablecoin issuers and activities. This is crucial to manage cross-border risks effectively and avoid regulatory fragmentation that could harm global markets.

5.5 Monitoring Progress and Ensuring Adaptability

The stablecoin landscape is dynamic. To ensure policies remain effective and aligned with sovereignty objectives, continuous monitoring and adaptation are crucial:

Develop Key Performance Indicators for Financial Sovereignty
Establish and track a set of quantitative and qualitative metrics to monitor the impact of stablecoins and policy responses on European financial sovereignty. Suggested metrics include:

- Market share (supply and transaction volume) of euro-denominated stablecoins (LILD) versus non-euro stablecoins within the EU.
- Volume and cost trends of stablecoin-based remittances into and out of the EU, particularly in euros.

- Proportion of reserves backing MiCAR-compliant euro stablecoins held in EU sovereign debt versus other assets.
- Adoption rates of euro stablecoins in targeted B2B and trade finance use cases.
- Concentration levels among euro stablecoin issuers and key service providers (e.g., custodians).
- Share of stablecoin transactions processed via EU-based infrastructure or nodes where feasible/relevant.

Establish a Monitoring Function
Consider tasking an existing body (e.g., a joint task force involving the European Banking Authority, European Securities and Markets Authority, European Central Bank, and European Commission) or establishing a dedicated observatory to regularly collect data on these KPIs, analyse market trends, assess risks, and provide evidence-based reports to policymakers.

Implement Regular Review Cycles
Build mechanisms for periodic reviews of the MiCAR framework and the overall stablecoin strategy to ensure they remain fit-for-purpose in light of market developments, technological changes, and evolving international standards.

Towards a Coherent European Stablecoin Strategy

Successfully navigating the complex landscape of stablecoins requires more than reactive regulation; it demands a proactive, coherent, and forward-looking European strategy. This strategy must skilfully integrate several key pillars: the ongoing optimisation of the MiCAR framework to ensure it remains fit-for-purpose and globally competitive; active measures to cultivate a vibrant and widely adopted ecosystem for euro-denominated stablecoins; strategic engagement with the underlying blockchain technologies and digital infrastructure to enhance resilience and autonomy; proactive global coordination and leadership; and continuous monitoring and adaptation.

Such a holistic approach is essential to effectively harness stablecoins as tools to reinforce, rather than undermine, all dimensions of European financial sovereignty — Monetary, Payments, Regulatory, and Digital. While implementation will face challenges, including achieving EU consensus, coordinating public and private efforts, and navigating technical complexities, the geopolitical urgency created by accelerating digital currency initiatives globally underscores the need for decisive action.

By embracing this strategic vision, Europe can move beyond simply managing the risks of stablecoins and instead leverage them to bolster the euro's international role, boost the competitiveness of its economy, and secure its position as a leader in shaping the future architecture of global digital finance.

Conclusion: Shaping the Future of Financial Sovereignty

DIGITAL EURO ASSOCIATION

6. Conclusion: Shaping the Future of Financial Sovereignty

The rapid ascent of stablecoins marks a pivotal moment in the evolution of global finance, presenting both unprecedented opportunities and complex challenges to the long-held tenets of national and regional financial sovereignty. This paper has demonstrated that the impact of these digital assets is multifaceted, extending across Monetary, Payments, Regulatory, and Digital dimensions of sovereign control.

Our analysis reveals a fundamental duality: stablecoins, particularly those issued extra-territorially or denominated in a non-domestic currency, can pose potential challenges to financial sovereignty, including currency substitution, financial instability, erosion of regulatory oversight, and dependence on foreign technological infrastructure. These challenges highlight the potential for unmanaged stablecoin proliferation to dilute the effective control authorities exercise over their financial systems.

However, this paper also argues that stablecoins, especially well-regulated, locally-issued, and locally-denominated variants operating under frameworks like the EU's MiCAR, offer tangible pathways to enhance financial sovereignty. They provide tools to modernise domestic currencies, improve payment system efficiency, foster competitive innovation within the regulatory perimeter, and potentially strengthen the international role of currencies like the euro in the burgeoning digital economy.

Consequently, the ultimate impact of stablecoins on financial sovereignty is not predetermined. It hinges critically on the strategic choices made by policymakers. A passive or purely reactive stance risks ceding ground to external forces and technological path dependencies. Conversely, a proactive, coherent jurisdictional strategy – encompassing optimised regulation, active cultivation of a domestic ecosystem, strategic engagement with underlying technologies, and robust international cooperation, as outlined in the recommendations – offers the potential to harness stablecoin innovation in service of national and regional strategic objectives.

While the recommendations provided are framed within the European context, the core principles should resonate globally as jurisdictions worldwide grapple with integrating digital assets while preserving economic autonomy. The choices made today regarding stablecoins will significantly shape the architecture of the future financial system and the distribution of influence within it. Strategic foresight, regulatory agility, and a commitment to fostering sovereign capabilities within the digital realm are therefore not merely advisable, but essential for navigating the complexities ahead and ensuring that the evolution of digital finance reinforces, rather than diminishes, financial sovereignty.

References

7. References

Abu Dhabi Global Market. (2025, February 7). *AI Applications in Web3 SupTech and RegTech: A Regulatory Perspective*. ADGM. https://assets.adgm.com/download/assets/2025-02-07+AI+Applications+in+Web3+SupTech+and+RegTech+%28Full+Paper%29.pdf/dcd69336e93411ef98be4e4cb195b674

Adachi, M., Born, A., Gschossmann, I., & van der Kraaij, A. (2022). The expanding uses and functions of stablecoins. *Financial Stability Review*. European Central Bank. https://www.ecb.europa.eu/press/financial-stability-publications/fsr/focus/2021/html/ecb.fsrbox202111_04~45293c08fc.en.html

Adrian, T., & Mancini-Griffoli, T. (2019). *The rise of digital money* (IMF Fintech Notes No. 2019/001). International Monetary Fund. https://www.elibrary.imf.org/view/journals/063/2019/001/article-A001-en.xml

ADQ. (2025, April 28). *IHC, ADQ and FAB Pioneer UAE Dirham-backed Stablecoin for the Digital Economy*. ADQ Newsroom. Retrieved May 7, 2025, from https://www.adq.ae/newsroom/ihc-adq-and-fab-pioneer-uae-dirham-backed-stablecoin-for-the-digital-economy/

A&O Shearman. (2023). *MiCAR under the microscope - Part 3: The issuance of stablecoins under MiCAR scope and requirements*. Retrieved May 13, 2025, from https://www.aoshearman.com/insights/micar-under-the-microscope-part-3-the-issuance-of-stablecoins-under-micar-scope-and-requirements

Al-Megren, S., Alsalamah, S., Altoaimy, L., Tirado, F., & Herrera-Joancomartí, J. (2018). Blockchain use cases in digital sectors: A review of the literature. In *Proceedings of the European Interdisciplinary Cybersecurity Conference (EICC '18)* (pp. 1–8). Association for Computing Machinery. https://doi.org/10.1145/3279996.3280004

Al Midfa, N. (2025, February 5). *The U.S.-China Trade War: China's Challenge in Navigating U.S. Tariffs and Global Trade Tensions*. Trends Research & Advisory. Retrieved from https://trendsresearch.org/insight/the-u-s-china-trade-war-chinas-challenge-in-navigating-u-s-tariffs-and-global-trade-tensions/

Al Shehabi, B., & Ahmad, N. (2021). Centralized vs. decentralized ledgers in the money supply process: A SWOT analysis. *Quantitative Finance and Economics*, *5*(1), 38–53. https://doi.org/10.3934/QFE.2021003

Aldasoro, I., Cornelli, G., Ferrari Minesso, M., Gambacorta, L., & Habib, M. M. (2024). *Stablecoins, money market funds and monetary policy* (BIS Working Papers No 1219). Bank for International Settlements. https://www.bis.org/publ/work1219.htm

Alloy. (n.d.). *AML monitoring challenges*. Alloy Guides. Retrieved May 4, 2025, from https://www.alloy.com/guides/aml-monitoring-challenges

Alonso-Robisco, A., Azqueta-Gavaldón, A., Carbó, J. M., González, J. L., Hernáez, A. I., Herrera, J. L., Quintana, J., & Tarancón, J. (2025). *Empowering financial supervision: a SupTech*

experiment using machine learning in an early warning system (Documentos Ocasionales No. 2504). Banco de España. https://www.bde.es/f/webbe/SES/Secciones/Publicaciones/PublicacionesSeriadas/DocumentosOcasionales/25/Files/do2504e.pdf

Ante, L. (2025). From adoption to continuance: Stablecoins in cross-border remittances and the role of digital and financial literacy. *Telematics and Informatics*, *97*, Article 102205. https://doi.org/10.1016/j.tele.2024.102205 (Assuming Article ID based on common practice if page numbers are not used, DOI implies specific article)

Ardoino, P. [@paoloardoino]. (2025, March 15). *Tether was the 7th largest buyer of U.S. Treasuries in 2024, compared to Countries* [Tweet]. X. https://x.com/paoloardoino/status/1902689997766922318

Armour, J., Awrey, D., Davies, P., Enriques, L., Gordon, J. N., Mayer, C., & Payne, J. (2016). *Principles of Financial Regulation*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198786474.001.0001

Arner, D., Auer, R., & Frost, J. (2020). *Stablecoins: Risks, potential and regulation* (BIS Working Paper No. 905). Bank for International Settlements. https://www.bis.org/publ/work905.pdf

Ashurst. (2024, July 1). *EU goes live with MiCAR for regulated stablecoins*. Ashurst. https://www.ashurst.com/en/insights/eu-goes-live-with-micar-for-regulated-stablecoins/

Asscheman, A. (2023). Crypto-assets under MiCAR: a deep dive into risks, solutions, and regulatory convergence. *ERA Forum*, *24*(1), 489–500. https://doi.org/10.1007/s12027-023-00773-6

Auer, R., Cornelli, G., & Frost, J. (2020). *Rise of the central bank digital currencies: Drivers, approaches and technologies* (BIS Working Papers No 880). Bank for International Settlements. https://www.bis.org/publ/work880.htm

Ava Labs. (2024, October 12). *AvaCloud unveils EERC token standard*. Avalanche. https://www.avax.network/blog/avacloud-unveils-eerc-token-standard

Bains, P., Ismail, A., Melo, F., & Sugimoto, N. (2022). *Regulating the crypto ecosystem: The case of stablecoins and arrangements* (Fintech Note No. 2022/008). International Monetary Fund. https://www.imf.org/-media/Files/Publications/FTN063/2022/English/FTNEA2022008.ashx

Bank for International Settlements. (2020). Central banks and payments in the digital era. *BIS Annual Economic Report 2020*, Chapter III. https://www.bis.org/publ/arpdf/ar2020e3.htm

Bank for International Settlements. (2021). *Central bank digital currencies: financial stability implications* (Report No. 42). Committee on Payments and Market Infrastructures. https://www.bis.org/publ/othp42.pdf

Bank for International Settlements. (2022). *Annual economic report 2022*. https://www.bis.org/publ/arpdf/ar2022e.htm

Bank of England. (2023). *Regulatory regime for systemic payment systems using stablecoins and related service providers: A consultation paper*. https://www.bankofengland.co.uk/paper/2023/dp/regulatory-regime-for-systemic-payment-systems-using-stablecoins-and-related-service-providers

Bastion. (2025, February 7). *The GENIUS Act: What it means for stablecoin issuers and the future of U.S. regulation*. Bastion. https://www.bastion.com/blog/the-genius-act-what-it-means-for-stablecoin-issuers

Bindseil, U. (2022). *Central bank digital currency and the evolution of payments* (ECB Occasional Paper Series, No. 286). European Central Bank. https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op286~c8835ab04c.en.pdf (Example URL, actual might differ)

Bindseil, U., & Malekan, O. (2025). *Public crypto networks as financial market infrastructures* [Preprint]. SSRN. https://dx.doi.org/10.2139/ssrn.5138052

Bindseil, U., & Pantelopoulos, G. (2022). *Towards the Holy Grail of Cross-Border Payments* (ECB Working Paper No. 2693). European Central Bank. https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2693~9940025de9.en.pdf

Blackwill, R. D., & Harris, J. M. (2016). *War by other means: Geoeconomics and statecraft*. Harvard University Press.

Braun, B., & Gabor, D. (2022). Rethinking Monetary Sovereignty: The Global Credit Money System and the State. *Perspectives on Politics*, *20*(4), 1365–1380. https://doi.org/10.1017/S153759272200127X

Breeden, S. (2025, May). *International payment rails: The value of a harmonised gauge* [Speech]. Bank of England. https://www.bankofengland.co.uk/speech/2025/may/sarah-breeden-panellist-at-the-global-finance-technology-network

Bria, F., & Sheikh, H. (2025, March 31). Europe must avoid becoming a digital colony. *Foreign Policy*. https://foreignpolicy.com/2025/03/31/europe-digital-sovereignty-colony-trump-asml-ai-eurostack/

Browne, R. (2019, September 19). Here's why regulators are so worried about Facebook's digital currency. *CNBC*. https://www.cnbc.com/2019/09/19/heres-why-regulators-are-so-worried-about-facebooks-digital-currency.html

Business Times. (2025, May 8). Stripe introduces stablecoin accounts in more than 100 countries. *Business Times*. https://www.businesstimes.com.sg/startups-tech/startups/stripe-introduces-stablecoin-accounts-more-100-countries

Buterin, V. (2020, January 3). *Credible neutrality as a guiding principle*. Balajis.com. https://balajis.com/p/credible-neutrality

Calvo, G. A., & Végh, C. A. (1992). *Currency substitution in developing countries: An introduction* (IMF Working Paper No. 92/40). International Monetary Fund. https://mpra.ub.uni-muenchen.de/20338/

Cambridge Centre for Alternative Finance (CCAF). (2024, December 10). *Digital tool sheds light on stablecoin flows and regulation*. University of Cambridge Judge Business School. https://www.jbs.cam.ac.uk/2024/digital-tool-sheds-light-on-stablecoin-flows-and-regulation/

Carter, N. (2023). Stables are catching up to established settlement networks. In C. Sheffield (Ed.), *Making sense of stablecoins*. Visa. https://corporate.visa.com/en/sites/visa-perspectives/trends-insights/making-sense-of-stablecoins.html

Carter, N., Harris, H., Khosrowshahi, W., & Ambrose, C. (2024, September 12). *Stablecoins: The emerging market story*. Castle Island Ventures. https://castleisland.vc/wp-content/uploads/2024/09/stablecoins_the_emerging_market_story_091224.pdf

Chainalysis. (2024, December 11). *Stablecoins 101: Behind crypto's most popular asset*. Chainalysis. https://www.chainalysis.com/blog/stablecoins-most-popular-asset/

Chan, S. P. (2019, October 14). Facebook's digital currency dealt another blow. *BBC News*. https://www.bbc.co.uk/news/business-50037223

Chander, A., & Sun, H. (Eds.). (2023). *Digital sovereignty*. Oxford University Press.

Cheung, A. S. Y. (2022). *From data subjects to data sovereigns: Addressing the limits of data privacy in the digital era* (University of Hong Kong Faculty of Law Research Paper No. 2022/50). SSRN. https://ssrn.com/abstract=4218780

Cipollone, P. (2025, April 8). *Empowering Europe: boosting strategic autonomy through the digital euro* [Introductory statement at the Committee on Economic and Monetary Affairs of the European Parliament, Brussels]. European Central Bank. https://www.ecb.europa.eu/press/key/date/2025/html/ecb.sp250408~40820747ef.en.html

Circle. (2024, September 24). *Welcome to the future of digital asset compliance*. Circle Blog. Retrieved May 13, 2025, from https://www.circle.com/blog/welcome-to-the-future-of-digital-asset-compliance

Circle Internet Financial. (2025). *Statement on USDC Reserve Assets and Treasury Holdings*, https://www.circle.com/en/transparency

Claman, L. (2025, February 4). Stripe closes $1.1 billion Bridge deal, prepares for stablecoin push. *CNBC*. https://www.cnbc.com/2025/02/04/stripe-closes-1point1-billion-bridge-deal-prepares-for-stablecoin-push-.html

Clifford Chance. (2024, July). *EU crypto regulation: MiCAR overview for issuers and crypto-asset service providers*. Clifford Chance. Retrieved May 13, 2025, from https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2024/07/eu-crypto-regulation-micar-overview-for-issuers-and-crypto-asset-service-providers.pdf
Coelho, H., & Ringer, M. (2024, June 14). Opinion: Why EU stablecoin rules threaten to upend crypto markets. *DL News*. https://www.dlnews.com/articles/regulation/why-eu-rules-in-mica-threaten-to-upend-stablecoin-markets/

Committee on Payments and Market Infrastructures. (2016). *Correspondent banking* (BIS Papers No 130). Bank for International Settlements. https://www.bis.org/cpmi/publ/d147.pdf

Crypto Briefing. (2025, March 31). Kiln joins TRON Network as newest Super Representative. *Crypto Briefing*. https://cryptobriefing.com/kiln-tron-super-representative/

DeFi Llama. (n.d.). *Stablecoins dashboard*. Retrieved May 15, 2025, from https://defillama.com/stablecoins

DigitalEurope. (2024). *The EU's critical tech gap*. https://cdn.digitaleurope.org/uploads/2024/06/DIGITALEUROPE-EU-CRITICAL-TECH-GAP-REPORT_WEB_UPDATED.pdf

Duffie, J. D., Olowookere, O., & Veneris, A. (2025). *A note on privacy and compliance for stablecoins*. SSRN. https://ssrn.com/abstract=5242230

Duong, D. (2024, August 5). *Stablecoins and the new payments landscape* [Market Intelligence Report]. Coinbase Institutional. https://coinbase.bynder.com/m/2bbf091481cb30cb/original/Market-Intelligence-Stablecoins-and-Payments.pdf

Edwards, S. (2021). *Central Bank Digital Currencies and the Emerging Markets: The Currency Substitution Challenge* (NBER Working Paper No. 29489). National Bureau of Economic Research. https://www.nber.org/papers/w29489

Egilsson, J. H., & Fritsche, J. P. (2025). *Keeping the euro whole: Why singleness of money matters in the digital race, and how the euro can compete on the global stage*. SSRN. https://ssrn.com/abstract=5236036

European Central Bank. (2022, July). Macroprudential Bulletin, Issue 2. *Macroprudential Bulletin*. https://www.ecb.europa.eu/press/financial-stability-publications/macroprudential-bulletin/html/ecb.mpbu202207_2~836f682ed7.en.html

European Commission. (2020). *Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937* (COM(2020) 593 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593

European Data Protection Board. (2025, April 8). *Guidelines 02/2025 on processing of personal data through blockchain technologies: Version 1.1* (Public consultation version). https://www.edpb.europa.eu/system/files/2025-04/edpb_guidelines_202502_blockchain_en.pdf

European Investment Bank. (2021). *Artificial intelligence, blockchain and the future of Europe: How disruptive technologies create opportunities for European corporates*. https://www.eib.org/en/publications/artificial-intelligence-blockchain-and-the-future-of-europe-report

European Parliament and Council of the European Union. (2023a). *Regulation (EU) 2023/1113 of the European Parliament and of the Council of 31 May 2023 on information accompanying transfers of funds and certain crypto-assets and amending Directive (EU) 2015/849 (recast TFR)*.

Official Journal of the European Union, L 150, 1–39. https://eur-lex.europa.eu/eli/reg/2023/1113/oj

European Parliament and Council of the European Union. (2023b). *Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (MiCAR)*. Official Journal of the European Union, L 150, 40–205. https://eur-lex.europa.eu/eli/reg/2023/1114/oj

European Systemic Risk Board (ESRB). (2023). *Annual report 2022*. https://www.esrb.europa.eu/pub/pdf/ar/2023/esrb.ar2022~2c04d37be4.en.pdf

European Union Agency for Cybersecurity (ENISA). (2022). *ENISA threat landscape 2022*. https://www.enisa.europa.eu/publications/enisa-threat-landscape-2022

Farrell, H., & Newman, A. L. (2019). Weaponized interdependence: How global economic networks shape state coercion. *International Security*, *44*(1), 42–79. https://doi.org/10.1162/isec_a_00351

Feibelman, A. (2021, January). *What's Monetary Sovereignty Worth? A Case Study*. The Law and Political Economy (LPE) Project. https://lpeproject.org/wp-content/uploads/2021/01/Whats-Monetary-Sovereignty-Worth-LPE-intro.pdf

Fenergo. (2024, November 15). *How to Break Through Data Silos in Banking with Automated Transaction Monitoring*. Fenergo Resources Blog. https://resources.fenergo.com/blogs/how-to-break-through-data-silos-in-banking-with-automated-transaction-monitoring

Finck, M. (2018). Blockchains and Data Protection in the European Union. *European Data Protection Law Review*, *4*(1), 17–35. https://doi.org/10.21552/edpl/2018/1/6

Financial Action Task Force. (2020). *Report to the G20 finance ministers and central bank governors on so-called stablecoins*. FATF. https://www.fatf-gafi.org/content/dam/fatf-gafi/reports/Virtual-Assets-FATF-Report-G20-So-Called-Stablecoins.pdf

Financial Action Task Force. (2022, July). *Partnering in the Fight Against Financial Crime: Data Protection, Technology and Private Sector Information Sharing*. FATF. https://www.fatf-gafi.org/content/dam/fatf-gafi/guidance/Partnering-int-the-fight-against-financial-crime.pdf

Financial Stability Board. (2020, April). *Enhancing cross-border payments: Stage 1 report to the G20*. https://www.fsb.org/uploads/P090420-2.pdf
Financial Stability Board. (2022, October). *Regulation, supervision and oversight of crypto-asset activities and markets: Consultative report*. Financial Stability Board. https://www.fsb.org/wp-content/uploads/P111022-1.pdf

Financial Stability Board. (2023, July 17). *High-level recommendations for the regulation, supervision and oversight of global stablecoin arrangements: Final report*. FSB. https://www.fsb.org/wp-content/uploads/P170723-3.pdf

Fonte, G. (2025, April 15). U.S. policy on stablecoins more dangerous than tariffs, Italian minister says. *Reuters*. https://www.reuters.com/technology/us-policy-stablecoins-more-dangerous-than-tariffs-italian-minister-says-2025-04-15/

Fortune. (2024, October 3). *BBVA plans Visa-backed stablecoin launch in 2025*. Fortune. Retrieved May 21, 2025, from https://fortune.com/crypto/2024/10/03/bbva-plans-to-launch-stablecoin-in-2025-with-support-from-visa/

G7 Working Group on Stablecoins. (2019). *Investigating the impact of global stablecoins*. Committee on Payments and Market Infrastructures, Bank for International Settlements. https://www.bis.org/cpmi/publ/d187.pdf

HAL Privatbank. (2022, December). *How to design a compliant, privacy-preserving fiat stablecoin via zero-knowledge proofs*. HAL Privatbank. https://www.hal-privatbank.com/fileadmin/HAL/Downloads/Publikation/202212_How_to_design_a_compliant_privacy-preserving_fiat_stablecoin_via_zero-knowledge_proofs.pdf

Hansen, P., & Bauer, H. (2024). *MiCA's significance regime for stablecoins - A sledgehammer to crack a nut?* SSRN. https://ssrn.com/abstract=4699043
International Monetary Fund. (n.d.). *COFER dashboard*. Retrieved May 23, 2025, from https://data.imf.org/en/Dashboards/COFER%20Dashboard

Jean-Noel II, D. (2025, March 20). *Input to the SEC Strategic Hub for Innovation and Financial Technology (FinHub) on a unified framework for digital asset regulation*. U.S. Securities and Exchange Commission. https://www.sec.gov/files/ctf-input-jean-noel-1-2025-3-20.pdf

Johns Hopkins Carey Business School. (2022, March 2). *What you need to know about SWIFT and economic sanctions*. Johns Hopkins Carey Business School. https://carey.jhu.edu/articles/research/about-swift-economic-sanctions

Kalifa, R. (2021). *The Kalifa review of UK FinTech*. HM Treasury. https://www.gov.uk/government/publications/the-kalifa-review-of-uk-fintech

Katz, E., & Rice, B. (2024, June 19). *EBA provides new rules for stablecoins*. Ashurst. Retrieved May 23, 2025, from https://www.ashurst.com/en/insights/eba-provides-new-rules-for-stablecoins/

Kaur, S. (2025, May 6). De-dollarisation & BRICS' quest for financial sovereignty. *Infobrics.org*. https://infobrics.org/post/44070

L2BEAT. (n.d.). *Scaling summary*. Retrieved May 23, 2025, from https://l2beat.com/scaling/summary

Lagarde, C. (2025, March 31). L'invité de 8h20 le grand entretien [Radio broadcast]. *France Inter*. https://www.radiofrance.fr/franceinter/podcasts/l-invite-de-8h20-le-grand-entretien/l-invite-de-8h20-le-grand-entretien-du-lundi-31-mars-2025-1755225

Lane, P. R. (2025, March 20). *The digital euro: maintaining the autonomy of the monetary system* [Speech, Cork]. European Central Bank. https://www.ecb.europa.eu/press/key/date/2025/html/ecb.sp250320_1~41c9459722.en.html

Lastra, R. M. (2015). *International financial and monetary law* (2nd ed.). Oxford University Press.

Lawyer Monthly. (2025, March 27). *The hidden impact of SWIFT sanctions on global banking*. Lawyer Monthly. https://www.lawyer-monthly.com/2025/03/the-hidden-impact-of-swift-sanctions-on-global-banking/

Ledger Insights. (2025, February 27). *Bank of America considers stablecoin launch*. Ledger Insights. https://www.ledgerinsights.com/bank-of-america-considers-stablecoin-launch/

Ledger Insights. (2025, April 2). *Circle IPO: A rosy future weighed down by Coinbase deal*. Ledger Insights. https://www.ledgerinsights.com/circle-ipo-a-rosy-future-weighed-down-by-coinbase-deal/

Leiden Security and Global Affairs. (2025, February 11). *Licensed Detection Agents: A New Approach to Financial Crime*. Leiden Security and Global Affairs Blog. https://www.leidensecurityandglobalaffairs.nl/articles/licensed-detection-agents-a-new-approach-to-financial-crime

Levy Yeyati, E. (2006). Financial dollarization: Evaluating the consequences. *Economic Policy*, *21*(45), 61–118. https://www.jstor.org/stable/3601043

Li, G., & Zhou, H. (2015). Globalization of financial capitalism and its impact on financial sovereignty. *World Review of Political Economy*, *6*(2), 176–191. https://doi.org/10.13169/worlrevipoliecon.6.2.0176

Lian, A. (2025, January 28). MiCA's stablecoin gamble: How Europe's bank mandate could backfire. *International Policy Digest*. https://intpolicydigest.org/mica-s-stablecoin-gamble-how-europe-s-bank-mandate-could-backfire/

Liao, G. Y., & Caramichael, J. (2022, January). *Stablecoins: Growth potential and impact on banking* (International Finance Discussion Papers No. 1334). Board of Governors of the Federal Reserve System. https://doi.org/10.17016/IFDP.2022.1334

Lucinity. (2025, March 4). *7 Compliance and FinCrime Trends for 2025*. Lucinity Blog. https://lucinity.com/blog/7-compliance-and-fincrime-trends-for-2025
Massad, T. G. (2024, April 17). *Stablecoins and national security: Learning the lessons of Eurodollars*. Brookings Institution. https://www.brookings.edu/articles/stablecoins-and-national-security-learning-the-lessons-of-eurodollars/

McLaughlin, T. (2025, March 24). *Ubyx whitepaper*. Ubyx. Retrieved May 7, 2025, from https://www.ubyx.xyz/_files/ugd/903a30_d34247ea82974a1487e3a479fb6c20f9.pdf

Milliken, D., & Reggiori Wilkes, T. (2025, April 29). UK sets out new crypto rules to date wider financial services strategy. *Reuters*. https://www.reuters.com/sustainability/boards-policy-regulation/uk-sets-out-new-crypto-rules-date-wider-financial-services-strategy-2025-04-29/

Ministry of Finance, Republic of Palau. (2024). *Palau National Payment System Phase 2a Final Report*. https://www.palaugov.pw/wp-content/uploads/Palau-National-Payment-System-Phase-2a-Final-Report.pdf

Munster, B., & Faggionato, G. (2025, April 22). Commission livid as ECB warns of crypto apocalypse under Trump. *POLITICO*. https://www.politico.eu/article/european-commission-livid-ecb-warn-crypto-apocalypse-donald-trump/

Murau, S., & van 't Klooster, J. (2023). Rethinking monetary sovereignty: The global credit money system and the state. *Perspectives on Politics*, *21*(4), 1319–1336.

New York State Department of Financial Services. (2019, September 10). *DFS approves first gold-backed virtual currency and new dollar-backed stablecoin* [Press release]. https://www.dfs.ny.gov/reports_and_publications/press_releases/pr1909051

New York State Department of Financial Services. (2022, June 8). *Industry letter: Issuance of U.S. dollar-backed stablecoins*. https://www.dfs.ny.gov/industry_guidance/industry_letters/il20220608_issuance_stablecoins

OMFIF. (2025, April). *Building a national stablecoin strategy*. OMFIF. https://www.omfif.org/2025/04/building-a-national-stablecoin-strategy/

OSL. (2025, April 17). *How Blockchain Is Enhancing Transparency in Financial Transactions*. OSL Academy. Retrieved May 4, 2025, from https://osl.com/academy/article/how-blockchain-is-enhancing-transparency-in-financial-transactions

Panetta, F. (2022). *The digital euro: Staying the course in a changing landscape* [Speech at the Trustees and Directors Meeting of the Bank for International Settlements, Basel]. European Central Bank.

Paul, V., & Markova, D. (2025, April 10). How stablecoins are becoming a frontier of sovereignty. *Banking Risk and Regulation*. https://www.bankingriskandregulation.com/how-stablecoins-are-becoming-a-frontier-of-sovereignty/

Paxos. (2025, February 4). *Paxos completes acquisition of Finnish E-Money Institution Membrane Finance* [Press release]. Paxos. https://www.paxos.com/newsroom/paxos-completes-acquisition-of-finnish-e-money-institution-membrane-finance
PaymentsCMI. (2025). *Stablecoins & cross-border payments: What banks must do*. PaymentsCMI. Retrieved May 21, 2025, from https://paymentscmi.com/insights/stablecoins-cross-border-payments-banks-strategy/

Peak, B. (2025, March 24). Stablecoin regulations in the US: A beginner's guide. *Cointelegraph*. https://cointelegraph.com/learn/articles/stablecoin-regulations-in-the-us-a-beginners-guide

Pistor, K. (2017). From territorial to monetary sovereignty. *Theoretical Inquiries in Law*, *18*(2), 491–514. https://doi.org/10.1515/til-2017-0022

Pol, R. (2020). Anti-money laundering: The world's least effective policy experiment? Together, we can fix it. *Policy Design and Practice*, *3*(1), 73–94. https://doi.org/10.1080/25741292.2020.1725366

Prashanth, M. S., Karnati, R., Velpuru, M. S., & Reddy, H. V. (2024). Blockchain in cyber security: A comprehensive review. In A. Kumar, V. K. Gunjan, S. Senatore, & Y.-C. Hu (Eds.), *Proceedings of the 5th International Conference on Data Science, Machine Learning and Applications (ICDSMLA 2023): Vol. 1* (Lecture Notes in Electrical Engineering, Vol. 1273, pp. 1181–1191). Springer. https://doi.org/10.1007/978-981-97-8031-0_124

PYMNTS. (2025, January 31). Tether reportedly made $13 billion in profits in 2024. *PYMNTS*. https://www.pymnts.com/cryptocurrency/2025/tether-reportedly-made-13-billion-in-profits-in-2024/

Reeves, R. (2025, April 29). *Chancellor speech at Innovate Finance Global Summit 2025*. GOV.UK. https://www.gov.uk/government/speeches/chancellor-speech-at-global-innovate-summit-2025

Reuters. (2025, April 16). Russia should have own stablecoins, finance ministry official says. *Reuters*. https://www.reuters.com/technology/russia-should-have-own-stablecoins-finance-ministry-official-says-2025-04-16/

Ripple, & Boston Consulting Group. (2025, April 7). *Approaching the tokenization tipping point*. Ripple. https://ripple.com/reports/approaching-tokenization-at-the-tipping-point.pdf

Rustam, A., Hasanah, N., Pasaribu, H., Aina, Q., & Judijanto, L. (2025). The role of blockchain technology in increasing transparency and security of financial management in the banking sector. *Journal of Ecohumanism*, *4*(1), 5290–5303. https://doi.org/10.62754/joe.v4i1.6463

RWA.xyz. (n.d.). *Homepage*. Retrieved April 28, 2025, from https://app.rwa.xyz/
Shaw, M. N. (2021). *International Law* (9th ed.). Cambridge University Press. https://doi.org/10.1017/9781108774802

Singh, D. (2022, October 14). *Remarks at the Harvard National Security Journal symposium on digital currencies*. Atlantic Council. https://www.atlanticcouncil.org/commentary/transcript/full-transcript-former-deputy-nsa-daleep-singhs-argument-for-a-digital-dollar/

Solana. (n.d.). *Token extensions*. Solana. Retrieved May 23, 2025, from https://solana.com/solutions/token-extensions

Stablewatch. (n.d.). *Stablecoin clarity in a volatile world*. Retrieved May 23, 2025, from https://www.stablewatch.io/

Stripe. (2025). *Stripe accelerates the utility of AI and stablecoins with major launches*. Stripe. https://stripe.com/gb/newsroom/news/sessions-2025

SWIFT. (2025, March). *RMB tracker: Monthly reporting and statistics on renminbi (RMB) progress towards becoming an international currency*. SWIFT. https://www.swift.com/swift-resource/252389/download

Tether. (2024, November 18). *Tether to make investment in Quantoz launch of MiCAR-compliant stablecoins; Leverages Hadron by Tether tech as part of tokenization expansion* [Press release]. Tether. https://tether.io/news/tether-to-make-investment-in-quantoz-launch-of-

micar-compliant-stablecoins-leverages-hadron-by-tether-tech-as-part-of-tokenization-expansion/

The Guardian. (2023, March 11). USD Coin breaks peg with dollar after Silicon Valley Bank collapse. *The Guardian*. https://www.theguardian.com/technology/2023/mar/11/usd-coin-depeg-silicon-valley-bank-collapse

The Paypers. (2025, April 30). *Breaking the Visa and Mastercard duopoly: Europe's path to innovation*. The Paypers. https://thepaypers.com/expert-opinion/breaking-the-visa-and-mastercard-duopoly-europes-path-to-innovation--1273064

Token Terminal. (2024). *The economics of Ethereum vs Solana: A network comparison* [Dashboard]. Retrieved April 21, 2025, from https://tokenterminal.com/explorer/studio/dashboards/11974884-5d10-4e90-91be-ffc77ddb105b

Tookitaki. (2025, March 18). *Hidden Risks in Anti-Money Laundering Compliance: What Banks Miss Most*. Tookitaki Compliance Hub. https://www.tookitaki.com/compliance-hub/hidden-risks-in-anti-money-laundering-compliance-what-banks-miss-most

TRM Labs. (2025, February 26). *The Bybit hack: Following North Korea's largest exploit*. TRM Labs. https://www.trmlabs.com/post/the-bybit-hack-following-north-koreas-largest-exploit

Trump, D. J. (2025, January 23). *Executive Order 14178: Strengthening American leadership in digital financial technology*. The White House. https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/

U.S. Department of the Treasury. (n.d.). *Table 5: Foreign holdings of U.S. long-term securities, by type of U.S. security*. Treasury International Capital (TIC) System. Retrieved May 23, 2025, from https://ticdata.treasury.gov/resource-center/data-chart-center/tic/Documents/slt_table5.html

U.S. Department of the Treasury. (2024). *Treasury Borrowing Advisory Committee charge – Q4 2024*. https://home.treasury.gov/system/files/221/TBACCharge2Q42024.pdf

United Nations. (2024). *International Day of Family Remittances – Background*. United Nations. https://www.un.org/en/observances/remittances-day/background

United Nations Office on Drugs and Crime. (n.d.). *Money laundering: Overview*. Retrieved May 21, 2025, from https://www.unodc.org/unodc/en/money-laundering/overview.html

Visa. (n.d.). *Stablecoin transactions*. Visa Onchain Analytics Dashboard. Retrieved April 6, 2025, from https://visaonchainanalytics.com/transactions

Visa Inc. (2024). *Annual report 2024*. https://annualreport.visa.com/financials/default.aspx

Waller, C. J. (2021, November 17). *The economic outlook and monetary policy* [Speech]. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/newsevents/speech/waller20211117a.htm

Waller, C. J. (2025, February 12). *The economic outlook: The case for staying on track* [Speech]. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/newsevents/speech/waller20250212a.htm

World Bank. (2025). *Remittance Prices Worldwide*. Retrieved May 23, 2025, from https://remittanceprices.worldbank.org/

World Economic Forum. (2020). *Global Standards Mapping Initiative: An overview of blockchain technical standards*. https://www3.weforum.org/docs/WEF_GSMI_Technical_Standards_2020.pdf

Zetzsche, D. A., Annunziata, F., Arner, D. W., & Buckley, R. P. (2020). *The Markets in Crypto-Assets Regulation (MICA) and the EU Digital Finance Strategy* (European Banking Institute Working Paper Series No. 2020/77; University of Luxembourg Law Working Paper Series No. 2020-018; University of Hong Kong Faculty of Law Research Paper No. 2020/059). SSRN. https://ssrn.com/abstract=3725395

Zetzsche, D. A., Annunziata, F., Arner, D. W., & Buckley, R. P. (2021). The Markets in Crypto-Assets regulation (MiCA) and the EU digital finance strategy. *Capital Markets Law Journal*, *16*(2), 203–208. https://doi.org/10.1093/cmlj/kmab008

Zimmermann, C. D. (2013). The concept of monetary sovereignty revisited. *European Journal of International Law*, *24*(3), 797–818. https://doi.org/10.1093/ejil/cht041

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