

## Stablecoins as a New Monetary Layer: Market Structure, Reserve Design, and the Competition with Tokenized Deposits



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**Abstract:** Stablecoins have evolved from liquidity tools for crypto trading into a form of tokenized private money with implications for payments, cross-border transfers, short-term funding markets, and the architecture of money itself. The literature on stablecoins has expanded rapidly but remains fragmented across stability, reserve design, banking, payments, and regulation. This paper synthesizes that literature into a single integrative argument: stablecoins should be analyzed as a distinct monetary layer within tokenized finance, evaluated against the BIS framework of singleness, elasticity, and integrity, and compared with tokenized deposits as their most relevant institutional alternative. Drawing on descriptive market evidence and a structured institutional comparison, the paper shows that the stablecoin sector is highly concentrated and overwhelmingly dollar-based; that reserve-backed stablecoins transmit on-chain demand into safe-asset markets and bank funding through three identifiable channels – Treasury and short-term funding, bank funding, and the global safe-asset channel; and that stablecoins and tokenized deposits embody distinct institutional models of programmable money with different welfare and stability implications. The paper concludes that, under recent regulatory developments including MiCA in the European Union and the GENIUS Act in the United States, the most coherent monetary architecture is one in which central bank money remains the ultimate settlement anchor, tokenized deposits extend regulated bank money into programmable environments, and stablecoins operate as specialized private instruments under strong constraints on reserves and redemption.

**Keywords:** stablecoins; tokenized deposits; tokenized money; reserve design; singleness of money; financial stability; monetary policy transmission; safe-asset channel; regulatory architecture; MiCA; GENIUS Act.

**JEL Classification:** E42; E44; E52; G18; G21; G28; O33; C58.

### Introduction

The rapid rise of stablecoins is one of the clearest signs that digital finance is moving from speculative crypto-assets toward tokenized monetary instruments. What began largely as a mechanism for parking liquidity between crypto trades has developed into a market exceeding 300 billion USD in outstanding capitalization by early 2026 and now represents a quantitatively significant component of tokenized finance (Adrian *et al.* 2025; BIS, 2025; RWA.xyz, 2026). The market is highly concentrated and overwhelmingly U.S.-dollar-based, with the two largest issuers accounting for roughly 90 per cent of outstanding capitalization and approximately 97 per cent of issuance denominated in dollars (Adrian *et al.* 2025). Stablecoins can therefore no longer be treated as a peripheral or purely

technical component of crypto-asset markets. They increasingly constitute the monetary core of on-chain finance and a growing layer of tokenized private money (Arner *et al.* 2020; Aldasoro *et al.* 2023; Garratt and Shin, 2023).

This shift has changed the analytical terms of the debate. Earlier discussions often treated stablecoins primarily as a solution to crypto-asset volatility or as infrastructure for digital-asset trading. That perspective is now too narrow. Recent institutional and academic work situates stablecoins within the broader process of financial tokenization and argues that tokenized claims are beginning to reshape the architecture of payments, settlement, and financial intermediation (CPMI, 2023; Adrian *et al.*, 2025; BIS, 2025). In this setting, stablecoins matter not only because they facilitate on-chain transactions, but because they represent a privately issued, programmable, and scalable form of money-like liability that increasingly interacts with sovereign currencies, reserve assets, and the regulated financial system.

Stablecoins remain institutionally ambiguous. They are designed to maintain stable value relative to a sovereign currency, yet they are not central-bank liabilities. They are described as money-like, yet they are generally not deposits in the legal and prudential sense. They are backed by reserves of cash, Treasury bills, and reverse repos, yet they are not simply tokenized money market fund shares (Adrian *et al.* 2025; Ahmed *et al.* 2024). This ambiguity is precisely why recent official and academic work has moved beyond peg performance to deeper monetary properties. The BIS argues that stablecoins should be assessed against the foundational qualities of sound money – singleness, elasticity, and integrity – rather than against a narrow nominal-stability test (Garratt and Shin, 2023; BIS, 2025). The central question becomes whether privately issued tokenized claims can perform monetary functions without fragmenting the unit of account, constraining the adaptability of the monetary system, or undermining trust in par settlement.

These properties make tokenized deposits the most relevant institutional comparator for stablecoins. Both instruments aim to supply programmable, ledger-compatible money, yet they differ fundamentally in legal form, transfer logic, settlement architecture, and monetary implications (Garratt and Shin, 2023; EBA, 2024; Huang and Keister, 2026). Whether stablecoins complement or substitute for bank-based tokenized money is now a central question for the future architecture of money, and one that recent regulatory developments – MiCA in the European Union and the GENIUS Act in the United States – have made urgent.

This paper addresses that question through four related sub-questions. First, how concentrated is the current stablecoin sector by issuer, currency, and platform? Second, how does reserve composition shape resilience, macro-financial spillovers, and monetary transmission? Third, in what economic and institutional sense do stablecoins differ from tokenized deposits? Fourth, which regulatory approaches are most consistent with a stable and interoperable tokenized monetary system? By addressing these questions jointly, the paper contributes to the literature on digital money, financial intermediation under tokenization, and current policy debate on the architecture of money (Arner *et al.* 2020; Adrian *et al.* 2025; BIS, 2025; Altavilla *et al.* 2026).

Within this integrative aim, the paper makes three specific contributions that distinguish it from the institutional syntheses on which it builds. First, it consolidates the dispersed evidence on reserve-driven spillovers into a single three-channel transmission framework – a Treasury and short-term-funding channel, a bank-funding channel, and a global safe-asset channel – and shows that these channels are not independent but interact through a shared pool of reserve assets, so that reserve narrowness redirects rather than removes systemic transmission. This synthesis goes beyond the existing literature, which typically examines each channel in isolation (Ahmed and Aldasoro, 2025; Altavilla *et al.* 2026; Ferrari Minesso and Siena, 2026). Second, the paper provides an original quantification of issuer concentration in the stablecoin sector, computing a Herfindahl–Hirschman index of issuer market shares from 2020 to 2026 and interpreting its persistence through the centralization-of-arbitrage mechanism, thereby connecting an empirical concentration measure to a structural explanation rather than treating concentration as a transitional feature. Third, the paper operationalizes the BIS singleness–elasticity–integrity framework as an explicit five-dimensional comparison between stablecoins and tokenized deposits – legal claim, transfer logic, supervisory perimeter, settlement architecture, and singleness implications – turning a largely normative benchmark into a structured analytical grid that can be applied to any tokenized monetary instrument. Together, these contributions move the paper beyond a literature review toward a distinct analytical account of how the architectural properties of tokenized private money determine its monetary consequences and its competitive relationship with bank-based alternatives.

The remainder of the paper proceeds as follows. Section 1 sets out the methodology and analytical framework. Section 2 positions stablecoins within the broader evolution of tokenized money. Section 3 reviews the literature and identifies the main unresolved issues. Section 4 examines the market structure of the stablecoin sector. Section 5 analyzes reserve design and the macro-financial channels through which stablecoins affect safe-asset markets and bank funding. Section 6 compares stablecoins and tokenized deposits as competing forms of

private tokenized money. Section 7 discusses regulatory and policy implications. Final section concludes by considering the place of stablecoins in a future monetary order characterized by an increasingly contested and potentially interoperable multi-money environment.

### 1. Methodology and Analytical Framework

This paper adopts a structured institutional-comparative methodology. Rather than producing new econometric estimates, it synthesizes the recent academic and policy literature on stablecoins and reorganizes it into a single analytical argument about the monetary character of tokenized private money. The approach proceeds in three steps. The first step establishes an evaluative benchmark: the BIS conception of sound money as the joint satisfaction of singleness (uniform par exchange across issuers), elasticity (the capacity of the monetary system to expand and contract in response to demand), and integrity (resistance to fraud, illicit use, and operational failure) (Garratt and Shin, 2023; BIS, 2025). This benchmark is normative – it specifies the properties money should display – and is complemented by the “money view” of stablecoins, which supplies the positive mechanics of how par is sustained or breaks down under stress (Aldasoro, Mehrling, and Neilson, 2023).

The second step applies this benchmark to a structured comparison of stablecoins and tokenized deposits along five dimensions selected because they jointly determine whether a tokenized instrument can perform monetary functions without fragmenting the unit of account: (i) legal claim – the nature of the holder’s entitlement and the identity of the obligor; (ii) transfer logic – whether value moves as a bearer-style token or as an instructed adjustment of regulated balances; (iii) supervisory perimeter – whether the instrument sits inside or outside the prudential banking framework; (iv) settlement architecture – whether the interbank leg settles in central bank money; and (v) implications for the singleness of money – whether the instrument preserves or undermines uniform par exchange. These dimensions are derived from the singleness–elasticity–integrity benchmark and are applied consistently to both instruments, so that the comparison reflects architectural properties rather than incidental features of particular issuers.

The third step assembles the descriptive market evidence used to ground the comparison. Market-structure data in Section 4 – aggregate capitalization, issuer-level shares, currency composition, and the issuer Herfindahl–Hirschman index – are drawn from publicly available market dashboards (RWA.xyz, DefiLlama, CoinGecko) and from the institutional reserve reporting of the major issuers (Tether International, Circle Internet Financial), cross-checked against the empirical findings reviewed in Section 3. This evidence is used not descriptively but diagnostically: each market regularity (concentration, dollar dominance, reserve composition) is connected to a monetary consequence within the singleness–elasticity–integrity framework. The paper’s contribution is therefore integrative and interpretive rather than econometric: it argues that the fragmented literature on stablecoin stability, reserve design, banking transmission, payments, and regulation can be organized as a single argument about how the architectural properties of tokenized private money shape its monetary consequences and its competitive equilibrium with tokenized deposits.

### 2. Stablecoins in the Evolution of Tokenized Money

Stablecoins should be understood as part of a broader transformation in form, infrastructure, and institutional organization of money. They did not emerge in isolation. Rather, they are one manifestation of a wider tokenization process through which claims, assets, and financial relationships are increasingly represented, transferred, and settled on distributed ledgers or related programmable infrastructures (CPMI, 2023; Adrian *et al.* 2025; BIS, 2025). In this broader setting, the key analytical question is no longer whether stablecoins belong to “crypto” or to “finance.” They now sit at the boundary of both. On the one hand, they retain strong roots in crypto-native environments, especially as settlement assets, collateral instruments, and liquidity bridges across on-chain markets. On the other hand, once their reserve structures, regulatory treatment, and interactions with safe-asset markets are taken seriously, they become part of a wider debate about the future composition of money itself.

Tokenization does not create a single homogeneous category of “digital money.” It reveals a hierarchy of claims with different legal foundations, settlement properties, prudential protections, and macro-financial implications. Table 1 sets out the principal monetary forms that increasingly coexist in tokenized finance: central bank money in both retail and wholesale form, traditional commercial bank deposits, tokenized deposits, stablecoins, electronic money tokens regulated under MiCA, and tokenized money-market-fund-like claims. The taxonomy is not merely descriptive: instruments that look technologically similar at the level of the ledger may remain institutionally and economically distinct in ways that determine their monetary quality, their behavior under stress, and their relationship to the two-tier banking system. Central bank money remains the ultimate settlement anchor; traditional and tokenized deposits remain the dominant form of private money for households and firms;

stablecoins and EMTs sit alongside them as privately issued tokenized claims with materially different reserve, redemption, and prudential structures; and tokenized MMF-like claims occupy an adjacent zone, relevant for liquidity and collateral but typically without direct payment function at par.

Table 1 clarifies three points that are central to the paper. First, stablecoins occupy a distinct position between bank-based money and reserve-backed investment-like claims: unlike central bank money and deposits they are issuer-specific private liabilities, yet unlike tokenized MMF-like claims they are designed to perform payment functions at par. Second, the singleness implications differ sharply across forms – strongest for central bank money in either retail or wholesale form, preserved through two-tier settlement for traditional and tokenized deposits, and weakest for bearer-style stablecoins. Third, the relevant comparison for evaluating the future role of stablecoins is not stablecoins versus crypto-assets, but stablecoins versus tokenized deposits, with central bank money in both forms providing the wholesale and retail anchor.

Within this spectrum, stablecoins occupy a distinctive position. They are not central bank liabilities. They are generally not deposits in the legal sense. They are not simply tokenized versions of money market fund shares. Nor are they equivalent to tokenized deposits, even when the user-facing experience may appear similar. As recent official work emphasizes, stablecoins differ from both traditional and tokenized monetary instruments in issuer type, transferability, redemption structure, reserve design, and legal certainty (Adrian *et al.* 2025; EBA, 2024; BIS, 2025). The BIS in particular argues that the relevant benchmark for evaluating stablecoins is not stable price behavior alone, but the broader set of qualities associated with sound money: singleness, elasticity, and integrity (Garratt and Shin, 2023; BIS, 2025). This shift in perspective is crucial. It means that the question is not whether a stablecoin usually trades close to one dollar, but whether the institutional structure behind it allows it to function as money without fragmenting the unit of account or weakening the architecture of settlement.

Table 1. Forms of money in a tokenized financial system

Monetary form	Issuer	Nature of claim	Transfer logic	Settlement anchor	Reserve / backing structure	Par convertibility	Yield feature	Prudential perimeter	Implication for singleness of money
Central bank money – retail (cash, retail CBDC)	Central bank	Direct public claim	Bearer (cash) or account-/token-based (retail CBDC)	Self-anchored	Sovereign monetary liability	Yes	None for cash; design-dependent for retail CBDC	Full public monetary framework	Strongest anchor of singleness for end-users
Central bank money – wholesale (reserves, wholesale CBDC, tokenized reserves)	Central bank	Direct public claim restricted to eligible institutions	Account-based or tokenized public settlement asset	Self-anchored	Sovereign monetary liability	Yes	Policy-rate linked	Full public monetary framework	Strongest anchor of singleness for interbank and wholesale settlement; the operational anchor for tokenized wholesale markets
Traditional bank deposits	Commercial banks	Deposit claim on bank	Account-based transfer	Interbank settlement in central bank money	Bank balance sheet backed by loans, securities, reserves, other assets	Yes, within regulated banking system	May bear interest	Full banking regulation and, where applicable, deposit insurance	Preserves singleness through two-tier monetary system
Tokenized deposits	Commercial banks	Deposit claim represented on DLT or related infrastructure	Typically non-bearer / burn-and-issue logic	Interbank leg settles in central bank money	Bank balance sheet; same economic substance as deposits	Yes, if designed as non-bearer tokenized deposits	May bear interest	Banking law, not MiCA in EU treatment	More consistent with singleness than bearer-style private tokens
Stablecoins	Usually nonbank	Redeemable tokenized	Bearer-style transfer of	External reference to	Reserve-backed, often	Intended at par, but may	Issuer-paid yield	Crypto / payments /	Weaker singleness;

Monetary form	Issuer	Nature of claim	Transfer logic	Settlement anchor	Reserve / backing structure	Par convertibility	Yield feature	Prudential perimeter	Implication for singleness of money
	issuers, sometimes bank-affiliated structures	private liability	issuer-specific claim	sovereign unit of account; not self-anchored	cash, T-bills, repos, deposits; composition varies by issuer	deviate under stress	generally prohibited under recent regimes (MiCA, EMT, GENIUS)	prudential perimeter varies by jurisdiction	depends on issuer credibility and convertibility
E-money tokens (EMTs) under MiCA	Authorized issuer, including eligible credit institutions / e-money institutions	Transferable token referencing one official currency	Bearer-style transferable claim	External reference to fiat currency	Backing and safeguarding obligations under EU framework	Intended at par	Interest generally prohibited under MiCA	MiCA plus related payments regulation where relevant	More structured than unregulated stablecoins, but still distinct from deposits
Tokenized MMF-like claims / tokenized cash-management claims	Fund / issuer vehicle	Investment-type claim on underlying liquid asset pool	Transferable security/fund claim	Not primarily payment-settlement money	Government bills, repo, cash equivalents, HQLA	Usually NAV- or asset-value-linked rather than strict money-at-par logic	Typically yield-bearing	Securities / fund regulation	Adjacent to money, but weaker money-like singleness

Source: Author's elaboration based on BIS (2025), Garratt and Shin (2023), Aldasoro, Mehrling, and Neilson (2023), and CPMI (2023).

The first benchmark in this comparison is central bank money. Both the BIS and the ECB continue to treat central bank money as the ultimate settlement anchor in a tokenized economy, and recent operational developments give that conceptual claim empirical weight. In the BIS framework, tokenization can improve financial markets and make settlement more programmable, but it should do so around a core of central bank reserves, commercial bank money, and government bonds rather than through the wholesale replacement of existing monetary foundations by privately issued stablecoins (BIS, 2025). The Eurosystem has translated this position into concrete experimentation: its 2024 exploration work on new technologies for wholesale settlement processed more than 200 transactions worth approximately 1.59 billion EUR across 64 participants, settled in central bank money on DLT-based platforms (ECB, 2026). The Bank of England is undertaking related work through its DLT Innovation Challenge and Synchronisation Lab, while Project Agorá – a public-private initiative involving seven central banks and more than 40 financial institutions – is exploring tokenized cross-border settlement based on tokenized commercial bank deposits and tokenized wholesale central bank money (Bank of England, 2025b; BIS Innovation Hub, 2025). The ECB's wider position acknowledges that tokenized deposits and stablecoins may play useful roles in wholesale and cross-border contexts but consistently stresses that central bank money must remain the anchor of trust and settlement finality (ECB, 2025a, 2025b, 2026; Bank of England, 2026). Stablecoins therefore remain derivative from the monetary system rather than constitute it: they reference sovereign money but do not provide the ultimate settlement anchor themselves.

The second benchmark is traditional commercial bank money. Deposits remain the dominant form of private money in modern economies because they combine broad acceptability, payment-system integration, and convertibility at par within a regulated two-tier structure. Stablecoins differ from deposits in several fundamental respects. A bank deposit is embedded in a continuing contractual relationship between the depositor and the bank and is supported by prudential supervision, liquidity rules, capital requirements, and, in many jurisdictions, deposit-protection arrangements. A stablecoin, by contrast, is typically issued by a nonbank entity or by a structure that does not reproduce the full institutional architecture of deposit-taking. Its credibility depends more directly on reserve composition, redemption mechanics, custody arrangements, disclosure, and operational resilience (Arner *et al.* 2020; Adrian *et al.* 2025). This is why stablecoins should not be viewed simply as “digital deposits.” They are better understood as a distinct form of private tokenized money whose monetary quality must be reconstructed through reserve design and regulatory embedding rather than inherited automatically from the banking system.

The most relevant comparator for this paper is tokenized deposits. Stablecoins and tokenized deposits both seek to make money programmable, interoperable with digital platforms, and better suited to near-instant or

automated settlement. Yet the BIS Bulletin on stablecoins versus tokenized deposits shows that the two instruments differ fundamentally in transfer logic and monetary implications (Garratt and Shin, 2023). Stablecoins are generally bearer-style liabilities: when the token changes hands, the claim on the issuer changes hands with it. Tokenized deposits, in their safer non-bearer form, work instead by extinguishing the sender's claim and issuing a new claim by the recipient's bank, with the interbank leg settled in central bank money. This preserves the singleness of money far more effectively than a transferable issuer-specific bearer claim. The ECB has reinforced this distinction by emphasizing that non-bearer tokenized deposits are safer because they do not create market-priced circulating liabilities that may deviate from par, while the EBA has clarified that tokenized deposits remain deposits for legal purposes and should therefore be distinguished from electronic money tokens under MiCA (ECB, 2025b; EBA, 2024). In other words, two instruments may both appear as "tokenized money" on a ledger, but one extends the logic of the banking system while the other introduces a more independent private monetary layer.

This distinction is especially important because it reveals that tokenization does not flatten the hierarchy of money. If anything, it makes that hierarchy more visible. At the top remains central bank money as the settlement anchor. Below it sit traditional and tokenized forms of commercial bank money, which can preserve par convertibility if designed appropriately. Stablecoins form a separate layer of private tokenized money that is potentially more portable and interoperable across open digital environments, but whose soundness depends more explicitly on reserve design, governance, and regulation. Money-market-fund-like tokenized claims and related tokenized safe-asset instruments occupy an adjacent zone, relevant for liquidity management and collateral, but generally less suited to broad payment use (Aldasoro *et al.* 2023; Adrian *et al.* 2025; BIS, 2025). This hierarchy is not only conceptual. It is increasingly reflected in official policy debates, especially in the Bank of England's "multi-money" framing and in the ECB's insistence that tokenized innovation should remain anchored in central bank money.

Located within this broader evolution of tokenized money, stablecoins emerge as a distinct form of private tokenized money whose institutional fragility and competitive pressure on tokenized deposits cannot be assessed from inside the crypto frame. Their cross-platform portability and reserve-backed issuance give them clear advantages in open digital markets; their dependence on issuer-specific reserve architecture and weaker integration into the two-tier monetary system give tokenized deposits a structural advantage in regulated settings. The literature review that follows is therefore organized not as a generic survey but as a structured examination of unresolved debates on stability, reserve design, intermediation, regulation, and the competition with tokenized deposits.

### 3. Literature Review

Literature on stablecoins has expanded rapidly but remains unevenly developed across themes, methods, and levels of analysis. The early systematic review by Ante (2023) showed that the first wave of empirical research was narrow and concentrated on price stability, market interdependence, and a limited set of empirical techniques; the more recent survey by Mahrous, Caprolu, and Di Pietro (2025) confirms that the field has expanded substantially but remains fragmented across economic, technical, and regulatory subfields. Since 2024, and especially in 2025–2026, the literature has become much richer and more policy-relevant. Stablecoins are now studied as liabilities with implications for payments, reserve markets, bank funding, and the architecture of tokenized money. This paper is positioned at the intersection of seven broad streams rather than within any one of them in isolation: conceptual and monetary-theoretic work; stability, depegging, and run-risk research; reserve disclosure and safe-asset linkages; banking and monetary-policy transmission; payments and cross-border use; regulation and institutional design; and the literature comparing stablecoins with tokenized deposits. Each stream has matured but each remains incomplete on the integrative question that motivates this paper: how the asset side, the liability side, and the regulatory perimeter jointly determine the monetary character of stablecoins relative to tokenized deposits.

The first stream is conceptual and monetary-theoretic. Early influential work by Arner *et al.* (2020) framed stablecoins through the triad of risks, potential, and regulation, emphasizing that stablecoins were neither ordinary crypto-assets nor ordinary money, but hybrid instruments capable of affecting payment systems, monetary sovereignty, and financial stability. Historical and institutional analogies have reinforced this perspective by showing that credibility, governance, and redeemability are longstanding monetary issues rather than purely digital novelties (Frost *et al.* 2020; Gorton and Zhang, 2023). Subsequent BIS work sharpened the conceptual benchmark by arguing that stablecoins should not be assessed only in terms of whether they maintain a nominal peg. Instead, they must be evaluated against the deeper properties of sound money: singleness, elasticity, and integrity (Garratt and Shin, 2023; BIS, 2025). In this framework, the central issue is not whether stablecoins are "stable enough" in secondary markets, but whether they can function as money without fragmenting the unit of account, constraining balance-sheet responsiveness, or undermining confidence in par settlement. A complementary "money view"

perspective developed by Aldasoro, Mehrling, and Neilson (2023) interprets stablecoins through the historical analogy of the eurodollar system, arguing that maintaining par exchange between private liabilities and the unit of account requires a hierarchy of dealers, market-makers, and ultimately central-bank backstops. This account is not a competing alternative to the singleness framework so much as a more dynamic counterpart: where Garratt and Shin emphasize the architectural properties that money must satisfy, Aldasoro, Mehrling, and Neilson emphasize the dealer-balance-sheet mechanics by which par is sustained or breaks down. The two perspectives converge on the central proposition that a stablecoin's monetary character depends not on its peg in calm markets but on its institutional capacity to absorb redemption pressure under stress. This literature has been further reinforced by broader BIS and CPMI work on tokenization, which places stablecoins within a wider transformation of payment and settlement infrastructure rather than treating them as a self-contained crypto product category. The conceptual contribution of this stream is substantial, but it still leaves open an important issue: it defines what good money should be yet says less about how existing stablecoins are actually evolving as monetary instruments in relation to deposits, tokenized deposits, and tokenized reserve assets.

A second stream studies stability, depegging, and run risk. Early empirical work focused on the mechanisms that keep fiat-backed stablecoins near par and on the market structures that sustain arbitrage around the peg (Lyons and Viswanath-Natraj, 2023). More recent research has become more analytically sophisticated and increasingly attentive to fragility across designs and episodes. Gadzinski *et al.* (2023) examine whether design affects stability and show that protocol structure alone does not guarantee robust performance; Gadzinski *et al.* (2024) extend this work by analyzing co-instability across stablecoins, and AlAsadi *et al.* (2025) provide econometric evidence that stability differs systematically across issuers and market conditions. Briola *et al.* (2023) analyze the Terra-Luna collapse and demonstrate the fragility of algorithmic stabilization mechanisms when confidence breaks down, while Lee *et al.* (2025) develop systematic models of depegging risk using prices, trading activity, volatility, and sentiment. Ahmed, Aldasoro, and Duley (2024) advance the theoretical frontier with a global-games framework in which reserve quality and public information jointly determine run dynamics, showing that disclosure can either reduce or amplify fragility depending on prior beliefs about reserve quality. Ma, Yang, and Zhang (2025) identify a complementary fragility channel that operates not through reserves but through arbitrage: the mint-and-redeem mechanism that maintains the peg in normal conditions is itself highly concentrated, with a small number of authorized arbitrageurs accounting for the bulk of activity, so that a withdrawal of even a small number of arbitrageurs for operational, regulatory, or balance-sheet reasons can cause material peg deviations even when reserves are intact. This stream has matured substantially after the TerraUSD and USDC–SVB episodes, but it still treats stablecoins primarily as fragile pegged instruments rather than as evolving monetary institutions with broader balance-sheet and intermediation consequences – a limitation for any analysis concerned with monetary architecture rather than peg performance alone.

A third stream focuses on reserve design, disclosure, and the market consequences of backing assets. This literature is particularly relevant for the present paper because it connects stablecoins' liability side to their asset side. Disclosure-based work shows that the informational content of reserve reporting matters for market interpretation, while comparisons with money market funds clarify both the similarities and the limits of the analogy between stablecoins and traditional cash-management vehicles (Maex and Slavov, 2025; Anadu *et al.* 2024; Oefele *et al.* 2024). Recent studies and official work establish that reserve design is not a technical appendix to issuance but the mechanism through which on-chain demand for programmable balances is transmitted into conventional markets (Adrian *et al.* 2025; Ahmed and Aldasoro, 2025). The theoretical underpinning of this stream has been substantially deepened by Li, Mancini-Griffoli, Miccoli, Tan, and Zhang (2026), who develop a Diamond–Dybvig-style framework that formalizes the trade-off between maintaining stability and preserving issuer profitability: the unregulated equilibrium is suboptimal because issuers hold risky assets to maximize profits, and a social planner can improve welfare by requiring safe-asset backing combined with alternative revenue channels such as central bank reserve remuneration in a narrow-bank configuration. The empirical mapping into Treasury markets is now well established. Ahmed and Aldasoro (2025) show that inflows into dollar-backed stablecoins lower short-term U.S. Treasury yields; Barthélemy, Gardin, and Nguyen (2026) demonstrate that when major issuers held commercial paper extensively, stablecoin demand influenced short-term funding-market issuance; Ferrari Minesso and Siena (2026) interpret U.S. dollar stablecoins as creating a new global safe-asset channel linking private money creation and international payment demand directly to U.S. public debt. The institutional counterpart of this empirical finding is provided by Yadav and Malone (2026), who argue that the U.S. Treasury market itself is becoming structurally dependent on stablecoin-related demand, with the implication that the safe-asset channel is bidirectional: stablecoins do not merely consume Treasury supply but increasingly shape its short-term composition. The literature on reserve design materially deepens the field, but remains fragmented between disclosure studies,

funding-market studies, and macro safe-asset analyses. Few papers synthesize these strands to explain how reserve architecture shapes the economic identity of stablecoins as a distinct monetary layer.

A fourth stream examines the relationship between stablecoins, banks, and monetary-policy transmission. This has become one of the most dynamic areas of recent research, and the evidence has shifted substantially in 2025–2026. Altavilla, Boucinha, Burlon, Adalid, Fortes, and Maruhn (2026) document a deposit-substitution mechanism whereby stablecoin adoption shifts funds away from retail bank deposits, increases banks' reliance on wholesale funding, and weakens intermediation capacity, thereby altering monetary-policy transmission. Aldasoro and Ahmed (2026) provide arguably the cleanest causal-design evidence on the substitution question to date: using local projections fit to weekly U.S. data from January 2019 to June 2025, they show that deposit-rate increases predict slower stablecoin market-capitalization growth, with the effect roughly three times larger under instrumental-variable identification that exploits the well-documented nonlinearity in deposit-rate pass-through above a federal funds rate of approximately 3 per cent; the effect is materially stronger for USDC than for USDT, consistent with USDC's closer ties to U.S.-domiciled depositors. Coste (2024) traces the prudential mechanics underlying these aggregate dynamics, showing how deposits originating from stablecoin issuers are treated as wholesale, financial-sector liabilities under existing frameworks, with implications for liquidity coverage and net stable funding ratios at deposit-receiving banks. Wang's December 2025 FEDS Notes analysis (Wang, 2025) organizes these effects into three conceptually distinct channels – direct substitution, recycling within the banking system, and bank-issued stablecoin issuance – and notes that the composition of deposits matters more than the headline total, with transactional balances exposed to greater substitution pressure than savings balances. The New York Fed's work on stablecoin disintermediation reaches related conclusions from a complementary angle (Lee and Tou, 2026). Aldasoro *et al.* (2024) add nuance by showing that monetary tightening affects both traditional and crypto markets but that stablecoins do not behave as simple digital substitutes for established safe assets, while Chen and Phelan (2025) show that stablecoin issuance can harm banking-sector stability by altering deposit spreads, capital rebuilding, and lending capacity. Cong (2026) provides an industry-supported counterpoint, arguing that under the constraints imposed by the GENIUS Act – full reserve backing, prohibition on issuer-paid yield, prohibition on credit extension by issuers – the disintermediation pressure on bank deposits is materially smaller than headline projections suggest, with stablecoin–deposit substitution conditional on yield differentials and reserve composition. Read together, this stream has firmly moved stablecoins into mainstream debates on banking and monetary transmission, yet most studies either focus on banking effects without a detailed comparison to tokenized deposits or analyze stablecoin disintermediation in isolation from the broader tokenization of money.

A fifth stream studies stablecoins in payments, remittances, and cross-border finance. This literature remains thinner than the banking or reserve-design literature, but it is growing quickly and is increasingly relevant because it connects stablecoins to international monetary competition and payment-system frictions. IMF work shows that stablecoins remain heavily concentrated in crypto-market and automated uses yet also documents large and growing cross-border payment-related flows (Adrian *et al.* 2025; Cerutti *et al.* 2025). BIS work by Auer *et al.* (2025) uses a large bilateral dataset and shows that cross-border flows in stablecoins have distinct drivers from those of native crypto-assets, supporting the view that stablecoins have both speculative and transactional uses. Methodological work has also begun to address how international stablecoin flows can be measured more consistently, which matters because empirical inference remains highly sensitive to data construction (Reuter, 2025). This literature is valuable because it moves the discussion beyond domestic banking systems and toward international currency usage, digital dollarization, and cross-border monetary influence. However, much of it still focuses on adoption and flow patterns rather than on the institutional consequences of scaling stablecoin-based payments relative to bank-based tokenized money.

A sixth stream concerns regulation and institutional design. This stream has expanded sharply because stablecoins have moved beyond the stage where they could plausibly be treated as a regulatory afterthought. The FSB's framework on crypto-asset activities and stablecoin arrangements identified risks to financial stability, governance, and cross-border supervision, while the BIS has emphasized that jurisdictions are increasingly building frameworks focused on asset backing, disclosure, stability, and illicit-finance concerns (FSB, 2023, 2025; BIS, 2025). Earlier prudential work on e-money, oversight, and user protection remains relevant because stablecoin regulation increasingly overlaps with questions long associated with nonbank digital money claims (Dobler *et al.* 2021). Three recent regulatory regimes anchor contemporary academic and policy literature. First, the European Union's MiCA regime, which represents the most systematic *ex ante* formalization through asset-referenced tokens and electronic money tokens, with EBA work clarifying both the distinction between tokenized deposits and stablecoin-like liabilities and the overlap between MiCA and payment-services regulation (EBA, 2024, 2025, 2026). Second, the U.S. GENIUS Act of July 2025 (Public Law 119-27), which establishes a statutory framework for

payment stablecoins built around full one-to-one reserve backing, a closed list of permissible reserve assets, an explicit prohibition on issuer-paid yield, and a chartering pathway for nonbank issuers under federal supervision, with implementing rulemaking underway in 2026 (Dudley and Liang, 2026; OCC, 2026; FDIC, 2026; U.S. Treasury, 2026a, 2026b). The U.S. literature around the Act has expanded rapidly, with Yadav and Malone (2026) analysing its Treasury-market consequences and Cong (2026) examining its implications for bank deposit dynamics. Third, the Bank of England's "multi-money" framework, articulated through its 2025 consultation on sterling-denominated systemic stablecoins and subsequent speeches, which explicitly seeks to allow stablecoins, tokenized deposits, and central bank money to coexist under conditions that preserve trust in money (Bank of England, 2025a, 2026; Breeden, 2025). Recent monitoring by the FSB, IOSCO, and the ESRB shows that implementation remains uneven across jurisdictions and that broader systemic-risk concerns extend beyond individual issuers to crypto and DeFi spillovers (FSB, 2024; IOSCO and FSB, 2025; ESRB, 2025). This stream is rich in institutional detail, but much of it remains segmented by jurisdiction. There is still a clear need for work that synthesizes regulatory design not just as legal comparison but as a question about what kind of monetary architecture different frameworks are implicitly trying to produce.

A seventh and increasingly important stream compares stablecoins with tokenized deposits and related tokenized forms of money. This stream is directly relevant to the present paper and remains less developed than its importance would suggest. Garratt and Shin (2023) provide the key conceptual distinction by contrasting bearer-style stablecoins with non-bearer tokenized deposits and showing why the former threaten the singleness of money while the latter can preserve it through settlement in central bank money. The EBA's report on tokenized deposits translates that distinction into regulatory terms by clarifying that tokenized deposits remain deposits even when recorded on DLT and should not be conflated with EMTs (EBA, 2024). Huang and Keister (2026) revisit the debate from a theoretical perspective, modeling stablecoins and tokenized deposits as competing forms of tokenized private money with different welfare implications depending on bank incentives, regulation, and the scale of blockchain-based trade. The BIS annual report places the same question into a broader macro-financial vision, treating tokenized commercial bank money as part of the core future system while viewing stablecoins much more critically (BIS, 2025). Despite these advances, the comparative literature remains narrow relative to the importance of the issue. There are still relatively few papers that combine market evidence, reserve analysis, and regulatory comparison to study stablecoins and tokenized deposits as rival institutional forms within the same tokenized monetary environment.

The common limitation across these streams is fragmentation. Research on peg stability rarely connects depegging risk to reserve architecture, bank-funding effects, and safe-asset demand. Work on regulation often remains jurisdiction-specific, even as MiCA, the GENIUS Act, and the UK multi-money consultation increasingly raise the same architectural question: how private tokenized money can coexist with tokenized deposits and central-bank settlement without fragmenting money at par. The small literature on stablecoins versus tokenized deposits provides the closest bridge to that question, but it remains insufficiently connected to current market concentration, reserve composition, and regulatory change.

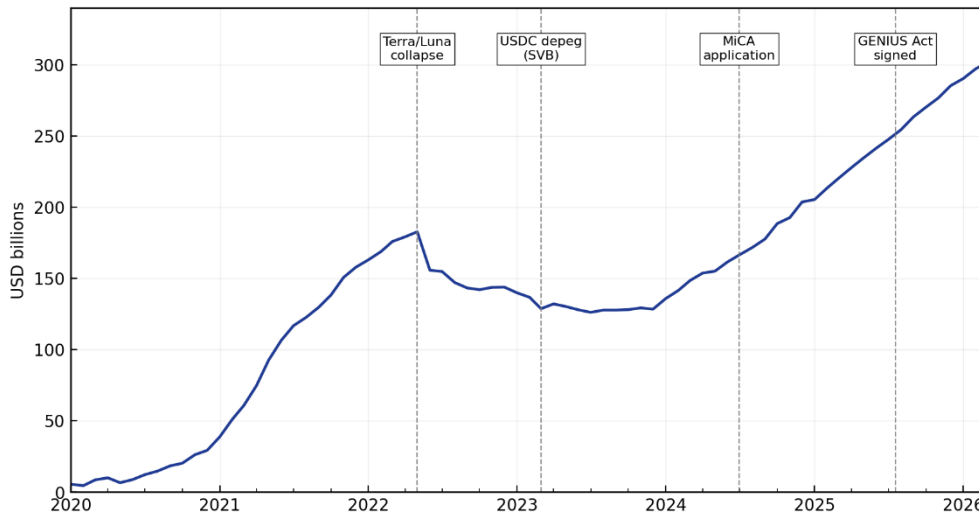
Three unresolved issues follow directly from this fragmentation. First, the literature still lacks a consolidated framework locating stablecoins between deposits, tokenized deposits, EMTs, and tokenized MMF-like claims. Second, reserve architecture has not yet been integrated into a single account linking disclosure, Treasury-market effects, bank-funding effects, and the global safe-asset channel. Third, the institutional competition between stablecoins and tokenized deposits remains underdeveloped, especially under the new regulatory perimeter created by MiCA, the GENIUS Act, and the UK multi-money approach. This paper addresses these gaps by treating stablecoins as a distinct monetary layer, linking market structure to reserve design and macro-financial transmission, and comparing stablecoins with tokenized deposits as competing institutional forms of programmable private money.

#### 4. Market Structure of the Stablecoin Sector

The current structure of the stablecoin market indicates that stablecoins can no longer be treated as a peripheral supporting asset within crypto-asset markets. Their scale, concentration, and integration into wider tokenized financial activity justify treating them as a distinct monetary segment rather than as a narrow technical layer. As of 8 March 2026, RWA.xyz reported total stablecoin value of approximately 301 billion USD and more than 233 million holders, while DefiLlama and CoinGecko report aggregates within a 3–5 per cent range of this figure; the differences reflect methodological choices about how to treat wrapped tokens, paused issuance, and cross-chain duplicates rather than any disagreement on the order of magnitude (DefiLlama, 2026; CoinGecko, 2026; RWA.xyz, 2026). Reuter (2025) provides a methodological framework for reconciling these estimates and shows that, while the level

varies by construction, the trend and the dominant compositional features (issuer concentration, dollar dominance, network distribution) are robust across measurement choices. Aggregate scale is economically relevant in its own right, but its main significance lies in what it represents historically: stablecoins have moved from a niche liquidity instrument into the dominant monetary base of on-chain markets and an increasingly important form of tokenized private money. The historical growth of the sector, shown in Figure 1, is therefore not merely a background trend; it is the empirical basis for analyzing stablecoins as a monetary phenomenon rather than a transient crypto-market convenience.

Figure 1. Total stablecoin market capitalization, January 2020 – March 2026



Notes: billions USD, monthly. Annotations mark Terra/Luna collapse (May 2022), USDC depegging during Silicon Valley Bank failure (March 2023), MiCA entry into application for ARTs and EMTs (June 2024), and the signing of the GENIUS Act (July 2025).

Source: DefiLlama (2026); RWA.xyz (2026); CoinGecko (2026), authors' compilation. Methodological discrepancies across sources are within  $\pm 5$  per cent; series shown reflects the DefiLlama aggregate.

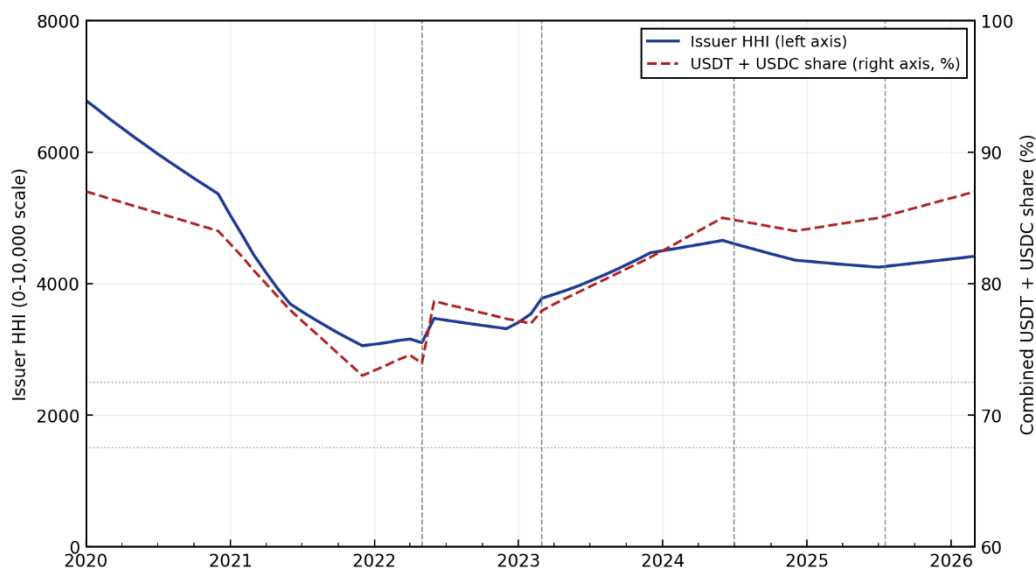
Figure 1 traces the historical scaling of stablecoins from a niche liquidity instrument into a monetary layer of growing systemic relevance for tokenized markets. The figure makes visible four developmental phases: early expansion (2020–2021), rapid growth during the crypto bull cycle (2021–2022), contraction associated with the Terra/Luna collapse and the broader 2022–2023 market correction, and renewed growth from late 2023 onward that pushed the sector above the 300 billion USD threshold by early 2026. The renewed expansion visible after mid-2025 coincides with greater U.S. regulatory clarity following the GENIUS Act, although the figure should be interpreted descriptively rather than as evidence of a causal regulatory effect. The pattern shows that the current significance of stablecoins cannot be understood through a static cross-sectional snapshot; it is the outcome of a rapid scaling process that redefined stablecoins as a form of tokenized private money rather than a transient feature of crypto-market infrastructure.

Scale alone does not capture the most important structural features of the sector. The stablecoin market is highly concentrated by issuer and overwhelmingly concentrated by currency. USDT and USDC account for approximately 90 per cent of total stablecoin capitalization, and around 97 per cent of issuance is denominated in U.S. dollars (Adrian *et al.* 2025). The concentration is asymmetric: stablecoins are technically portable across blockchains, wallets, and market venues, but they are not decentralized on the issuance side. Transferability is distributed; the liability structure is concentrated in a small number of private entities whose credibility depends on reserve quality, redemption arrangements, and market confidence rather than on the institutional guarantees associated with deposits or central bank money. This combination explains both the sector's success and its fragility. Concentrated issuance enables standardization, scale, and broad use as a common settlement asset across fragmented digital markets, but it also amplifies the consequences of issuer-specific shocks: reserve uncertainty, redemption friction, or confidence events at one or two major issuers can quickly become sector-wide. The persistence of dollar dominance despite the earlier introduction of MiCA-compliant euro-denominated stablecoins (notably Circle's EURC and Société Générale's EURCV) reinforces this picture. As Adrian *et al.* (2025) document, regulatory infrastructure alone has not been sufficient to drive non-dollar adoption: network effects, secondary-market liquidity, and the underlying currency's role in international finance dominate. Concentration is

therefore not an industrial-organization curiosity. It is a monetary-stability question because it makes system-wide confidence highly sensitive to a very small number of issuer-specific balance sheets and to a single sovereign currency.

Issuer concentration is not only high in the cross-section; it is also persistent over time, with movements that track regulatory and stress events rather than competitive dynamics in a conventional sense. Figure 2 shows the Herfindahl-Hirschman Index of issuer concentration in the stablecoin market computed monthly from January 2020 to March 2026, alongside the combined market share of the two leading issuers, USDT and USDC. The HHI is constructed in the standard form  $HHI = \sum s_i^2$ , where  $s_i$  denotes the percentage market-capitalization share of issuer  $i$  and the index is reported on the conventional 0-10,000 antitrust scale. By the U.S. Department of Justice and Federal Trade Commission thresholds, values above 2,500 denote a "highly concentrated" market. The stablecoin sector has remained above this threshold throughout the sample.

Figure 2. Issuer-concentration Herfindahl-Hirschman Index of the stablecoin market, January 2020 – March 2026



Notes: Monthly observations. The HHI is computed on the 0–10,000 antitrust scale as  $HHI = \sum s_i^2$ , where  $s_i$  denotes the percentage market-capitalization share of issuer  $i$ . The dashed reference lines indicate the conventional U.S. Department of Justice and Federal Trade Commission thresholds at  $HHI = 1,500$  (boundary between unconcentrated and moderately concentrated markets) and  $HHI = 2,500$  (boundary between moderately concentrated and highly concentrated markets). The right-hand axis shows the combined market share of USDT and USDC. Vertical dashed lines mark the collapse of TerraUSD (May 2022), the U.S. regional banking turbulence and USDC depeg (March 2023), the entry into application of MiCA for asset-referenced and electronic-money tokens (30 June 2024), and the signing of the GENIUS Act (18 July 2025).

Source: authors' computation based on issuer-level monthly market capitalizations from DefiLlama (2026), cross-checked against CoinGecko (2026).

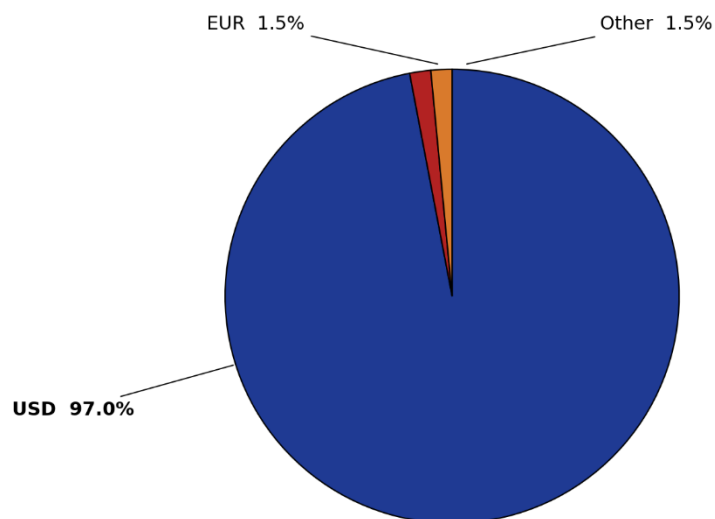
The series tells a non-monotonic story. Concentration was extreme in early 2020, with HHI close to 6,800, reflecting the near-monopoly position of USDT in the early phase of the market. The expansion of USDC and the brief growth of BUSD, DAI and TerraUSD reduced the index sharply through 2020 and 2021, reaching a local minimum of approximately 3,055 in December 2021 – still above the "highly concentrated" threshold but the most diversified configuration the market has reached to date. The collapse of TerraUSD in May 2022 mechanically reduced the issuer count by one and produced a temporary increase in HHI as remaining issuers absorbed redirected demand. The U.S. regional banking turbulence of March 2023, which produced the temporary depeg of USDC, accelerated a redistribution of share from USDC back to USDT, and the index rose to roughly 3,800 by mid-2023. The termination of BUSD by the New York Department of Financial Services later that year removed a further competitor.

In the post-MiCA and post-GENIUS period the index has stabilized in a range between approximately 4,200 and 4,700, with the entry of USDe, FDUSD, and PYUSD only partially offsetting the consolidation around USDT and USDC. As of the snapshot date used elsewhere in this paper, HHI stands at approximately 4,415, with the combined USDT + USDC share at 87 per cent. This combination of values places the stablecoin sector in a more concentrated position than U.S. money market funds, which exhibit HHI values typically below 1,000, and at a level comparable to large-bank deposit concentration in mid-sized European economies. The persistence of this

concentration is not merely a product of network effects or first-mover advantages. Ma, Yang, and Zhang (2025) develop a theoretical framework showing that issuer concentration is structurally tied to the centralization of arbitrage: stablecoin issuers actively restrict the set of authorized arbitrageurs in order to stabilize the peg in normal times, but this design choice simultaneously concentrates run risk in those same arbitrageurs under stress. Concentration on the issuer side and concentration on the arbitrage side are therefore two manifestations of the same trade-off between price stability and crisis resilience, which helps explain why the stablecoin sector remains structurally concentrated even as new entrants appear. From a monetary-stability perspective, the implication is that concentration must be modelled as a structural feature of the sector rather than a transitional one, and that the prudential, redemption, and resolution frameworks discussed in Sections 5 and 7 must be designed to operate against a market in which two issuers persistently account for roughly nine-tenths of outstanding supply. Analytically, this means concentration is not merely a descriptive feature of the current market but a determinant of systemic risk: because singleness of money requires uniform par exchange across issuers, a sector in which two issuers account for the overwhelming majority of supply makes the system-wide maintenance of par dependent on the reserve adequacy and operational integrity of a very small number of balance sheets. Market concentration therefore feeds directly into the integrity dimension of the BIS framework rather than standing as a stand-alone statistic.

A second defining characteristic of the sector is its overwhelming dollarization. Figure 3 makes this feature explicit. Stablecoins are often described in generic terms as fiat-referenced digital assets, but the actual market is overwhelmingly a dollar market. The IMF's estimate that around 97 per cent of stablecoin issuance is dollar-denominated implies that the stablecoin ecosystem is not merely creating a new class of private digital claims; it is extending the monetary reach of the U.S. dollar into tokenized financial environments. This has at least three implications. First, it connects the growth of stablecoins directly to global demand for dollar liquidity. Second, it links stablecoin expansion to the demand for U.S. safe assets, especially Treasury bills and Treasury-backed repos. Third, it raises questions of monetary sovereignty in non-U.S. jurisdictions, particularly where tokenized markets may increasingly operate on top of private dollar liabilities rather than domestic money. These concerns are now explicit in IMF, BIS, and ECB work and are among the reasons stablecoins have moved from a specialized fintech issue to a broader macro-financial and geopolitical question.

Figure 3. Currency composition of stablecoin market capitalization, March 2026



Notes: Share of total stablecoin market capitalization by reference currency, percentages.

Source: Adrian *et al.* (2025) for the dominance estimate; cross-checked against CoinGecko (2026) and RWA.xyz (2026) March 2026 snapshot.

Figure 3 makes explicit the asymmetric currency composition of the stablecoin market. Dollar-linked stablecoins account for approximately 97 per cent of total capitalization; euro-, sterling-, yen-, and other-currency stablecoins together account for the remainder, with the largest non-dollar segment (euro) materially below 2 per cent. The stablecoin market is therefore not a generic market for fiat-referenced digital tokens but a highly asymmetric system of private dollar-denominated money. Analytically, this matters in three ways. First, it ties stablecoin demand to global demand for dollar liquidity. Second, it ties stablecoin growth to demand for U.S. safe

assets, principally short-dated Treasuries and Treasury-backed repo. Third, it raises monetary-sovereignty questions for non-U.S. jurisdictions in which tokenized markets may increasingly operate on top of private dollar liabilities rather than on domestic money – a concern now explicit in IMF, BIS, and ECB work and a principal driver of the post-2024 regulatory response.

The market is also structured across blockchain networks in ways that are economically revealing. RWA.xyz network data indicate that Ethereum remains the dominant network by stablecoin capitalization, with about 166.7 billion USD, while BNB Chain hosts roughly 12.8 billion USD and other chains much smaller amounts. This concentration across networks matters because it suggests that stablecoins are not distributed evenly across technological environments. Rather, they cluster where tokenized asset activity, settlement demand, and composability are deepest. The dominance of Ethereum reinforces the view that stablecoins are increasingly embedded in broader tokenized financial infrastructures rather than functioning only as transactional media in isolated crypto niches. In other words, stablecoins are becoming part of a networked monetary layer whose structure depends not only on issuer behavior but also on the architecture of the underlying platforms in which they circulate.

At the same time, the economic use of stablecoins remains more complex than a simple “digital payments” narrative would suggest. IMF evidence indicates that stablecoins are still used predominantly for crypto-related purposes, including trading, collateral management, liquidity parking, and automated market operations, with a substantial share of transaction activity driven by bots and algorithmic systems. This does not diminish their importance. On the contrary, it helps clarify the stage of development the sector has reached. Stablecoins have not yet become a generalized retail money for households and firms, but they have already become the default monetary base for a large share of on-chain finance. That intermediate position is crucial: it explains why stablecoins can have growing banking, reserve-market, and regulatory consequences even before they become a dominant retail payment instrument.

The distinction between outstanding supply, circulation, and function is therefore essential. A stablecoin can have a very large market capitalization without being widely used in everyday retail transactions, just as a money-market-like claim can be systemically relevant without circulating as hand-to-hand currency. Stablecoins should be interpreted along both monetary and intermediation dimensions. On the monetary side, they increasingly provide the unit of settlement and liquidity management for tokenized markets. On the intermediation side, their reserve-backed structure translates user demand for blockchain-compatible money into demand for Treasury bills, repos, bank deposits, and other liquid assets. This is why market structure is not merely descriptive groundwork. It establishes the conditions under which reserve design and monetary transmission become economically meaningful.

The current market structure has direct implications for the competition between stablecoins and tokenized deposits. As of late 2024, the EBA documented only very limited live tokenized-deposit activity in the EEA, with use cases concentrated in narrow institutional settings (EBA, 2024). The picture has shifted materially in 2025–2026, although the evidence should be interpreted as institutional experimentation and early commercialization rather than full market parity with stablecoins. JPMorgan introduced its JPM Coin USD / JPMD deposit-token initiative for institutional clients on Coinbase's Base network; Citi expanded Citi Token Services for cross-border payments and liquidity management, including 24/7 USD clearing and euro integration; BNY was selected as the primary reserve custodian for Ripple's RLUSD stablecoin; and SoFi announced SoFiUSD, describing it as the first stablecoin issued by a U.S. national bank on a public permissionless blockchain (JPMorgan Chase, 2025; Citigroup, 2025a, 2025b; BNY, 2025; SoFi Technologies, 2025). These examples do not show that tokenized deposits or bank-issued stablecoins have reached commercial parity with USDT and USDC, which still circulate at an order of magnitude larger than the visible stock of bank-issued tokenized money. They do, however, show that the asymmetry between scaled stablecoins and bank-based programmable money is narrowing rather than widening, and that the competition between the two forms is moving from prospect to active institutional contest. Stablecoins continue to enjoy a first-mover advantage in open and crypto-native settings, while bank-based tokenized money is gaining ground in institutional and cross-border B2B settings where prudential integration and balance-sheet continuity matter most. The competitive field is therefore best characterized not as a contest between equally mature products, but as a rapidly shifting institutional rivalry whose eventual outcome will depend on regulatory design, interoperability, and the operational maturity of bank-issued programmable money. Equity-market evidence supports this characterization: Copestake, Englander, Martinez Peria, and Villegas-Bauer (2026) use high-frequency variation in stock prices around U.S. legislative events to estimate that legislation supporting the use of stablecoins in payments reduced the market value of listed incumbent payment firms by approximately 18 per cent, or about 300 billion USD. The estimated effect is proportionally larger for incumbents focused on cross-border

payments and smaller for incumbents protected from network effects or already offering crypto-related services. The financial-market interpretation is therefore consistent with the institutional one: stablecoins are increasingly priced as a credible competitor to incumbent payment infrastructure, particularly in cross-border use cases where their cost and speed advantages are most pronounced.

This market structure has three implications. First, stablecoins have reached a scale at which they must be treated as a meaningful monetary segment rather than a technical appendage of crypto trading. Second, the joint concentration of issuance and currency makes issuer credibility, reserve quality, and cross-border monetary influence the central analytical variables, not the choice of blockchain or the user interface. Third, the current market architecture gives stablecoins a substantial first-mover advantage in open digital markets, but the rapid 2025–2026 development of bank-issued tokenized money – both as tokenized deposits and as bank-affiliated stablecoins under the GENIUS Act chartering pathway – suggests that this advantage is not structurally permanent. The trajectory will depend on regulatory design, interoperability between forms of money, and the operational maturity of programmable bank-based instruments. The argument therefore turns from market structure to the balance-sheet design that sustains it.

### 5. Reserve Design and Monetary Transmission

If market structure explains why stablecoins matter, reserve design explains how they matter. Stablecoins are liabilities that promise stable redemption, but the credibility of that promise depends not on a nominal peg or on secondary-market arbitrage alone. It depends on the composition, liquidity, transparency, and operational accessibility of the assets held against those liabilities. Reserve design is therefore the bridge between private token issuance and monetary consequence: it determines whether a stablecoin behaves more like a narrow claim on safe assets, a money-market-fund-like instrument, a shadow-banking liability with embedded liquidity risk, or a hybrid of these forms. The theoretical underpinning of this view has been formalized by Li, Mancini-Griffoli, Miccoli, Tan, and Zhang (2026) in a Diamond–Dybvig-style framework that captures the trade-off between maintaining stability and preserving issuer profitability: the unregulated equilibrium is suboptimal because issuers hold risky assets to maximize profit, and welfare can be improved by combining safe-asset backing with alternative revenue channels such as central bank reserve remuneration in a narrow-bank configuration. The empirical literature complements this theory with three observations: the IMF documents that the largest stablecoins are backed mainly by short-term U.S. Treasuries, Treasury-backed repos, and deposits at financial institutions (Adrian *et al.* 2025); BIS work on stablecoin runs shows that reserve quality and transparency jointly determine peg resilience (Ahmed, Aldasoro and Duley, 2024); and ECB, BIS, and Federal Reserve staff work shows that reserve-backed stablecoins alter bank funding structures, reserve distribution, and monetary-policy transmission by transforming demand for digital transactional balances into demand for reserve assets outside the traditional deposit system (Altavilla *et al.* 2026; Aldasoro and Ahmed, 2026; Coste, 2024; Wang, 2025).

A first analytical point is that "stablecoin reserves" should not be treated as a uniform category. Even within the dominant fiat-backed segment, reserve structures differ materially across issuers. Circle's published reserve reports present USDC as backed by cash, short-dated U.S. Treasury securities, and Treasury-backed overnight repo, with the majority held through the BlackRock-managed Circle Reserve Fund (Circle Internet Financial, 2026). Tether's own reporting shows that although U.S. Treasury bills and reverse repos account for the majority of USDT backing, the reserve pool also contains secured loans, precious metals, bitcoin, and other investments classified as non-core assets (Tether International, 2026). These differences are not incidental. The category "reserve-backed stablecoin" contains meaningfully different risk architectures. A stablecoin backed narrowly by government securities, repo, and cash is institutionally different from one that embeds a wider asset mix; the difference is one of liquidation depth, valuation transparency, and operational accessibility under stress, not merely of accounting composition. The post-GENIUS regulatory environment in the United States is likely to compress this dispersion over time, because the closed list of permissible reserve assets in the GENIUS Act effectively forces U.S.-regulated payment stablecoins toward the narrow end of the spectrum (U.S. Congress, 2025). Reserve backing remains, for now, a spectrum rather than a binary characteristic, but the spectrum itself is narrowing under regulatory pressure.

Table 2. Major stablecoins: market position and reserve architecture, 31 December 2025

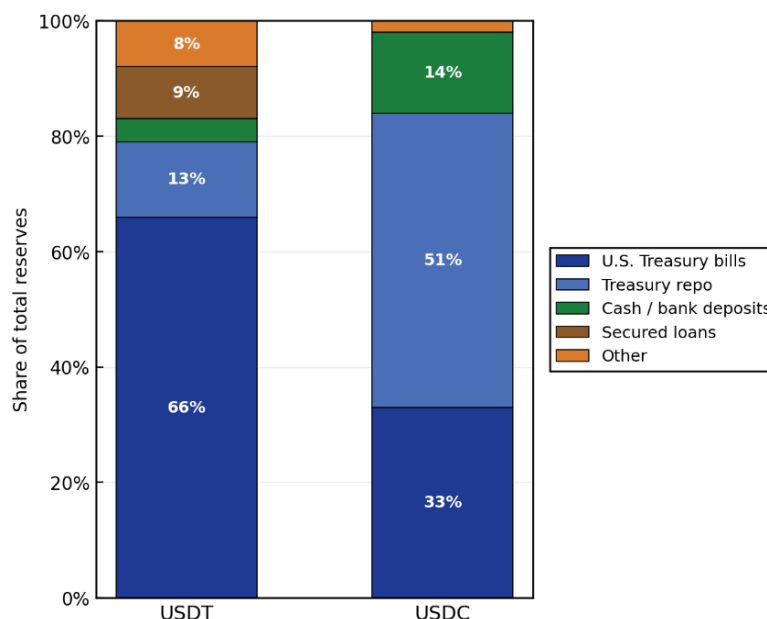
Stablecoin	Reference currency	Market cap (31 Dec 2025)	Issuer / sponsor	Reserve architecture (high level)	Disclosure / attestation style	Main use profile	Main fragility channel
USDT	USD	~140 bil. USD	Tether International, S.A. de C.V.	U.S. Treasury bills (~122 bil. USD) and Treasury-backed reverse repos (~25 bil. USD) dominate; secured loans (~17 bil. USD); precious metals, bitcoin, and other investments as residual	Quarterly assurance-style reserves report	Dominant cross-exchange liquidity; broad crypto settlement asset, especially in non-U.S. markets	Asset heterogeneity; opacity concerns under stress; issuer-specific confidence shock
USDC	USD	45 bil. USD	Circle Internet Financial	Cash and bank deposits (~14%); short-dated U.S. Treasuries (~33%); Treasury-backed overnight repo (~51%); reserves majority held via Circle Reserve Fund managed by BlackRock	Daily third-party reporting via Reserve Fund; monthly attestation	Institutional-facing payments; DeFi liquidity; tokenized-finance settlement rails	Bank/custody event risk (cf. SVB March 2023); redemption coordination under stress despite narrow reserves
USDe	USD	~5 bil. USD	Ethena Labs	Synthetic, delta-neutral collateral structure: long crypto spot positions hedged by short perpetual futures, plus liquid stablecoin reserves; not a fiat-backed model	Protocol-level transparency; periodic custodian attestations	DeFi-native yield-bearing collateral; on-chain trading	Funding-rate risk; centralized-exchange counterparty risk; collateral-market stress
DAI / USDS	USD	~5 bil. USD (combined)	Sky Ecosystem (formerly MakerDAO)	Mixed crypto-collateral plus growing share of tokenized real-world assets, especially short-dated U.S. Treasuries via tokenized vehicles	On-chain governance + protocol transparency	DeFi-native collateral and on-chain monetary use	Protocol/governance risk; collateral concentration; oracle and liquidation-mechanism risk
EURC	EUR	~0.2 bil. USD	Circle Internet Financial	Narrow euro-denominated reserve design: cash and short-dated euro-area government securities	MiCA EMT-regime reporting; transparency disclosures	Euro-denominated tokenized transfers and settlement	Scale disadvantage; weaker network effects; thinner secondary-market liquidity

Source: Author's compilation based on Tether (2026) and Circle (2026) reserve attestations as of 31 December 2025; market capitalization data from CoinGecko (2026) and DefiLlama (2026); for USDe, Ethena Labs (2025) transparency disclosure; for FDUSD, First Digital Trust (2025) reserve attestation; for DAI/USDS, MakerDAO/Sky Protocol (2025) on-chain collateral data.

Table 2 brings this heterogeneity into focus. The major issuers rely on materially different reserve configurations: narrow Treasury-and-repo structures (USDC, EURC), heterogeneous mixed-asset structures (USDT), synthetic delta-neutral collateral (USDe), and crypto- or tokenized-asset structures with on-chain governance (DAI/USDS). Disclosure also varies, from daily reserve-fund reporting to periodic custodian attestations and protocol-level transparency. These differences shape redemption credibility, liquidity under stress, and the channels through which stablecoins affect conventional markets. The 2025–2026 regulatory wave is likely to compress heterogeneity at the top of the market, as GENIUS-compliant payment stablecoins and MiCA EMTs are pushed toward narrower reserve models, while synthetic and DeFi-native designs remain institutionally distinct.

These differences matter for how the major issuers should be interpreted. A stablecoin with a narrow reserve structure concentrated in government bills, Treasury-backed repos, and cash is more readily understood as a tokenized claim on highly liquid safe assets. It does not thereby become identical to a bank deposit or a money market fund share, but it is institutionally closer to a narrow reserve-backed transactional instrument than to a broader portfolio liability. A stablecoin backed by a more heterogeneous reserve mix, by contrast, embeds greater scope for valuation uncertainty, liquidity asymmetry, and information sensitivity under stress. Two stablecoins may both hold par most of the time while resting on materially different balance-sheet logics and therefore on materially different conditions of credibility. The analytical implication is that reserve heterogeneity maps directly onto the elasticity and integrity dimensions of sound money: a narrowly backed issuer approximates a tokenized claim on safe assets and supports par exchange with high reliability but limited elasticity, whereas a broader reserve structure introduces liquidity transformation that raises elasticity at the cost of redemption certainty. Reserve composition is therefore not a reporting detail but the variable that locates each issuer on the singleness–elasticity–integrity surface.

Figure 4. Reserve composition of USDT and USDC, 31 December 2025



Notes: Stacked-bar comparison, percentage of total reserves by asset class. USDT components: U.S. Treasury bills (~122 billion USD); Treasury-backed reverse repos (~25 billions USD); secured loans (~17 billions USD); precious metals, bitcoin, and other investments (residual). USDC components: cash and bank deposits (~14%); short-dated U.S. Treasuries (~33%); Treasury-backed overnight repo (~51%); other (residual).

Sources: Tether International (2026); Circle Internet Financial (2026).

Figure 4 compares the reserve architecture of the two dominant USD-pegged stablecoins. It makes visible the difference between a heterogeneous mixed-asset reserve (USDT) and a narrower Treasury-and-repo reserve (USDC), together with differences in disclosure granularity. The comparison matters because liquidity under stress, macro-financial transmission, and exposure to regulatory tightening all depend on the asset-side structure behind the token. Under the closed list of permissible reserve assets in the GENIUS Act, the USDC structure is closer to

the post-GENIUS regulatory norm, while USDT includes asset categories that sit outside the U.S. payment-stablecoin perimeter.

A second point is that reserve design affects not only solvency in a narrow sense but also the strategic dynamics of redemption. Stablecoin fragility is often discussed in terms of depegging, but the deeper issue is whether holders continue to believe that par convertibility can be honored quickly and predictably when public information becomes adverse. Ahmed, Aldasoro, and Duley (2024) show that the informational quality of reserve assets affects the coordination game among stablecoin holders, and that public disclosure can either reduce or amplify run risk depending on prior beliefs about reserve quality. Their framework identifies a trade-off between transparency and fragility: better information stabilizes expectations when reserve quality is believed to be strong, but negative public signals can accelerate redemptions when confidence is already weak. Transparency is necessary but not a sufficient substitute for asset quality and liquidity: a reserve pool can be more transparent and yet more vulnerable if its underlying assets are difficult to liquidate or sensitive to valuation shocks in stressed conditions.

A complementary fragility channel operates through market microstructure rather than through reserves. Ma, Yang, and Zhang (2025) document that the arbitrage mechanism that maintains the stablecoin peg in normal conditions is highly concentrated, with a small number of authorized arbitrageurs accounting for the bulk of mint-and-redeem activity. Concentrated arbitrage is functional in normal conditions because it minimizes peg deviation, but it introduces an additional source of fragility under stress: if even a small number of arbitrageurs withdraw – for operational, regulatory, or balance-sheet reasons – secondary-market peg deviations can become material even when reserves remain intact. The institutional architecture of arbitrage is therefore part of the broader reserve-and-redemption problem, not a separate technical issue.

Together, these results explain why reserve quality matters more than nominal peg performance. A stablecoin can remain near par in normal conditions while still carrying latent run risk if its reserves are opaque, heterogeneous, or operationally difficult to mobilize quickly under stress; or if the arbitrage architecture that sustains the peg in normal conditions is concentrated enough to fail when most needed. The TerraUSD collapse demonstrated the fragility of algorithmic and under-collateralized designs; the subsequent literature has shown that even reserve-backed models must be analyzed through the same first-mover logic. Reserve design therefore operates along four interacting dimensions – informational, liquidity, governance, and arbitrage-architecture – which jointly determine whether holders continue to regard the token as money-like at the moment when convertibility is most in question.

The third analytical implication of reserve design is that it transmits stablecoin demand into conventional financial markets. This is where the analysis moves from microstructure to macro-finance. The literature now identifies three distinct transmission channels operating through the asset side of stablecoin issuance. They are conceptually separable but operationally intertwined.

#### *The Treasury and short-term funding channel.*

Demand for dollar-backed stablecoins concentrates in U.S. Treasury bills and Treasury-backed reverse repos, which means that on-chain demand for transactional balances is mechanically translated into off-chain demand for the most liquid segments of U.S. public debt. Ahmed and Aldasoro (2025) show that inflows into dollar-backed stablecoins are associated with measurable declines in short-term Treasury yields. Cerutti, Firat, Hengge, and Sagawa (2026) provide stronger causal identification of the same mechanism: combining a daily narrative dataset of stablecoin-specific news with high-frequency variation in the combined market capitalization of USDC and USDT, they implement heteroskedasticity-based identification within an event-study and structural-VAR framework, and document that positive stablecoin demand shocks persistently lower short-term U.S. Treasury yields and depreciate the U.S. dollar. They also document heterogeneous cross-sectional effects – payment providers benefit from greater stablecoin adoption, while banks (including community and small banks frequently identified as exposed to deposit substitution) show no significant priced disintermediation risk – which is consistent with the moderate, regulatory-design-dependent magnitude of bank-funding effects that the second channel will examine. Barthélemy, Gardin, and Nguyen (2026) demonstrate that during periods when major issuers held larger commercial-paper exposures, stablecoin demand directly affected short-term funding-market issuance. The mechanism is not speculative: it operates through the standard balance-sheet identity that links liability creation to asset acquisition. As the GENIUS Act narrows the permitted reserve assets of U.S.-regulated payment stablecoins toward Treasury bills, repo, and insured deposits (U.S. Congress, 2025), this channel will tighten and become more concentrated in the front end of the Treasury curve.

*The bank-funding channel.*

Reserve composition transmits stablecoin demand into bank funding through two routes. The first is the reserve-deposit route: stablecoin issuers hold a portion of their reserves as bank deposits, which appear on the asset side of the issuer and the liability side of the bank but are treated as wholesale, financial-sector funding for prudential purposes (Coste, 2024). The second is the substitution route: when retail and institutional users move balances from bank deposits into stablecoins, the deposit base of the banking system contracts, increasing reliance on more expensive wholesale funding and altering the transmission of monetary policy (Altavilla *et al.* 2026; Lee and Tou, 2026). The substitution route has now been documented with careful identification: Aldasoro and Ahmed (2026) show using local projections on weekly U.S. data that deposit-rate increases predict slower stablecoin growth, with effects roughly three times larger under instrumental-variable identification, and materially stronger for USDC than for USDT. Wang (2025) organizes the resulting effects into three conceptually distinct effects – direct substitution, recycling within the banking system, and bank-issued stablecoin issuance – and notes that the composition of deposits matters more than the headline total, with transactional balances exposed to greater substitution pressure than savings balances. Cong (2026), in industry-supported research, argues that under the constraints imposed by the GENIUS Act the disintermediation pressure on bank deposits is materially smaller than headline projections suggest, with substitution conditional on yield differentials and the prohibition on issuer-paid yield. The literature has therefore converged on the qualitative conclusion that substitution is real and regulatory-design-dependent, but it has not converged on the quantitative magnitude of the effect, where estimates differ by roughly an order of magnitude. Wang (2025) reports illustrative scenarios in which displaced bank deposits could range from approximately USD 65 billion under conservative assumptions to over 1 trillion USD under more aggressive ones, with the higher figures reflecting unconstrained yield-bearing competition; the Bank Policy Institute and other industry-supported analyses argue that yield-bearing stablecoin variants could produce destabilizing outflows of comparable scale. Cong (2026), drawing on transaction-level evidence under post-GENIUS constraints, argues that effective substitution is materially smaller because the Act prohibits issuer-paid yield and confines reserves to a narrow set of assets that does not allow stablecoin issuers to compete with deposit rates directly. The disagreement is partly empirical and partly counterfactual: it depends on whether one assumes faithful enforcement of the GENIUS Act's yield prohibition, or whether one allows for indirect yield competition through affiliates, exchanges, or bundled product structures. The substitution effect is therefore best understood not as a single estimated parameter but as a range whose realised magnitude will depend on the operational interpretation of the GENIUS Act's perimeter rules. This is one of the principal empirical questions the literature on stablecoins and bank funding is yet to settle.

*The global safe-asset channel.*

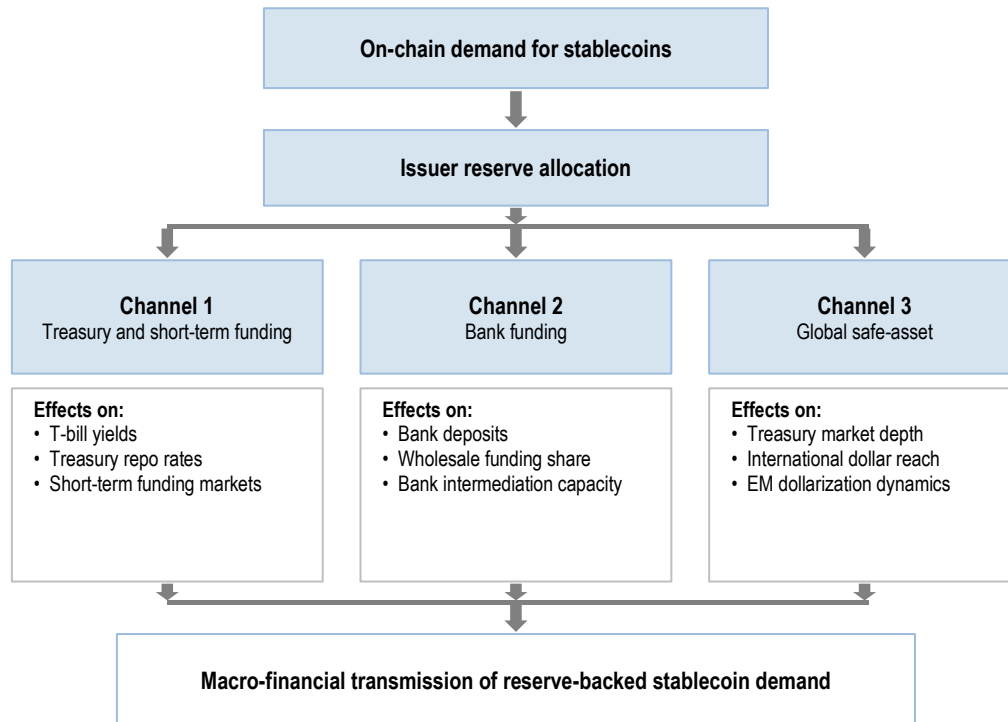
The third channel operates at the level of the international monetary system. Ferrari Minesso and Siena (2026) interpret U.S. dollar stablecoins as creating a new global safe-asset channel that links private money creation and international payment demand directly to U.S. public debt. Yadav and Malone (2026) extend this argument by tracing its institutional implications: as stablecoin issuance scales, the U.S. Treasury market becomes structurally dependent on stablecoin-related demand for short-term issuance, and non-U.S. jurisdictions experience an extension of dollar reach through tokenized rails. Aldasoro, Beltran, and Grinberg (2026) provide complementary evidence that large inflows into dollar stablecoins generate measurable parity deviations between stablecoin and spot-FX dollar prices and can weaken local currencies, particularly in jurisdictions with restricted access to dollar markets. Hofmann, Mehrotra, and Paulick (2026) embed these dynamics in a broader analysis of digital-age dollarization. The combined picture is one in which stablecoins are not only an instrument of payments but a channel through which private dollar issuance interacts with sovereign monetary control, with consequences for emerging-market policy autonomy that go well beyond the narrowly U.S.-domestic effects considered in the first two channels.

These three channels make reserve composition analytically central. A reserve pool concentrated in cash, short-dated Treasuries, repo, and insured deposits operates as a relatively narrow and predictable conduit between on-chain balances and off-chain markets. A reserve pool that includes secured loans, longer-duration assets, or non-core holdings introduces additional pathways through which stablecoin demand can affect conventional finance. The macro-financial footprint of a stablecoin is therefore determined jointly by its scale and by the architectural narrowness of its reserve.

The three channels also interact through the same set of reserve assets, which means that under stress they can amplify rather than diversify each other. Gross and Senner (2026) formalise this in a model that links a systemic stablecoin to the bond market through a feedback loop: redemption pressure depletes reserves, prompts asset sales, depresses bond prices, erodes the issuer's solvency, and amplifies further redemptions. Their analysis ties stablecoin design parameters – capital and liquidity buffers, reserve composition, redemption gates, and

reserve duration – directly to outcomes such as run frequency, fire-sale intensity, and bond-market volatility. Two implications follow. First, the architectural narrowness of a reserve does not by itself eliminate stress propagation; it only narrows the channel through which stress is transmitted. Second, the prudential framework for systemic stablecoins must be designed jointly across the asset side and the redemption side, since liquid reserves do not protect against runs if redemption mechanics permit unconstrained outflows in periods of stress.

Figure 5. The reserve transmission channel: from on-chain stablecoin demand to off-chain financial markets



Notes: Conceptual diagram, three transmission channels. Channel 1 (Treasury and short-term funding): demand for stablecoins → reserve allocation to T-bills and Treasury repo → effects on short-term Treasury yields and short-term funding markets. Channel 2 (bank funding): user demand for stablecoins → deposit substitution and reserve-deposit holdings at banks → effects on bank funding costs and intermediation capacity. Channel 3 (global safe-asset): scale of dollar stablecoin issuance → structural Treasury-market dependence and dollar extension via tokenized rails → effects on emerging-market dollarization and monetary autonomy.

Source: authors' synthesis based on Adrian *et al.* (2025), Ahmed and Aldasoro (2025), Aldasoro and Ahmed (2026), Coste (2024), Altavilla *et al.* (2026), Ferrari Minesso and Siena (2026), Yadav and Malone (2026), and Wang (2025).

Figure 5 summarizes this transmission logic. On-chain demand for programmable private money is translated into reserve allocation, and reserve allocation then affects safe-asset demand, bank funding, short-term funding markets, and international dollar intermediation. The figure therefore turns reserve design from an accounting description into a mechanism linking tokenized finance to conventional financial markets.

The same analysis also clarifies the institutional classification problem. Stablecoins backed narrowly by Treasury bills, repo, and insured deposits resemble tokenized narrow-money or cash-management claims. Broader reserve structures move closer to a shadow-banking perimeter, with different run dynamics, safe-asset effects, and competitive pressure on bank deposits. This classification matters because the relevant institutional alternative is not money in the abstract, but tokenized deposits as a bank-based form of programmable private money.

The three reserve channels also have direct implications for monetary policy and monetary sovereignty that deserve separate treatment, because they are among the most contested questions in the current debate. For monetary-policy transmission, the central point is that reserve-backed stablecoins relocate transaction balances from bank deposits into reserve portfolios concentrated in short-dated government claims. To the extent that this migration is large, it compresses the deposit base through which conventional policy rates are transmitted, and it shifts a portion of money-like balances into instruments whose return is governed by Treasury-bill and repo markets rather than by administered deposit rates. Altavilla *et al.* (2026) show that this can alter the pass-through of policy rates by changing the elasticity of bank funding, while the prohibition on issuer-paid yield under the GENIUS Act is precisely an attempt to limit the speed at which transaction balances migrate out of the deposit channel. The net

effect on transmission is therefore conditional on regulatory design rather than fixed, which is consistent with the order-of-magnitude disagreement on deposit substitution discussed in Section 3.

For interest-rate transmission specifically, the safe-asset channel implies a two-way linkage. Stablecoin inflows raise demand for short-dated Treasuries and compress their yields (Ahmed and Aldasoro, 2025), while redemption waves force reserve liquidation and can transmit stress back into the very markets that anchor the short end of the yield curve. As stablecoin reserves grow relative to the floating supply of Treasury bills, the marginal price-setting role of stablecoin flows in short-term funding markets increases, which means that monetary authorities may increasingly have to account for stablecoin redemption dynamics when assessing money-market conditions.

For digital dollarization and monetary sovereignty, the implications fall mainly outside the United States. Because roughly nine-tenths of stablecoin capitalization is dollar-denominated and a growing share of activity connects users in emerging-market economies, stablecoins function as a digital channel through which dollar balances reach residents of countries with high inflation, exchange-rate volatility, or capital controls (Adrian *et al.* 2025; Aldasoro, Beltran, and Grinberg, 2026). Where domestic demand for a stable store of value is strong, dollar stablecoins can substitute for local-currency balances, weakening the domestic monetary transmission mechanism and complicating the enforcement of capital-flow management measures. This “digital dollarization” extends the international reach of the dollar – strengthening its role as the unit of account of tokenized finance – while simultaneously narrowing the monetary autonomy of economies on the receiving end. The same architectural feature that makes dollar stablecoins attractive as globally portable money therefore creates an asymmetry: it reinforces the issuing currency’s dominance while eroding monetary sovereignty elsewhere. This tension, rather than peg stability, is arguably the most consequential macro-financial dimension of stablecoin growth for the international monetary system, and it motivates the regulatory and architectural questions taken up in Sections 6 and 7.

## 6. Stablecoins versus Tokenized Deposits

The comparison between stablecoins and tokenized deposits is central to the future architecture of tokenized money because these two instruments are emerging as the most plausible private-sector candidates for use on programmable financial platforms. They are often grouped together under the broad label of private tokenized money, and in a superficial sense that is understandable. Both are designed to circulate in digital form, both can be represented on distributed ledgers or related infrastructures, and both can support more automated, programmable, and potentially interoperable payment and settlement processes than conventional account-based arrangements (Garratt and Shin, 2023; EBA, 2024; Huang and Keister, 2026). Yet once the comparison moves from surface functionality to legal form, balance-sheet structure, settlement logic, and macro-financial implications, stablecoins and tokenized deposits begin to look like markedly different monetary institutions rather than alternative technical wrappers for the same claim.

The comparison can be developed along five interlocking dimensions: transfer logic and bearer character; balance-sheet logic and elasticity; legal and regulatory perimeter; use-case orientation and market traction; and the regulatory architecture under which the two forms compete. These dimensions may look minor at the level of user experience, but they matter substantially for singleness of money, monetary transmission, and the institutional choice between integrating private tokenized money into the banking system or allowing it to operate as a more independent monetary layer.

Table 3 distills the paper’s comparative argument. Stablecoins and tokenized deposits are not interchangeable versions of the same digital-money instrument. Although both are designed for programmable, ledger-compatible environments, they differ fundamentally in the nature of the claim, transfer logic, settlement design, prudential treatment, and relationship to bank intermediation. The comparison therefore moves the debate beyond a generic contrast between stablecoins and traditional money and toward the institutional question that matters more for tokenized finance: whether programmable money is organized around bearer-style private claims or around bank-based tokenized deposit claims. BIS Bulletin No. 73 remains the foundational statement of this distinction, and the EBA’s 2024 report gives it concrete regulatory content in the European setting.

Table 3. Stablecoins versus tokenized deposits

Dimension	Stablecoins	Tokenized deposits
Issuer type	Usually nonbank issuer or special-purpose structure; may be bank-affiliated in some models	Commercial bank
Nature of claim	Redeemable private tokenized liability of issuer	Deposit claim on bank represented on tokenized infrastructure
Transfer logic	Typically bearer-style transfer of the issuer's liability	Typically non-bearer burn-and-issue logic; sender's claim extinguished and recipient bank issues new claim
Settlement mechanics	Transfer of token itself; no automatic need for interbank settlement in central bank money at each transfer	Interbank leg settles in central bank money
Singleness of money	Weaker by design; issuer-specific claims may deviate from par	Stronger if non-bearer design is maintained
Elasticity	Constrained by reserve-funded issuance / cash-in-advance logic	Linked to banking system balance-sheet elasticity and central-bank-reserve-based settlement
Prudential protection	Depends on jurisdiction; not equivalent to deposit insurance or full banking safety net	Embedded in banking regulation; may benefit from deposit-law framework
Relationship to bank lending	May disintermediate deposits and separate transaction balances from lending base	Remains integrated with bank intermediation
Portability across open digital environments	High; strong advantage in crypto-native and cross-platform use	Currently weaker; more institutionally grounded but commercially less mature
Main policy concern	Run risk, fragmentation, reserve quality, monetary sovereignty, deposit substitution	Operational scalability, interoperability, programmability, legal standardization

Source: Author's elaboration based on Garratt and Shin (2023), BIS (2025), Huang and Keister (2026), Adrian *et al.* (2025), and Aldasoro, Mehrling, and Neilson (2023).

The first and most fundamental distinction concerns the nature of transfer. Stablecoins are generally bearer-style liabilities: when the token moves from one holder to another, the underlying claim on the issuer moves with it. The issuer's balance sheet does not need to be updated every time the token changes hands; adjustment occurs primarily when the token is issued or redeemed. Tokenized deposits, by contrast, are best understood in their safer non-bearer form. In that structure, a payment does not involve the transfer of one bank's liability to a third party. Instead, the sender's claim is extinguished and a new claim is created by the recipient's bank, while the interbank leg settles in central bank money (Garratt and Shin, 2023; ECB, 2025b; EBA, 2024). This distinction is not merely legal or technical. It directly affects how each instrument fits within the monetary system.

The difference matters because it goes to the heart of the singleness of money. In the existing two-tier monetary system, commercial bank money remains money because interbank obligations are settled at par in central bank reserves. What changes for the user is the size of the claim on her own bank, not the identity of the bank liability she holds after payment. Stablecoins do not automatically enjoy this property. A recipient of a stablecoin receives a claim on the stablecoin issuer, not a newly created claim on the recipient's own bank. This creates issuer-specific exposure and opens the possibility that different stablecoins may trade at different values relative to par under stress. Tokenized deposits, in contrast, are designed precisely to avoid that outcome by preserving par settlement through central bank money at the interbank level (Garratt and Shin, 2023; BIS, 2025). This is why tokenized deposits are generally treated as more compatible with the singleness of money than bearer-style stablecoins.

The second distinction concerns balance-sheet logic and the elasticity of money. Stablecoins are typically issued by entities that promise redemption at par against reserve-backed liabilities, and their issuance is generally constrained by prior funding and reserve acquisition. This gives stablecoins a narrow-money character but also limits their elasticity. Garratt and Shin (2023) and the BIS Annual Economic Report 2025 Chapter III argue that this structure causes stablecoins to fail the elasticity test because additional issuance requires full upfront payment by holders, effectively imposing a cash-in-advance constraint on balance-sheet expansion (BIS, 2025). Tokenized deposits, by contrast, sit inside the wider intermediation capacity of the banking system. Because they remain deposits, they remain linked to the mechanisms through which bank balance sheets expand and contract – reserve access, maturity transformation, and credit creation. Tokenized deposits therefore preserve a closer connection to

the elasticity historically associated with the banking-based monetary system, while stablecoins embody a narrower and more rigid liability structure.

This distinction has broader macroeconomic significance. Stablecoins may appear safer because of full reserve backing, but precisely that narrowness limits their capacity to perform the adaptive balance-sheet function that commercial bank money performs in modern economies. Tokenized deposits may appear less "clean" from a narrow-money perspective, yet their connection to bank intermediation allows them to preserve a relationship between payments, deposits, and lending that stablecoins tend to separate. The comparison cannot be reduced to a simple safety-versus-risk dichotomy: the two forms represent different institutional solutions to the longstanding monetary question of whether money should be tightly separated from or closely integrated with credit creation (Aldasoro *et al.* 2023; BIS, 2025; Huang and Keister, 2026).

The third distinction is legal and regulatory. The EBA's 2024 report provides one of the clearest official delineations between tokenized deposits and electronic money tokens issued by banks: both may appear on DLT, both represent claims against the balance sheet of a credit institution, but they differ along several crucial dimensions. Tokenized deposits involve a continuing contractual relationship between the bank and the depositor, are generally nominative rather than bearer in nature, may carry interest, and remain subject to the ordinary deposit-regulatory framework. EMTs and stablecoin-like bearer instruments, by contrast, are transferable liabilities that do not enjoy the same legal treatment as deposits and are not covered by deposit guarantee schemes in the same way (EBA, 2024, 2026). The relevant distinction is therefore not bank-issued versus non-bank-issued. It is the conjunction of transferability, bearer character, contractual continuity, prudential protection, and relationship to par settlement.

This legal architecture translates directly into the user proposition of each instrument. A tokenized deposit remains embedded in the architecture of deposit-taking, prudential supervision, central bank settlement, and – in many jurisdictions – deposit protection; its credibility derives from the institutional framework of banking. A stablecoin, even when well-reserved and well-disclosed, remains an issuer-specific redeemable token whose credibility depends on reserve composition, redemption terms, and the operational resilience of the issuer. It may be more portable across open digital environments, but it does not reproduce the full architecture of bank money. Stablecoins should therefore not be viewed as simple digital replicas of deposits. They are distinct private monetary claims that may compete with deposits without inheriting their legal and institutional protections (Arner *et al.* 2020; Garratt and Shin, 2023; EBA, 2024).

The fourth distinction concerns use-case orientation. Stablecoins currently have a strong first-mover advantage in open, interoperable, and crypto-native environments. They are deeply embedded in decentralized exchanges, on-chain collateral chains, tokenized trading venues, and cross-platform settlement. Their bearer-style transferability and broad wallet-based circulation make them especially useful in environments where users do not share a banking relationship or remain within a common domestic regulatory perimeter. Tokenized deposits historically developed much more slowly: the EBA reported only limited live tokenized-deposit use cases in the EEA by late 2024, concentrated in wholesale or specialized applications rather than broad retail circulation (EBA, 2024). The picture has shifted materially since then, but the evidence is still better read as early institutional commercialization than as commercial parity with stablecoins. JPMorgan's JPM Coin USD / JPMD initiative, Citi Token Services, BNY's reserve-custody role for RLUSD, and SoFi's SoFiUSD announcement all indicate that bank and bank-adjacent programmable-money infrastructure is advancing quickly (JPMorgan Chase, 2025; Citigroup, 2025a, 2025b; BNY, 2025; SoFi Technologies, 2025). At the central-bank-settlement layer, the Eurosystem's exploratory work on new technologies for wholesale settlement has demonstrated DLT-based settlement in central bank money at meaningful scale (ECB, 2026). These developments do not yet constitute commercial parity with stablecoins, but they show that the asymmetry between scaled stablecoins and bank-based tokenized money is narrowing. The competition is therefore not a contest between a scaled crypto-native instrument and a static banking-native one. It is a rapidly shifting institutional rivalry whose eventual outcome depends on regulatory design, interoperability, and the operational maturity of bank-issued programmable money.

The current asymmetry should not be read as a permanent equilibrium. The Bank of England's "multi-money" framing suggests a future landscape in which stablecoins, traditional and tokenized bank deposits, and central bank money coexist under conditions of mutual exchangeability and preserved trust in money (Bank of England, 2025a, 2026). Under such a configuration, stablecoins may continue to dominate in open, global, cross-platform settings where portability and composability are especially valuable, while tokenized deposits become the preferred form of private tokenized money in regulated domestic and wholesale settings where par settlement, legal certainty, and integration with bank credit matter most. The likely medium-term outcome is differentiated coexistence rather than simple replacement, though the scope for direct substitution remains real on either side: if

tokenized deposits become sufficiently programmable and interoperable, some of stablecoins' current advantages may erode; conversely, if stablecoins receive stronger prudential treatment and deeper integration with regulated infrastructure, the gap between the two could narrow from the opposite direction.

The welfare implications of this competition have now been formalized. Huang and Keister (2026) show that the relative desirability of stablecoins and tokenized deposits depends on bank incentives, regulation, and the scale of blockchain-based trade. Their framework yields three results that matter for this paper. First, when blockchain-based trade is small, tokenized deposits dominate because bank intermediation continues to support the wider productive economy and the welfare cost of fragmenting money into a separate stablecoin layer outweighs the gains. Second, when blockchain-based trade is large and bank lending is sufficiently risky, stablecoins can dominate because the safety advantage of full reserve backing offsets the loss of bank-mediated credit creation. Third, the parameter region in which stablecoins dominate shrinks when banks are permitted to issue tokenized deposits – that is, when banks can compete in the programmable-money domain on terms that preserve their intermediation role. The third result is decisive for the regulatory argument of this paper: the institutional configuration in which tokenized deposits are made operationally and legally available to users is the configuration that minimizes the welfare cost of stablecoin scaling. Stablecoins correspond to a narrow-banking-style model of tokenized money backed by safe assets, while tokenized deposits remain embedded in the risky lending activities of banks; neither form is always superior, but each corresponds to a different institutional allocation of money creation, asset holding, and credit intermediation.

Cong (2026), in industry-supported research drawing on transaction-level evidence from the U.S. context, provides a complementary perspective focused specifically on the post-GENIUS Act constraints. Under the GENIUS Act's full-reserve-backing requirement, prohibition on issuer-paid yield, and prohibition on credit extension by issuers, the disintermediation pressure on bank deposits is materially smaller than headline projections suggest, with stablecoin–deposit substitution conditional on yield differentials and reserve composition rather than on the scale of stablecoin issuance *per se*. Read together with the welfare framework of Huang and Keister, this evidence supports a differentiated picture: the competition between stablecoins and tokenized deposits is structurally shaped by regulatory constraints on the asset side of stablecoin issuance, and the magnitude of welfare loss from stablecoin scaling depends on whether tokenized deposits are simultaneously available as a regulated alternative.

The comparison suggests a more differentiated competitive landscape than the familiar "stablecoins versus banks" framing implies. The relevant question is not only speed or programmability, but which institutional attributes users, platforms, and regulators value most in particular settings. Stablecoins are advantaged where openness, portability, and cross-platform usability dominate. Tokenized deposits are advantaged where par settlement, legal certainty, and integration with bank intermediation matter most. The eventual division of labor within tokenized finance will depend on how these preferences evolve, on how quickly each model becomes operational at scale, and – crucially – on whether regulatory frameworks treat the two forms as institutional complements within a multi-money architecture or as substitutes within an unregulated competitive race.

## 7. Regulatory and Policy Implications

The regulatory debate on stablecoins has moved well beyond the earlier question of whether crypto-assets should be brought within a perimeter of investor-protection and market-conduct rules. Stablecoins now sit at the intersection of payments regulation, prudential supervision, monetary sovereignty, banking intermediation, and tokenized market infrastructure. The BIS frames the issue in terms of the foundational properties of money – singleness, elasticity, and integrity – and treats stablecoins as a candidate institutional form whose monetary quality must be evaluated against those properties (Garratt and Shin, 2023; BIS, 2025). The FSB treats stablecoins as a potential source of cross-border financial-stability risk (FSB, 2023, 2025). The EBA has had to work through the operational boundary between MiCA, e-money rules, tokenized deposits, and payment-services regulation (EBA, 2024, 2026). The Bank of England has explicitly adopted a multi-money perspective (Bank of England, 2025a, 2026). The ECB now discusses tokenized deposits and stablecoins as new payment rails relevant for wholesale settlement and the future role of central bank money (ECB, 2025a, 2025b, 2026). The U.S. has, since July 2025, enacted a federal statutory framework for payment stablecoins through the GENIUS Act, while federal implementation rulemaking was underway in 2026 (U.S. Congress, 2025; Dudley and Liang, 2026; OCC, 2026; FDIC, 2026; U.S. Treasury, 2026a, 2026b). Despite different legislative drafting, these approaches converge on a common architectural question: how to accommodate programmable, transferable forms of private tokenized money without weakening trust in par settlement, undermining monetary control, or destabilizing the balance-sheet structure of the banking system.

These developments indicate that stablecoin regulation now concerns the design of tokenized monetary architecture rather than merely the supervision of another crypto-asset category. A coherent framework must therefore address reserve composition, redemption rights, payment-system interoperability, prudential perimeter, and the coexistence of stablecoins with tokenized deposits and central-bank money.

Five policy dimensions are decisive. The first is monetary integrity: tokenized private money must remain reliably exchangeable at par with other forms of money. That requires more than a general redemption promise; it requires clear rules on eligible claims, redemption terms, intermediaries, and reserve assets. The closer a stablecoin comes to functioning as a widely used settlement asset, the stronger the case for requirements that protect convertibility and interoperability rather than relying on market discipline alone (Garratt and Shin, 2023; BIS, 2025).

The second is reserve quality and liquidity. Because stablecoins differ substantially in reserve composition, regulation cannot remain neutral with respect to asset-side architecture. The stronger the monetary use of stablecoins becomes, the stronger the case for narrow, high-quality, and highly liquid reserves, supported by segregation, custody, attestation, and redemption requirements. The policy choice is whether stablecoins should become narrow payment instruments or broader balance-sheet vehicles close to digital shadow banking.

The third is prudential perimeter and banking disintermediation. Once stablecoins absorb transaction balances at scale, regulation must address their competition with deposits and the consequences for bank funding and monetary-policy transmission. A regime that constrains tokenized deposits while allowing stablecoins to scale under a looser perimeter may accelerate disintermediation; a regime that constrains stablecoins while leaving tokenized deposits operationally weak may suppress innovation without creating a viable regulated alternative. Stablecoin regulation therefore has to be assessed alongside tokenized deposits, EMTs, and tokenized central bank settlement.

The fourth is cross-border coordination. Stablecoin issuance, reserve management, trading venues, custody, wallet provision, and user demand can be distributed across jurisdictions, so domestic regulation alone is structurally incomplete. The FSB's findings of implementation gaps and regulatory inconsistency are therefore integral to the risk profile of the market itself (FSB, 2025). Stablecoins make a strong case for internationally coherent minimum standards even if full legal harmonization remains unrealistic.

The fifth is interoperability and market architecture. If stablecoins, tokenized deposits, and central bank money are to coexist, policy must define the conditions under which they exchange with one another. This moves regulation beyond authorization of individual instruments toward settlement connectivity, access arrangements, operational hours, and compatibility across tokenized rails. Stablecoin regulation is therefore inseparable from the broader design of tokenized payment and settlement infrastructure.

Table 4 compares the main regulatory approaches as implicit models of monetary architecture. The U.S. GENIUS Act creates a constrained narrow-money perimeter for payment stablecoins while preserving the primacy of bank deposits. The EU MiCA framework builds an authorization and reserve-discipline perimeter around ARTs and EMTs while keeping tokenized deposits outside MiCA's scope. The Bank of England frames stablecoins within a regulated multi-money system, and the Eurosystem places central bank money at the settlement core. Despite different legal routes, the main frameworks converge on three principles: payment stablecoins are formally regulated and constrained on the asset side; tokenized deposits remain legally distinct from stablecoins; and the hierarchy of central bank money, tokenized bank money, and private tokenized money is preserved rather than replaced.

The United States has moved from a position of fragmented state-level oversight to a federal framework specifically designed for payment stablecoins. The Guiding and Establishing National Innovation for U.S. Stablecoins Act, signed into law on 18 July 2025, represents the most consequential single intervention in the global regulatory landscape because it governs the jurisdiction in which the overwhelming majority of stablecoins are issued and held. The Act establishes a dual federal–state regulatory regime built around four principles: full one-to-one reserve backing, a closed list of permissible reserve assets, an explicit prohibition on issuer-paid yield, and a chartering pathway for nonbank issuers under federal supervision, with agency implementation rules still being specified in 2026 (U.S. Congress, 2025; Dudley and Liang, 2026; OCC, 2026; FDIC, 2026; U.S. Treasury, 2026a, 2026b).

Three features of this regime are particularly important for the argument of this paper. First, the closed list of permissible reserve assets – U.S. coins and currency, demand deposits at insured depository institutions subject to safety-and-soundness limits, short-dated Treasury bills, Treasury-backed reverse repos, and money-market-fund shares – formally narrows the asset side of payment stablecoins toward a tokenized-narrow-money configuration.

Table 4. Regulatory approaches and implied monetary architecture

Jurisdiction / framework	Primary focus	Treatment of stablecoin-like instruments	Relationship to payments law / banking law	Implied monetary architecture
U.S.: GENIUS Act + OCC chartering pathway	Federal regulatory regime for payment stablecoins; closed list of permissible reserve assets; chartering route for nonbank issuers under OCC supervision	Payment stablecoins formally regulated; bank-issued tokenized deposits preserved as a distinct regime; issuer-paid yield prohibited; bank custody and reserve management permitted	Strong interaction with banking law (OCC); separate regimes for payment stablecoins and tokenized deposits; preservation of bank exclusivity over deposit-equivalent claims	Constrained narrow-money perimeter for payment stablecoins alongside preserved primacy of regulated bank deposits
EU: MiCA + EBA perimeter work	Authorization, asset-backing, disclosure, operational safeguards, legal perimeter	ARTs and EMTs brought into formal authorization framework; tokenized deposits kept distinct from MiCA where they remain deposits	Strong interaction with payments regulation; EBA had to clarify PSD2–MiCA overlap and transition	Structured perimeter around private tokenized money, anchored to existing banking and payments law
UK: Bank of England systemic stablecoin regime	Safety of systemic payment stablecoins, interoperability, protection of trust in money	Consultation-based regime for sterling systemic stablecoins with backing and safety requirements	Strong interface with payment-system regulation and broader monetary stability goals	Explicit "multi-money" system: stablecoins may coexist with bank money and central bank money if trust and exchangeability are preserved
Eurosystem / ECB policy line	Preserve central bank money as settlement anchor while enabling tokenized wholesale settlement	Stablecoins recognized as relevant settlement assets in some contexts, but central bank money remains anchor	Tokenized deposits and stablecoins discussed in relation to settlement infrastructure rather than as isolated crypto products	Hierarchical model centered on central bank money
FSB global framework	Cross-border consistency, financial stability, implementation gaps	Broad global recommendations for crypto-asset activities and global stablecoin arrangements	Depends on national implementation; uneven across jurisdictions	No single architecture yet; highlights fragmentation and implementation asymmetry

Source: Author's elaboration based on U.S. Congress (2025), European Parliament and Council (2023), Bank of England (2025, 2026), Hong Kong Government (2025), Monetary Authority of Singapore (2023), Financial Services Agency of Japan (2023, 2025), FSB (2025), and ESRB (2025).

This aligns U.S. payment stablecoins more closely with the institutional logic of cash-management vehicles than with the heterogeneous reserve mixes documented at some pre-GENIUS issuers. This configuration places GENIUS-regulated payment stablecoins within the long lineage of narrow-banking proposals reviewed by Pennacchi (2012), which argue that institutions whose liabilities function as money should hold only the safest, most liquid assets, leaving credit creation and maturity transformation to other parts of the financial system. The Act does not implement narrow banking in its strongest historical form – it does not separate payment money from credit creation across the entire banking system – but it does apply the narrow-banking logic specifically to the payment-stablecoin segment, treating it as a contained category in which moral hazard is reduced by design rather than by ex post supervision. Second, the prohibition on issuer-paid yield is designed to prevent payment stablecoins from competing directly with bank deposits on rate, while the explicit preservation of bank authority to issue tokenized deposits as a separate regime sets up the very competition that this paper analyses in Section 6. Third, the OCC's conditional approvals in late 2025 for national trust bank charters to several digital-asset firms, including Circle, Ripple, BitGo, Paxos, and Fidelity Digital Assets, signal a pathway for custody, fiduciary, and settlement activities under federal supervision. These approvals remained subject to final conditions and did not authorize ordinary deposit-taking or lending; they should therefore be interpreted as infrastructure and trust-bank developments rather than as full banking authorization for stablecoin issuers (OCC, 2025; Reuters, 2025).

The GENIUS Act also leaves three issues unresolved. Eligible reserves include some private bank claims, such as deposits and secured cash borrowing, that are not equivalent to central bank money and may become

fragile under stress (Dudley and Liang, 2026; OCC, 2026; FDIC, 2026). The prohibition on issuer-paid yield may not fully prevent indirect yield competition through affiliates or third parties. Most importantly, payment stablecoins remain bearer-style private claims; the Act narrows reserve risk but does not by itself ensure singleness of money in the sense developed by Garratt and Shin (2023).

The deeper reason is that singleness depends not only on the quality of underlying assets but on the information regime under which a money-like instrument circulates. Holmström (2015) shows that money markets function on the basis of "no questions asked": users accept money-like claims at par precisely because they do not have to investigate the issuer's balance sheet to transact. Reserve narrowness reduces the questions that need to be asked but does not eliminate them, since users may still investigate the specific composition, custodian, and redemption mechanics of a particular issuer when stress arises. Singleness therefore requires not only safe reserves but also institutional arrangements – central bank backstops, deposit insurance, or comparable redemption guarantees – that make the question of issuer identity irrelevant for ordinary payment use. The GENIUS Act narrows reserves substantially but does not provide an equivalent backstop for payment stablecoins, which is why it can deliver narrow money without delivering full singleness. For the comparative argument of this paper, the GENIUS Act is significant in two further ways. It establishes a U.S. federal preference for tokenized commercial bank money – that is, for tokenized deposits – as the form of programmable bank money rather than for bank-issued payment stablecoins. And it signals an institutional decision to bring payment stablecoins inside the regulatory perimeter without granting them deposit-equivalent legal status. The U.S. approach is therefore not best read as a permissive regime that simply licences private digital money. It is an attempt to define a constrained narrow-money perimeter for payment stablecoins while preserving the legal and prudential primacy of bank deposits. Despite different legislative drafting, this convergence on broadly similar architectural principles is visible across the U.S., EU, and UK frameworks.

The European Union was the first major jurisdiction to put a comprehensive ex ante framework in place. Under MiCA, stable-value crypto-assets are divided into asset-referenced tokens and electronic money tokens, with issuers of both required to operate within a formal authorization and supervisory framework. The regime rejects the view that stablecoins can remain outside formal oversight simply because they are issued on distributed infrastructures. The EBA's subsequent work shows that implementation is not straightforward: its 2026 Opinion on the end of the transition period under the No-Action Letter on the interplay between PSD2 and MiCA makes clear that stablecoin regulation in the EU cannot be understood through MiCA alone, since crypto-asset service providers transacting EMTs that qualify as payment services may also need payment-services authorization (EBA, 2026). This has forced a practical convergence between crypto-asset regulation and payments regulation. Stablecoins are pushing EU regulatory frameworks to acknowledge that they are not simply crypto-assets but money-like instruments that straddle multiple legal domains.

The EU experience also illustrates the limits of regulatory completeness when market adoption remains small. The EBA's 2025 Risk Assessment Report notes that, despite a growing number of authorized EMTs in the EU/EEA, issuance volumes remained limited (EBA, 2025). Europe therefore has a coherent legal perimeter but little market depth, while the U.S. regime arrived later but governs a much larger dollar-stablecoin ecosystem. The interaction of EU supervisory preparedness with U.S. market depth and reserve-asset constraints may define the practical global perimeter for payment stablecoins more than either model alone.

The United Kingdom is taking a conceptually distinctive approach. The Bank of England's late-2025 consultation on a proposed regime for sterling-denominated systemic stablecoins explicitly seeks to support a role for stablecoins within a multi-money system alongside commercial bank money, including tokenized deposits, all underpinned by central bank money at the core of the financial system (Bank of England, 2025a). The framing neither treats stablecoins as an anomaly to be suppressed nor as a substitute for the existing system, but as one possible component of a future monetary ecology in which coexistence is possible only under conditions that preserve trust in money itself. Subsequent speeches reinforce the same principle: innovation is acceptable if convertibility, interoperability, and confidence in par exchange remain intact (Bank of England, 2026; Breeden, 2025).

This multi-money framing offers a middle ground between marginalizing stablecoins and allowing them to scale freely as private bearer money. The UK approach points to regulated coexistence: stablecoins may serve useful roles in payment and settlement environments if they remain exchangeable with bank money and anchored by central bank money. The contrast with the U.S. and EU approaches is instructive. The U.S. framework emphasizes asset-side constraint, the EU framework emphasizes ex ante perimeter design, and the UK framework gives the clearest priority to coexistence and interoperability.

Comparable frameworks have been crystallized in major Asia-Pacific jurisdictions, with each adopting a distinct architectural choice. Hong Kong's Stablecoins Ordinance, gazetted on 30 May 2025 and brought into operation on 1 August 2025, introduces a licensing regime under which the Hong Kong Monetary Authority supervises issuers of fiat-referenced stablecoins, requires full reserve backing in segregated high-quality liquid assets, sets minimum financial-resource thresholds (25 million HKD paid-up capital, 3 million HKD liquid capital, and excess liquid capital equivalent to twelve months of operating expenses), and restricts retail offering to stablecoins issued by licensed institutions (Hong Kong Government, 2025; HKMA, 2025). Singapore had earlier finalised its single-currency stablecoin (SCS) framework in August 2023 under the Payment Services Act, applying it to SCS pegged to the Singapore dollar or any G10 currency, requiring 100 per cent reserve coverage in low-risk assets denominated in the peg currency, and prohibiting non-issuance activities such as lending or staking by SCS issuers; only stablecoins meeting all framework requirements may use the protected "MAS-regulated stablecoin" designation (MAS, 2023). Japan amended its Payment Services Act in 2022, with the framework taking effect on 1 June 2023, treating fiat-redeemable stablecoins as electronic payment instruments (EPs) issuable only by banks, licensed fund-transfer service providers, or trust companies, subject to full reserve backing and segregated custody (FSA, 2023); a further round of amendments enacted in June 2025 specifies reserve, custody, and redemption obligations in greater operational detail (FSA, 2025). The United Arab Emirates has pursued a parallel trajectory through the Central Bank Payment Token Services Regulation. These regimes vary in licensing perimeter and issuer eligibility, but they converge on the same architectural principles as the U.S., EU, and UK frameworks: full reserve backing in liquid assets, segregated custody, redemption discipline, and licensing or authorization as the precondition for retail circulation.

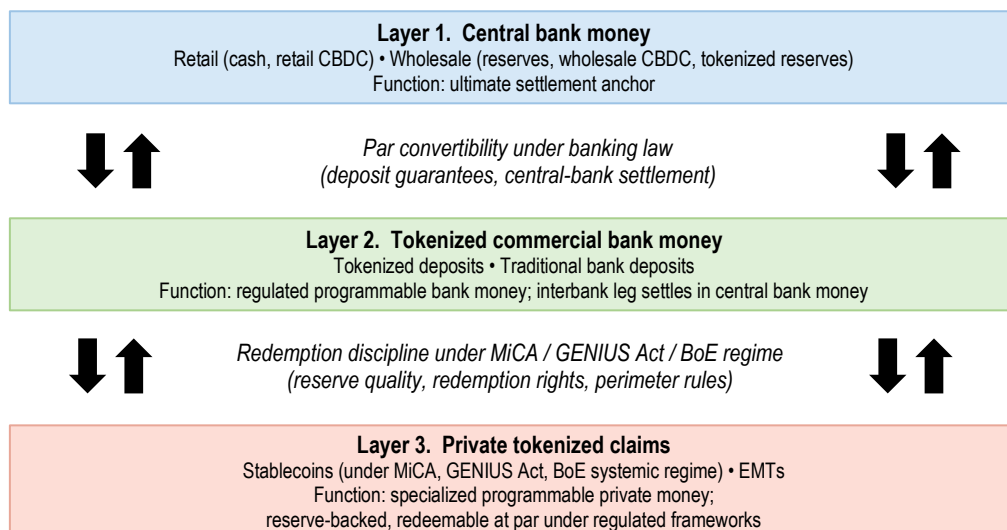
Figure 6 represents the architecture toward which the major frameworks are converging. Central bank money remains the ultimate settlement anchor, tokenized deposits extend regulated bank money into programmable environments, and stablecoins operate as private tokenized claims subject to convertibility, interoperability, and prudential discipline. The bidirectional arrows are essential: a multi-money system requires not only hierarchy but par exchange between layers.

The Eurosystem's position places central bank money explicitly at the center of the institutional response. Recent ECB speeches argue that to ensure central bank money remains the anchor of trust and stability in a digital economy, the Eurosystem is working both on a digital euro for retail payments and on the provision of central bank money for wholesale settlement on DLT-based platforms (ECB, 2025a, 2025b, 2026). The ECB acknowledges that tokenized deposits and stablecoins may bring efficiencies in some payment contexts, particularly cross-border B2B transactions and tokenized market settlement, while insisting that innovation in tokenized money remain anchored in a hierarchy where central bank money continues to perform the ultimate settlement function. This places the ECB close to a hierarchy-based model of tokenized money in which innovation may proceed but not at the cost of eroding the public monetary anchor. The Eurosystem's exploratory work on wholesale-DLT settlement, processing more than 200 transactions worth approximately 1.59 billion EUR across 64 participants, gives this position concrete operational form (ECB, 2026).

At the global level, evidence on regulatory convergence is now more concrete than the earlier institutional commitments suggested. The FSB and IOSCO published parallel thematic peer reviews on 16 October 2025, with an accompanying joint information note. The reviews assessed implementation across roughly forty jurisdictions and found notable progress but also significant gaps and inconsistencies, particularly in the regulation of global stablecoin arrangements: as of August 2025, only eleven jurisdictions had finalized comprehensive crypto-asset frameworks addressing financial-stability risks, while implementation of the global stablecoin recommendations was generally less advanced than that for crypto-asset service providers (FSB, 2025; FSB and IOSCO, 2025; IOSCO, 2025). Both reports highlight cross-border cooperation as a structural weakness, since existing supervisory channels rely heavily on the IOSCO Multilateral Memorandum of Understanding, which was designed for securities-enforcement information sharing rather than for stablecoin-specific oversight. The European Systemic Risk Board has taken a more directive position. Its Recommendation ESRB/2025/9 on third-country multi-issuer stablecoin schemes, adopted on 25 September 2025 and published in the Official Journal in November, urges the European Commission to treat as impermissible under the current MiCA framework arrangements in which an EU-authorized issuer and a non-EU partner jointly issue tokens presented as interchangeable, on the grounds that such schemes split reserves and operational responsibilities across jurisdictions in ways that undermine MiCA's redemption and supervisory architecture (ESRB, 2025). Together, these documents indicate that the international regulatory architecture is moving from broad principles towards specific operational tests and that the largest residual risks lie in cross-jurisdictional arrangements that exploit gaps between formally compatible regimes. Recent U.S., EU, UK,

and Asia-Pacific developments suggest that convergence may emerge gradually through mutual recognition and alignment among major regimes before formal global standards become fully codified.

Figure 6. The hierarchically anchored multi-money architecture



*Notes:* Schematic representation of a tokenized monetary architecture with three layers and bidirectional convertibility arrows. Top layer: central bank money in retail and wholesale form, including tokenized reserves and wholesale CBDC, providing the ultimate settlement anchor. Middle layer: traditional and tokenized commercial bank deposits, settling at par through the two-tier banking system. Bottom layer: stablecoins and EMTs, operating as private tokenized claims with reserve backing under regulated frameworks (MiCA, GENIUS Act, BoE systemic stablecoin regime). Convertibility arrows between layers indicate par exchange under regulated convertibility regimes.

*Source:* authors' synthesis based on Garratt and Shin (2023); Bank of England (2025a, 2026); BIS (2025); ECB (2025a, 2025b, 2026); EBA (2024).

Across the five policy dimensions, the U.S., EU, and UK frameworks differ in emphasis but converge on fundamentals. All treat singleness of money as a constraint to be protected through reserve and redemption discipline. The U.S. and EU frameworks narrow permitted reserves toward high-quality liquid assets, while the UK adds a more explicit interoperability logic. All preserve the legal distinctiveness of tokenized deposits and avoid folding deposit-equivalent claims into the stablecoin perimeter. The remaining weakness is cross-border coordination: the FSB's incomplete-convergence finding remains the binding constraint.

The convergence on architectural principles is the most important feature of the current regulatory landscape. The policy direction is not to eliminate institutional diversity, but to organize it around a credible hierarchy: central bank money as settlement anchor; tokenized deposits as regulated bank money in programmable environments; and stablecoins as specialized private instruments permitted only where reserve quality, redemption discipline, governance, and interoperability are strong enough to prevent fragmentation of par money. The regulatory issue is therefore no longer the containment of a crypto-asset category. It is the design of a monetary architecture in which private tokenized claims can coexist with bank money and public settlement infrastructure without eroding singleness, elasticity, and trust.

### Conclusion

Stablecoins have moved well beyond their original role as an internal liquidity device for crypto-asset markets. The market has scaled above USD 300 billion, remains highly concentrated in two issuers and overwhelmingly denominated in U.S. dollars, and is increasingly linked to Treasury markets, bank funding channels, and tokenized settlement infrastructure. Treating stablecoins as a distinct layer of tokenized private money – rather than as a marginal digital-finance innovation or as a low-volatility crypto-asset – is therefore a more convincing analytical starting point. Their significance cannot be judged by trading utility alone or by whether a token usually trades close to par.

The paper's contribution to this assessment is threefold. It integrates the dispersed evidence on reserve-driven spillovers into a single interacting three-channel transmission framework; it quantifies issuer concentration directly and links its persistence to the structural centralization of arbitrage rather than to transitional market dynamics; and it operationalizes the singleness–elasticity–integrity benchmark as a five-dimensional comparison

between stablecoins and tokenized deposits. These contributions allow the monetary character of stablecoins to be assessed structurally – through reserve architecture, concentration, and convertibility mechanics – rather than through peg performance alone.

Two structural findings stand out. First, market structure already gives stablecoins systemic relevance: the sector is dominated by a small number of issuers, concentrated in dollar-linked instruments, and closely tied to the extension of dollar-based intermediation into tokenized environments. Second, reserve design is the economic core of the instrument: differences in reserve composition, liquidity, transparency, governance, and operational accessibility shape redemption credibility, run risk, and the macro-financial transmission of stablecoin demand. The reserve channel operates through three identifiable mechanisms – Treasury and short-term funding, bank funding, and the global safe-asset channel – and together these mechanisms turn stablecoins from a payment instrument into a balance-sheet structure that reallocates transaction balances away from traditional banking and into reserve portfolios centered on safe assets and liquid claims. Stablecoins therefore matter not only for payments and market infrastructure but for monetary-policy transmission, banking intermediation, and the international circulation of dollar liquidity.

The most relevant institutional comparator for stablecoins is not crypto-assets in general but tokenized deposits. Both instruments supply programmable, ledger-compatible money, yet they embody different monetary logics: stablecoins circulate as issuer-specific bearer-style liabilities whose soundness depends on reserve architecture and private governance, while tokenized deposits in their safer non-bearer form preserve the two-tier monetary structure by settling the interbank leg in central bank money and embedding the end-user claim in the regulated banking system. The welfare framework of Huang and Keister (2026) clarifies the conditions under which each form is preferable, and the empirical evidence on post-GENIUS deposit dynamics (Cong, 2026; Aldasoro and Ahmed, 2026) suggests that the magnitude of substitution is materially shaped by regulatory constraints on the asset side of stablecoin issuance. The likely medium-term outcome is differentiated coexistence rather than displacement: stablecoins better placed in open and globally portable digital environments, tokenized deposits institutionally stronger in regulated domestic, wholesale, and bank-centered settings.

The comparison has direct regulatory implications. Stablecoins cannot be treated as another subclass of speculative crypto-assets nor as straightforward substitutes for deposits. They are a distinct form of tokenized private money whose legal treatment must reflect monetary function, reserve structure, redemption mechanics, governance, disclosure, and interoperability. The convergence of the U.S. GENIUS Act, the EU MiCA framework, and the UK multi-money consultation on broadly similar architectural principles – formal regulation of payment stablecoins, narrowed reserve permissibility, preserved bank exclusivity over deposit-equivalent claims, and explicit protection of the central-bank-anchored monetary hierarchy – suggests that the most coherent policy direction is now visible in the regulatory practice of the major jurisdictions, even if not yet codified internationally. A hierarchically anchored multi-money framework, in which central bank money remains the ultimate settlement anchor, tokenized deposits extend regulated bank money into programmable environments, and stablecoins operate as specialized private instruments under strong constraints on reserves, redemption, and operational design, is the architecture toward which the major frameworks are converging in practice. Tokenization does not abolish the hierarchy of money; it makes that hierarchy more visible and more contested.

This assessment should not be read as an unqualified endorsement of the view that tokenized deposits are categorically superior or that stablecoins are merely a constrained second-best. The literature also advances serious arguments on the other side, and a balanced reading must weigh them. A first counter-argument is that monetary competition has its own efficiency benefits: privately issued money-like instruments can discipline incumbent intermediaries, widen access, and accelerate innovation in payment functionality, and a long tradition in monetary economics holds that competition among issuers need not be destabilizing where convertibility is credibly maintained. A second counter-argument concerns cross-border payments, where stablecoins demonstrably reduce cost and settlement time relative to correspondent banking, particularly for remittances and for users in jurisdictions with limited access to dollar banking; here their open and globally portable architecture is an advantage that bank-based tokenized deposits, confined to regulated domestic perimeters, do not easily replicate. A third counter-argument is that the relationship between the instruments need not be a contest at all: hybrid models are emerging in which stablecoins, tokenized deposits, and central-bank money interoperate within a layered system – for example through tokenized deposits settling wholesale legs in central bank money while stablecoins serve open retail and cross-border functions – so that the architecturally distinct forms become complementary rather than mutually exclusive. The balance of evidence in this paper supports the singleness-based concern that uniform par exchange is harder to guarantee for bearer-style private liabilities than for bank-based claims; but the efficiency,

inclusion, and cross-border advantages of stablecoins, and the genuine possibility of interoperable hybrid designs, are part of the same assessment and qualify any conclusion that tokenized deposits should simply displace stablecoins.

Stablecoins are best understood not as the endpoint of monetary innovation but as a transitional institutional form. They reveal both the promise and the tension of tokenized finance – the promise of faster, more programmable, and more interoperable money, and the tension created when those functions are supplied by private liabilities outside the full architecture of the traditional monetary system. Whether stablecoins remain confined to narrow payment uses, evolve into broader private monetary claims, or are displaced in core functions by tokenized deposits and central-bank-anchored tokenized settlement assets will depend on the regulatory architecture that emerges from the convergence now visible across the major jurisdictions. Stablecoins have forced the question; tokenized deposits, central bank money, and new regulatory architectures will determine the answer.

## Declarations

**Conflict of interest:** The author declares no conflicts of interest.

**Use of Generative Artificial Intelligence:** During the preparation of this manuscript, the author used AI tool (QuillBot) exclusively to assist with language enhancement and technical proofreading. This tool was not used to generate content independently or to substitute the author's original analysis, critical thinking, or interpretations. After using this tool, the author reviewed and edited all content as needed and takes full responsibility for the integrity and accuracy of the manuscript.

**Data availability:** The data used to construct Figures 1-4, including aggregate market capitalization, issuer-level market shares, currency composition, and reserve-composition inputs, are available from the author on reasonable request. Figures 5 and 6 are conceptual diagrams based on the cited sources; their underlying node-and-link structures and computational scripts used to generate all figures are available on request.

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