

CHAPTER 4

The tokenised US dollar ecosystem

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The US dollar system is undergoing dramatic digital transformation, with stablecoins leading the way. With the passage of stablecoin legislation and more regulations to come, the United States strives to provide regulatory clarity and support the growing tokenised US dollar system. In this chapter, I outline the implications of payment stablecoin regulatory framework on the existing stablecoin ecosystem, and the development of other tokenised US dollar assets. I highlight the two key dimensions that will sculpt the future of the tokenised ecosystem: access and return.

THE EVOLVING LANDSCAPE FOR US DOLLAR TOKENISATION

The Executive Order on “Strengthening American Leadership in Digital Financial Technology”,² announced on 23 January 2025, aims at positioning the United States as a leader for blockchain-based markets and systems by promoting innovation and calling for regulatory clarity.

It signalled two tectonic shifts in the national approach to the financial infrastructure. First, it lays out a national strategy that prefers private to public innovation in the digital asset space, particularly in the provision of payment services. Explicitly, it prohibits work on central bank digital currency (CBDC) and affirms the need for regulatory clarity on stablecoins. Second, it pivots the national stance towards blockchain-based innovations, including the potential use of public blockchains. Explicitly, it recognises the principles of personal liberties and freedom in permitting blockchain-based activity for “lawful” purposes, and emphasises the need for a “technology-neutral” approach to regulation.

These shifts in the national stance towards blockchain-based innovations have resulted in tangible developments, notably with regard to stablecoins and forms of tokenised dollars. On 18 July, the Guiding and Establishing National Innovation for US Stablecoins (GENIUS) Act was signed into law, establishing a federal framework for issuance of payment stablecoins. This was against the backdrop of efforts to codify bans on the issuance of CBDC.³

1 Special thanks to Janine Wang for excellent research assistance. The views expressed are mine and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

2 <https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/>

3 <https://www.congress.gov/bill/119th-congress/house-bill/1919/text>

Today, banks,⁴ fintechs,⁵ and non-financial companies⁶ are exploring stablecoin issuance, as well as other forms of tokenised US dollar, including treasury securities, money market funds,⁷ and deposit tokens.⁸

TAKING STOCK OF STABLECOINS

Stablecoins have undergone explosive growth, both in terms of interest and market capitalisation. Today, there are 340 stablecoins, and the number continues to grow. At the same time, the stablecoin market is highly concentrated. By currency, 97% of the market is denominated in US dollars, with a total market capitalisation of over \$270 billion. Furthermore, the market is dominated by a centralised issuance model, whereby a single entity controls the issuance of stablecoins. Finally, stablecoins are predominantly fiat-backed, i.e. they are backed by a reserve of financial assets denominated in the target currency. Two centralised issuers alone of fiat-backed stablecoins – Tether (USDT) and Circle (USDC) – account for over 85% of all stablecoins.⁹

The GENIUS Act aims to provide regulatory clarity for this segment of the stablecoin market that involves fiat-backed stablecoins with centralised issuance. It sets forth a federal regulatory framework for “payment stablecoins”. Payment stablecoins are digital assets designed to be used for payment or settlement, are pegged to fiat currency, and provide redemption rights to its holders. Among other requirements, the GENIUS Act prohibits issuers of payment stablecoins from directly paying interest or yield, requires issuers to offer at-par redemption to stablecoin holders, and sets standards on disclosure and reserve requirements. Stablecoin issuers must also obtain approval from an appropriate federal or state banking regulator before issuing a payment stablecoin and will be subject to supervision and/or oversight.

How close is today’s stablecoin market to meeting anticipated regulatory requirements? A key requirement is that US dollar stablecoin issuers must hold cash and cash equivalents in US dollars. Given similarities, the requirements for government money market funds are a good benchmark. The set of permissible assets includes commercial bank deposits, short-term Treasury securities, repo, and agency debt. Most, if not all, fiat-backed stablecoin issuers disclose some information on the composition of their reserves. I examined the ten largest fiat-backed stablecoins over a sample period using historical public disclosures.¹⁰

4 <https://www.reuters.com/business/finance/bank-america-expects-launch-stablecoins-morgan-stanley-weighs-use-2025-07-16/>

5 <https://fintechmagazine.com/articles/exploring-fiservs-entry-into-stablecoin-market-with-fiUSD>

6 <https://www.theinformation.com/briefings/walmart-amazon-explore-issuing-stablecoins>

7 <https://www.coindesk.com/business/2024/11/13/blackrock-expands-tokenized-fund-buidl-beyond-ethereum-to-five-new-blockchains>

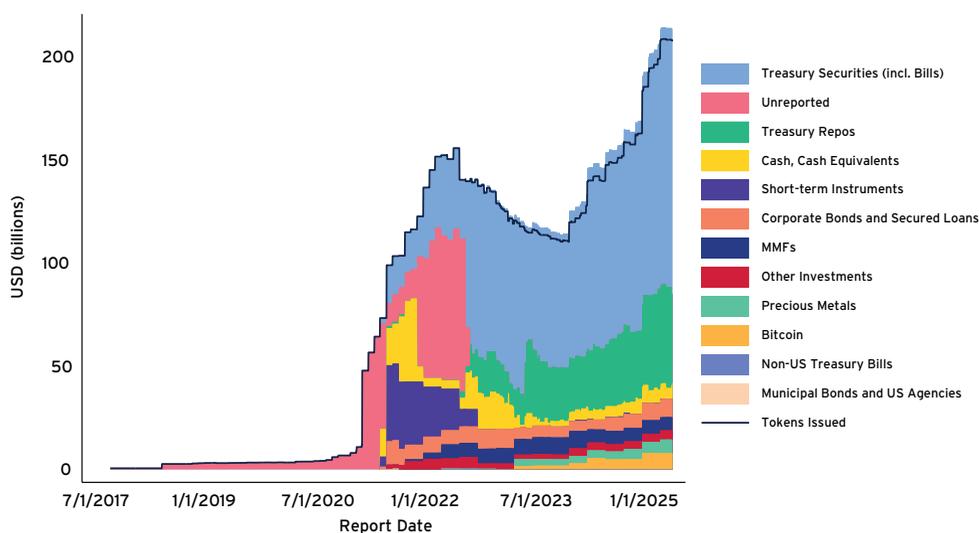
8 <https://www.jpmorgan.com/kinexys/content-hub/deposit-tokens>

9 Stablecoin statistics are Federal Reserve Bank of New York staff estimates based on data from Coingecko.

10 This set includes USDT (Tether), USDC (Circle), FDUSD (First Digital), PYUSD (Paypal), RLUSD (Ripple), USDG (Paxos), BUSD (Binance), USD1 (World Liberty Financial), GUSD (Gemini), and USDP (Paxos).

Do stablecoins meet this basic requirement? At the aggregate level, not quite. Figure 1 shows the aggregate stablecoin reserves over time. Transparency on stablecoin reserves has improved in the past several years. A significant fraction of reserves remained unreported until late 2022, reflecting greater demand by users for transparency on how stablecoins are managed. Still, as of mid-2025, almost 13% of stablecoin reserves are held in non-compliant assets, including precious metals, cryptocurrencies, and unspecified financial assets. In comparison, as of mid-2025 the US government money market fund industry holds – for retail and institutional segments, respectively – 38% and 35% in Treasuries, 47% and 50% in repo, and 15% and 15% in other assets including floating rate notes, foreign bank obligations, cash, and deposits.¹¹ Non-compliant assets are predominantly held by non-US stablecoin issuers, notably Tether. In contrast, US stablecoin issuers hold a combination of treasury securities, treasury repo, and bank deposits, highlighting the importance of establishing regulatory oversight for non-US issuers as well.

FIGURE 1 ASSET DECOMPOSITION OF AGGREGATE FIAT-BACKED STABLECOIN RESERVES



Source: FRBNY staff estimates.

The asset decomposition of reserves is based on voluntary disclosures with third-party attestations. Thus, the accuracy of these disclosures is subject to how credible the reporting is – an aspect often under question.¹² To track and compare the quality of stablecoin issuers' disclosure practices, each stablecoin is evaluated based on three dimensions:

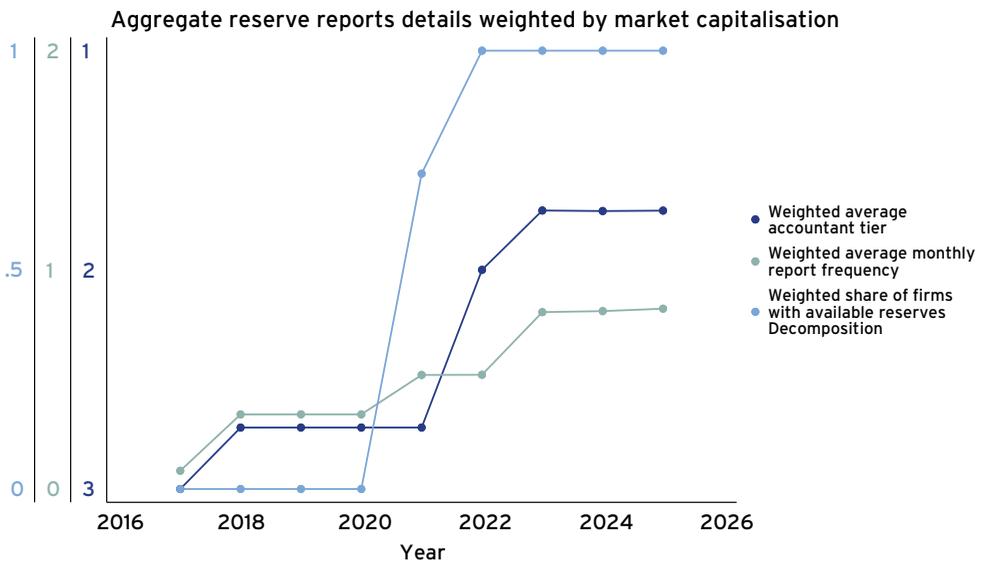
¹¹ Money market statistics are Federal Reserve Bank of New York staff estimates based on data from iMoneyNet.

¹² A notable example is TrueUSD, an off-shore stablecoin whose reserves were revealed to be held in long-term illiquid assets, in contrast to its attestations.

1. availability of reserve decomposition;
2. frequency of disclosures; and
3. tier of auditing firm.

Qualitatively, the disclosure practices of stablecoin issuers have improved significantly in the last five years in all three dimensions (Figure 2). In addition to issuers adopting a regular cadence of disclosing their reserves, the average issuer has increased the frequency of their disclosures, as well as engaging with a higher tier of auditing firms. There is, of course, ample room for improvement. With regards to assets, money market funds are required to report security-level and fund-level details on their reserves at a monthly frequency and share their holdings of liquid assets and net asset value at a daily frequency, exceeding what is provided by even the most rigorous stablecoin issuer. In addition, according to an industry report,¹³ 98% of money market funds are audited by the Big Four (PwC, EY, Deloitte, and KPMG).

FIGURE 2 STABLECOIN ISSUERS' DISCLOSURE AND AUDITING PRACTICES



Source: FRBNY staff estimates.

An important feature is that stablecoin issuers are required by the GENIUS Act to provide redemption at par to stablecoin holders. Stablecoin issuers vary significantly in their policies on eligibility and fees associated with redemptions. Major fiat-backed

¹³ <https://blog.auditanalytics.com/who-audits-mutual-funds-fund-type-market-share/>

stablecoins, such as USDT and USDC, provide significant connectivity between the banking and blockchain systems by providing redemption at par, either directly through the issuer or indirectly through partners and third-party services.¹⁴

As such, like money market funds, stablecoins are likely to experience nontrivial flows on a daily basis. Today, the accessibility and speed with which user can move cash in and out of stablecoins vary significantly. Over the course of January 2021 to December 2024, the second-largest stablecoin provider, Circle, provided redemption of \$464 billion in USDC, or a daily average of about \$318 million.¹⁵ This implies a daily redemption rate of about 0.93% of total market capitalisation, and a daily absolute percentage change in market capitalisation for USDC of about 0.62% – levels reasonably in line with those observed for US government money market funds. In comparison, the 25th and 75th percentile of daily absolute percentage change in market capitalisation of US government money market funds in 2024 is 0.4% and 2.79%, respectively.

However, stablecoin issuers may be expected to provide greater access and speed in redemptions. For example, Circle offers up to “near-instant” redemptions.¹⁶ This feature explains a key difference between Circle’s reserves and those of money market funds, which typically provide T+0 or T+1 settlement. Stablecoin providers issue stablecoins after receiving US dollars from customers, and fulfill customers’ redemption requests after receiving stablecoins by sending a corresponding amount in US dollars. Both processes require stablecoin providers to hold commercial bank deposits. Consequently, redemptions are processed closer to a gross, rather than net, basis, resulting in greater intraday payment volatility. Second, greater integration to support stablecoin usage for day-to-day payment needs could also increase gross redemptions, transmitting payment-related liquidity shocks to banks and the Treasury market.

TOKENISATION OF DEPOSITS AND MONEY-LIKE ASSETS

Tokenisation refers to the digital representation of traditional assets on blockchain systems. Although US dollar stablecoins represent the majority of the tokenised US dollar market, financial institutions have begun tokenizing other US dollar assets. There are broad efforts to tokenise various asset classes spanning securities, real estate, and commodities. Here I focus on tokenisation of money-like assets, notably Treasury funds and deposits.

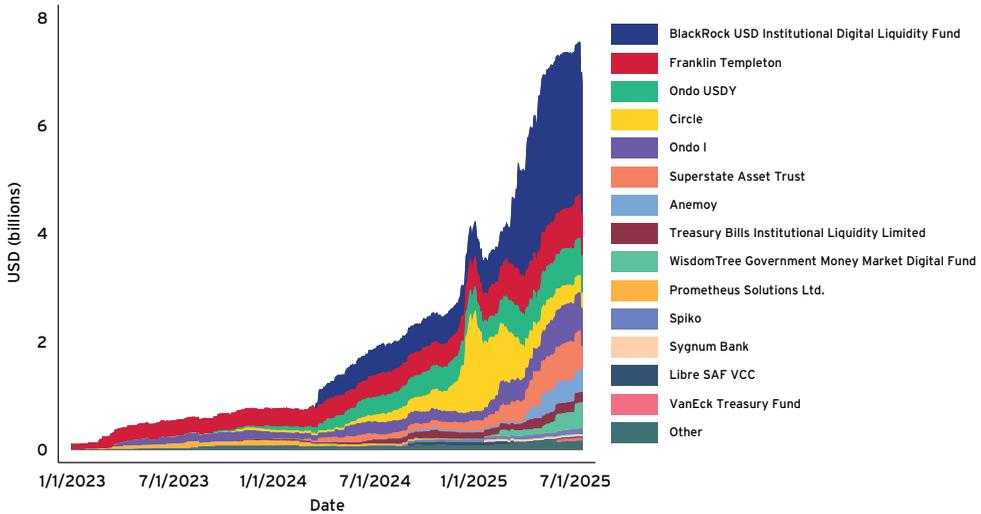
14 Circle offers direct redemptions for USDC through Circle Mint, and indirectly through centralized exchanges, such as Coinbase, and third-party payment providers, such as MoonPay.

15 Based on disclosures from Circle’s IPO prospectus.

16 Circle offers redemption at progressively higher fees and expected settlement times based on the size of the redemption request.

A nascent but fast-growing segment is tokenised Treasury and money market funds. Figure 3 shows the growth of the tokenised Treasury market by issuer. The issuer of a tokenised fund creates and distributes tokens that represent shares of the underlying fund and offers redemption, fulfilled with stablecoins or traditional payments.

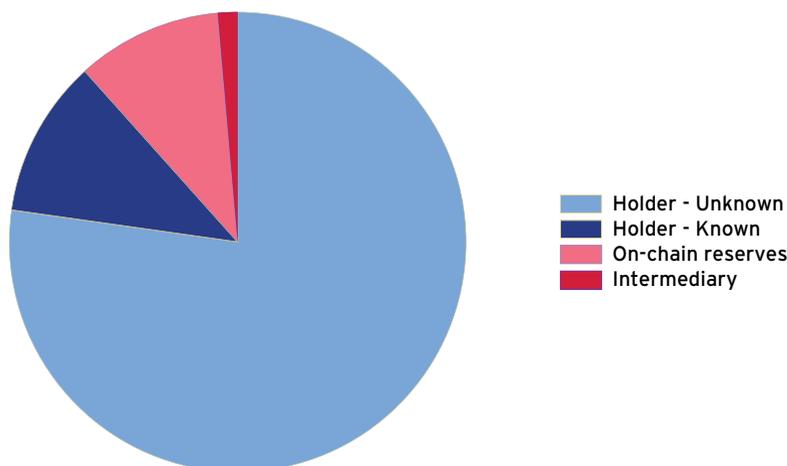
FIGURE 3 TOKENISED TREASURY FUNDS DECOMPOSITION BY ISSUER



Source: RWA.xyz.

I hand-collected cross-chain holder-level data on tokenised funds. In aggregate, tokenised funds reached about \$7 billion as of June of this year and have grown \$5.5 billion since a year ago. There are 49 tokenised Treasury products made available across 35 issuers, and about 53,000 (and growing) holders. I classify holders into four categories. An “intermediary” is a holder whose activities are characteristic of exchanges or intermediaries and who engages in significant activity with other tokens and addresses. “On-chain reserves” are holders linked to entities holding with the intention of using the token to back another token they issue, such as a Treasury fund token or a stablecoin. The remaining are “holders”, who typically buy and hold. Figure 4 provides a breakdown in the types of holders with over \$5 million as of August 2025. The majority of tokenised funds are held in ‘buy-and-hold’ accounts, and a sizeable fraction of tokenised funds are held for on-chain reserves.

FIGURE 4 TOKENISED TREASURY HOLDERS BY TYPE



Source: FRBNY staff estimates.

In reaction to the changing regulatory climate and increased competition from stablecoins, several banks are exploring the issuance of deposit tokens – native representation of bank deposits in token form on permissionless blockchains – and tokenised deposits – token forms that mirror holdings in traditional commercial bank accounts. Several banks have announced pilot projects, including JP Morgan Chase’s JPMD.

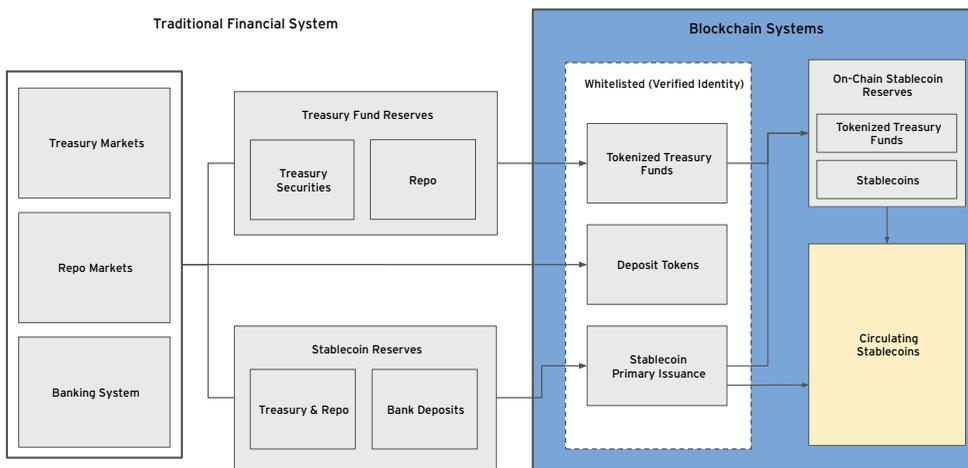
Stablecoins, tokenised Treasury funds, and deposit tokens all comprise claims on some combination of safe and liquid US dollar assets. Figure 5 provides a diagram of the linkage between blockchain systems and the traditional financial system vis-à-vis the tokens and the assets held as backing in the traditional system. Although stablecoins and other tokenised assets bear strong similarities in terms of their economic structure, they differ in terms of their legal and regulatory approach. In contrast to stablecoins, for which there is no existing equivalent, token forms of money market funds and deposits generally conform to existing regulatory frameworks for the traditional forms of these assets. This difference in approach has implications regarding access and return.

First, the issuer of tokenised Treasury funds and deposit tokens must directly verify any and all token holders. Like any traditional financial service arrangement, all potential clients undergo standard compliance processes, including know-your-customer (KYC) and anti-money laundering (AML) checks. Cleared clients are then granted access to respective tokens issued on the blockchain through a procedure called ‘whitelisting’, with only those on the whitelist able to interact with the tokens. The whitelist acts as a permissioned boundary in an otherwise permissionless environment and allows the issuer to control and manage access to their tokens. Any transaction, including peer-to-peer transactions, can only be made between those explicitly part of the whitelist. Under the GENIUS Act, stablecoin issuers are expected to meet similar standards of user verification for primary markets. At the issuance stage, stablecoin issuers functionally

manage a ‘whitelist’ as well. However, once issued, stablecoins are free to circulate, reaching a much broader base of users to own and access stablecoins without a direct relationship with the issuer. This flow is depicted in Figure 5, where issued stablecoins circulate outside of the whitelisting environment.

Second, as with their traditional counterparts, tokenised Treasury funds and deposit tokens are able to offer interest and yield to token holders. Tokenised Treasury and money market funds offer competitive money market rates to investors. Because stablecoins are forbidden from paying interest, yield-bearing US dollar assets are viewed as an integral part of the broader tokenised US dollar system. Correspondingly, issuers commonly accept and redeem in stablecoins, which enables investors to manage liquidity on blockchains more efficiently.

FIGURE 5 TOKENISED ISSUANCE DIAGRAM



There are, however, several important considerations. While the GENIUS Act prohibits payment stablecoin issuers from paying interest and yield directly to their holders, payment stablecoin issuers leverage partnerships with key distribution channels (for example, centralised exchanges) to circumvent direct interest and yield payments to holders. In doing so, stablecoin issuers can retain rate-sensitive holders, including institutional investors, who represent a sizeable portion of stablecoin users. For example, roughly a quarter of Circle’s USDC is held at Coinbase, which provides competitive rewards to investors that custody their USDC at Coinbase. Banks and stablecoin issuers disagree about whether this form of indirect yield transfers violates the GENIUS Act, and it will be a hotly debated issue as regulators and market participants turn to the implementation of the Act. Second, novel blockchain-based arrangements grant stablecoin holders with various ways to obtain yield from their holdings.

CONCLUSION

Major tailwinds are underway, with potential transformation in the way traditional financial transactions are settled and in the form and utility of money itself. Stablecoins, tokenised Treasuries, and deposit tokens each strike a different balance between access and return – a balance that will determine their role in payments and intermediation, and their implications for financial stability. The potential adoption of permissionless blockchains for traditional financial activity marks a big, if uncertain, evolution in how finance works. This puts utmost importance on cultivating and developing a regulatory environment that manages innovation for a safe and resilient financial system.

ABOUT THE AUTHOR

Michael Junho Lee is a Financial Economist at the Money and Payment Studies Department at the Federal Reserve Bank of New York. His recent work explores issues at the intersection of technology and finance, and focuses on financial system architecture and the future of money. Michael received his PhD in Finance from the Wharton School at the University of Pennsylvania.