Digital Money

TBAC Presentation
April 30, 2025

Charge:
With the growth of the cryptocurrency and digital asset economy has come the expansion of the "stablecoin" market in the United States and abroad. As this asset class continues to grow, the distinctions between money funds and payment stablecoins has continued to converge. Some stablecoins are moving towards paying interest, money market funds are exploring tokenization, and Congress is considering explicitly defining what constitutes a collateralized dollar-backed payment stablecoin. Please articulate the terminal effects of interest-bearing stablecoins from a perspective of Treasury demand, USD hegemony, the expansion of dollar-backed payment stablecoins, and potential effects for insured depository institutions. Further, do tokenized money funds present a risk should they be allowed to compete with other payment or settlement instruments?

Executive Summary

1 Stablecoin Market Overview

- Stablecoins (market cap of ~$234bn[1]) are ubiquitously utilized as "cash on-chain," effectively serving as a new payment mechanism
- An emergence in tokenized MMFs has recently created an alternative option to stablecoins, primarily given their yield-bearing feature
- Evolving market dynamics has the potential to accelerate stablecoins' trajectory to reach ~$2tn in market cap by 2028[2]

2 US Regulatory & Dollar Dynamics

- USD-pegged stablecoins dominate the stablecoin market (>99% in market cap[1]), driving near-term focus on potential legislation
- **Within currently proposed legislation (the GENIUS Act)[4] there are several factors that are still being determined, which influences the pace at which demand may grow**

Therefore, stablecoins could catalyse structural changes across the following areas – the extent of which is likely contingent on the ultimate requirements of U.S. regulated stablecoins and the corresponding growth of the stablecoin market in response

3 What are the Potential Impacts on Bank Deposits?

- The potential impact on bank deposits **may depend on whether stablecoins are yield-bearing or if they offer other operational payment features relative to the yield and functionality offered by other products**
- In light of potentially exacerbated competition, **banks may be required to increase interest rates to maintain funding or find alternative funding sources (i.e., expand their wholesale funding activity)**

4 What are the Potential Consequences for the Treasury Market?

- Two main potential impacts of deposits moving to stablecoins:
  1. **An overall increase in the demand for Treasuries**
     — Reserve requirements outlined in proposed stablecoin legislation[3] **will provide an additional and growing source of demand for Treasuries**
  2. **An overall shift to the front-end of the curve**
     — Legislation would **require stablecoin issuers to hold <93d T-bills[3], driving a concentration of Treasury holdings to the front-end**

5 What are the Potential Implications on Monetary Supply?

- Demand in stablecoins could have a net neutral impact on the U.S. money supply, however the attractiveness of USD-pegged stablecoins could drive currently non-USD liquidity holdings into USD

6 How Could this Potentially Affect Existing Market Structures?

- Currently proposed legislation doesn't provide a path to accessing a master account if the issuer doesn't already qualify
- **The inability for stablecoin issuers to access the FED has the potential to exacerbate periods of stress / volatility** that stablecoins may experience
- However, the specific reserve requirements contemplated by current legislation could mitigate potential stablecoin de-pegs and the need for such forms of enhanced access

[1] DeFi Lama as of 14-Apr-2025. [2] Standard Chartered: "Stablecoins, USD Hegemony, and UST Bills" (15-Apr-25). [3] GENIUS Act.

Conceptual Spectrum of Stablecoins' Impact

	Illustrative Stablecoin Design Spectrum		
	(A) **Non-Interest Bearing**	(B) **Interest-Bearing** *(limited market access)*	(C) **Interest-Bearing** *(enhanced market access)*
Competition	■ USD Cash	■ USD Cash ■ MMFs	■ USD Cash ■ MMFs ■ Bank Deposits
Illustrative Market Access *(i.e., Fed Account, RRP, or FDIC Insurance)*	✗	✗	✓

Illustrative Overall Impact

As we go across the spectrum, the versatility for stablecoins increases (given their enhanced features), as does the UST demand (given reserve requirements) through the stablecoin channel

Potential Regulatory Oversight →

Stablecoin Versatility →

Demand for USTs →

There is a Wide Spectrum of Digital Money Implementations

Today's Focus

Digital money refers to any form of value that exists purely in digital form.
It is typically stored, exchanged and transacted electronically, taking shape in many forms.

Privately Sector Issued *(Commercial Bank B/S)*

Tokenised Deposits – *Tokenised commercial bank money*
- Representation of a deposit liability at a commercial bank on blockchain

Private Sector Issued *(Central Bank B/S)*

Tokenised Money Market Funds – *MMFs as tokens on DLT*
- Representation of a MMF as a token on blockchain

Stablecoins – *Privately Issued Digital Money*
- Representation of cash on blockchain with price stability achieved by 1:1 backing with reserve assets
- Can be interest or non-interest bearing

Private or Public Sector Issued

Cryptocurrencies
- Virtual currencies that operate on decentralized networks, based on blockchain technology

Central Bank Issued *(Central Bank B/S)*

Trigger Solutions – *Connectivity into RTGS Systems*
- Connectivity of blockchain directly into Central Bank RTGS systems

Central Bank Digital Currency (CBDC)
- Representation of cash on blockchain issued directly by a Central Bank and regulated by their monetary authority

Snapshot of Current Initiatives & Trends

Tokenised Deposits

J.P.Morgan
Already live with own blockchain-based deposit solution for payments and repo activity[1]

citi
Already live with own blockchain-based deposit solution for payments activity[2]

Tokenised Money Market Funds

BlackRock
BUIDL, tokenized MMF, attracted over $240mm in investments within first week[3]

FRANKLIN TEMPLETON
BENJI tokens, which represent 1 share of the FOBXX MMF, issued on blockchains like Stellar, Polygon and Ethereum[4]

Stablecoins

Major Issuers

Dominated by major cap issuers like Tether and Circle. Total stablecoin market capitalization currently sits at ~$234bn[5]

Major banks and FinTechs like Standard Chartered, PayPal and Stripe have entered the market

Cryptocurrencies

Top Cryptocurrencies by Market Cap:[6]

Bitcoin = $1.7tn
Ethereum = $191bn
XRP = $123bn
USDT = $145bn
Binance = $82bn

Total Market Cap is near $3tn

Trigger Solutions

DEUTSCHE BUNDESBANK EUROSYSTEM

The Bundesbank Trigger Solution[7] is a mechanism designed to facilitate the settlement of tokenized assets in central bank money. It acts as a bridge between blockchain platforms and traditional payment systems, ensuring secure and efficient transaction settlement without CBDCs

CBDC

Of 134 Countries and Currency Unions tracked for CBDC development…[8]

2% of Central Banks have launched a CBDC

33% are in Pilot phase

…

14% are in Development

…

[1] JP Morgan. [2] Citi. [3] BUIDL. [4] FOBXX. [5] DeFi Lama. [6] CoinMarketCap. [7] Bundesbank. [8] The Atlantic Council.
Note: Market data as of 14-Apr-2025.

Current State of the Stablecoin Market

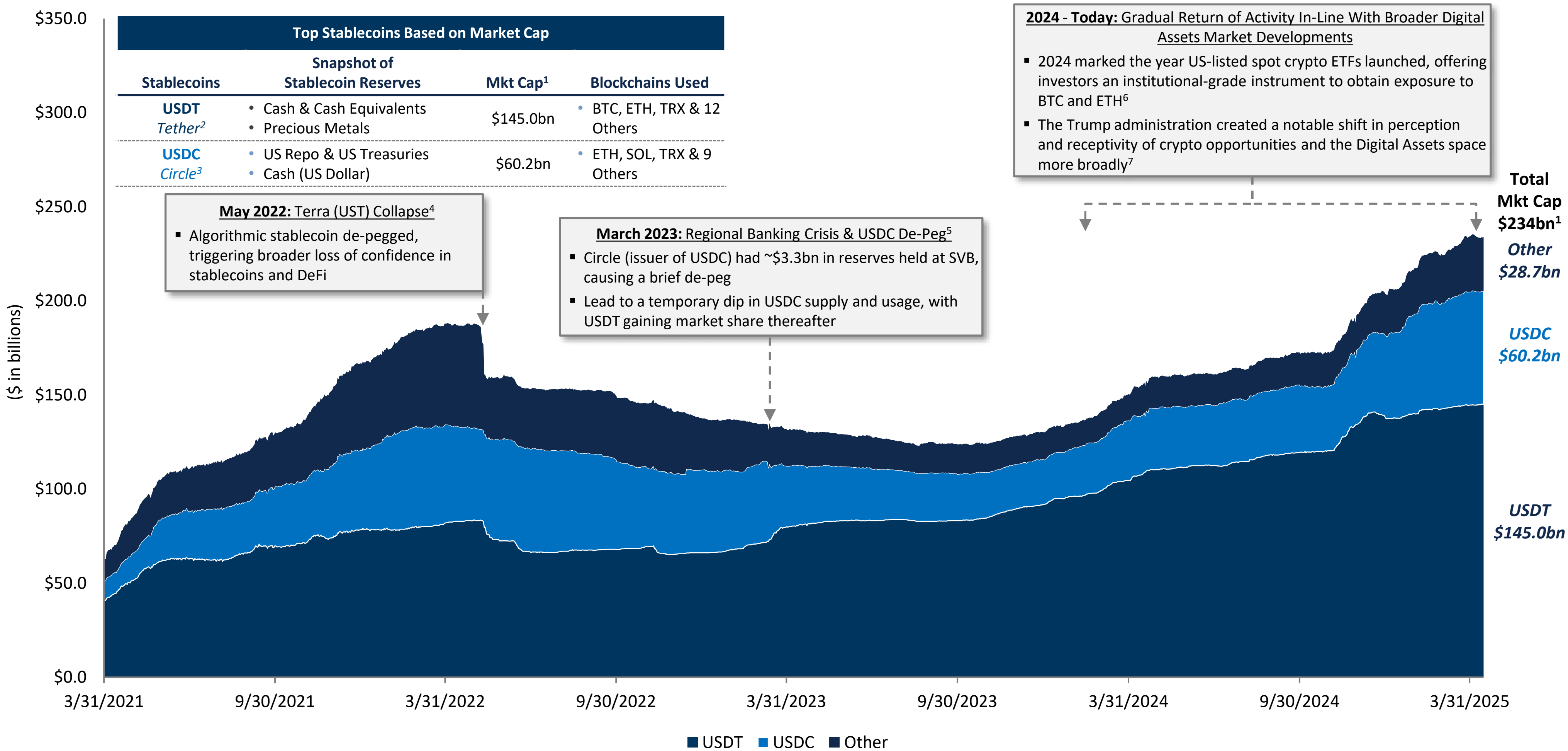
($ in billions)

The stablecoin market is rapidly evolving amid renewed institutional interest, the evolution of global regulatory frameworks, and the development of broader on-chain applications / use cases.

Historical Stablecoin Market Cap[1] – Last 4 Years

Top Stablecoins Based on Market Cap

Stablecoins	Snapshot of Stablecoin Reserves	Mkt Cap[1]	Blockchains Used
USDT *Tether[2]*	• Cash & Cash Equivalents • Precious Metals	$145.0bn	• BTC, ETH, TRX & 12 Others
USDC *Circle[3]*	• US Repo & US Treasuries • Cash (US Dollar)	$60.2bn	• ETH, SOL, TRX & 9 Others



[1] DeFi Lama. [2] Tether. [3] Circle. [4] Harvard Law School. [5] CNBC. [6] Reuters. [7] Coinbase.

Note: Market data as of 14-Apr-2025.

Rapid Growth in Digital MMFs Has Catalyzed an Alternative Stablecoin Narrative, Despite Obvious Differences

Similarities can be drawn between the use cases of Tokenized Money Market Funds (MMFs) and stablecoins, however a key differentiator between them is that stablecoins cannot be yield-bearing under the current proposed GENIUS Act.

	Tokenized Money Market Funds	Stablecoins
Target Users / Holders	■ On-chain investors, including retail / accredited / qualified investors, institutions, and corporates	■ On-chain investors, including retail, institutions, and corporates ■ Limited use from BHC's / financial institutions due to lack of regulatory clarity
Select Use Cases	■ A way for on-chain investors to access a yield-generating product with low-risk government assets and repo collateral ■ Enables efficient management of short-term liquidity and instant collateral transfers. In turn, provides a way to seamlessly free tied-up capital during clearing and to reduce intra-day exposure banking fees	■ Primarily utilized as a form of cash across on-chain applications
Payment Tool	■ Technically feasible to transfer immediately ■ Most near-term use cases focus on use of tokenized MMFs as collateral	■ Intentionally designed to provide an on-chain version of cash, enabling instant payments on blockchain rails
Underlying Assets	■ Consistent with traditional MMFs, are either registered '40 Government MMFs or funds investing in USTs, repos, other short-term debt instruments, or cash or cash equivalents	■ Stablecoins can be backed by a variety of assets (as noted on page 4), but are commonly backed by assets that maintain a stable reference to a fiat currency or a commodity
Redemption Model	■ Depends on the fund prospectus and protocol utilized, although holders can typically redeem at a rate of 1:1 to the USD against the protocol / distributor ■ Distributors of tokenized MMFs can redeem tokens through authorized broker-dealers or the asset manager (typically at NAV) during a fixed time-frame outlined in the prospectus	■ Holders of stablecoins currently have two options to redeem stablecoins: — Redeem against the issuer directly at a fixed price of $1 — Sell the stablecoin on exchange in the secondary market ■ Users often split into two categories, some having access to redeem against the issuer and sell on the exchange, some can only sell on exchange
Issuers	■ Regulated asset managers, such as Franklin Templeton (BENJI) and Blackrock (BUIDL), have partnered with tokenization platforms / protocols to implement the tokenization process	■ Private companies, such as Tether (USDT) and Circle (USDC)
Transferability	■ Transfer can occur instantaneously on blockchains (most tokenized MMFs have been issued on public blockchains) and are typically mediated by smart contract rules	■ Stablecoins *can* be transferred peer-to-peer
Yield Bearing	■ Tokenized MMFs earn returns based on the underlying assets and are yield-bearing instruments for end-investors	■ Under the proposed GENIUS Act stablecoins cannot be yield-bearing instruments

What the "Art of the Possible" of Stablecoin Use Cases Could Look Like for Financial Institutions

There are several hypothetical angles to how a financial institution could participate in the stablecoin market. These are highly illustrative and would be subject to the respective institutions' internal approvals as well as applicable legal and regulatory frameworks.

Functionality Enabled by Blockchain Rails and Stablecoins…

- Instantaneous settlement with precision to the nearest minute
- Single set of rails for multiple currencies or the same rails securities are issued on
- Programmable payments
- Extended cut-off times

…Has the Potential to Unlock New Ways of Conducting Business…

- ✓ Simultaneous exchange of cash and collateral
- ✓ 24/7, cross-border, cross-currency payments
- ✓ Instantaneous settlement of digital securities
- ✓ Intraday interest on deposits and charging on overdrafts

…Leading to a Wide Cross-Section of Commercial and Internal Optimization Use Cases

1. Issuing a Stablecoin
2. Settle On-Chain Digital Securities Transactions
3. Managing Stablecoin Reserves
4. Enhanced Treasury and Collateral Management
5. Cross-Border Payments & Cross Currency Swaps
6. Trading vs. Stablecoin Reserves
7. Serve as a Banking Partner for Stablecoin Providers and Managing Reserves

Stablecoins Could Witness Exponential Growth in Response to Market and Regulatory Breakthroughs

Evolving market dynamics, structures, and incentives have the potential to accelerate stablecoins' trajectory to reach ~$2tn in market cap by 2028[1].

Potential Growth Enablers That Could Prompt Rapid Stablecoin Adoption

Adoption Enablers

Financial Market Service Providers and Institutions
(Recent all-time highs of activity and open interest in crypto products on the CME[2], launch of spot BTC, ETH ETFs[3] and options[4])

Migration of Wholesale Market Transactional Activities On-Chain
(Strong business fundamentals and structural changes suggest a clear path for tokenization with the tokenization market (excluding stablecoins and tokenized deposits) forecasted to reach $6.4tn by 2033[5])

Merchant Integrations
(Stablecoins continue to grow as a mechanism for payment, with some merchants and platforms (e.g., PayPal) offering stablecoins as an option[6])

Economic Enabler

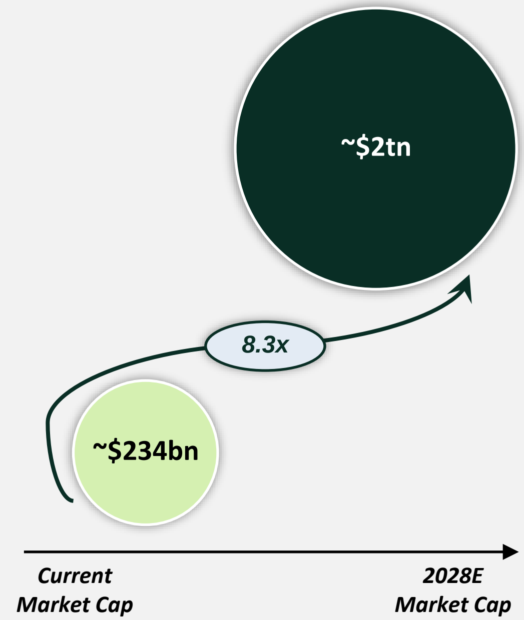
Interest-Bearing Stablecoins[7]
(Expectation that the store of value narrative of stablecoins becomes more appealing and unlocks a yield generating opportunity for holders)

Regulatory Enablers

Designated Capital and Liquidity Treatment of Stablecoins
(Would establish potential inclusion of stablecoins in liquidity management strategies)

Bank Holding Company (BHC) Permissibility of Public Blockchains
(Would provide a clearer path for banks being able to access and services customers' activity on public blockchains, on which most stablecoin activity occurs)

Stablecoin Supply Projections[1]



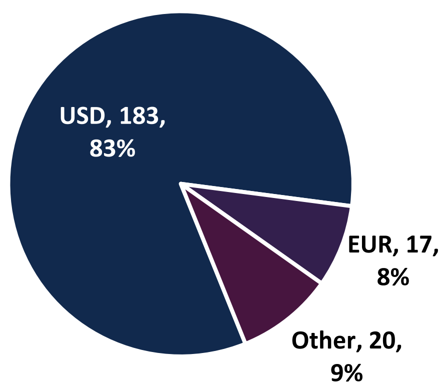
- A $2tn stablecoin supply would be required to support a 7x rise in overall transactions while assuming stablecoin velocity remains unchanged

[1] Standard Chartered: "Stablecoins, USD Hegemony, and UST Bills" (15-Apr-25). Assumes the passage of the GENIUS Act and thus a 7x total increase in stablecoin transactions from 700bn a month to ~USD 6tn by the end of 2028. This assumes a lift in stablecoin transactions to 10% of FX spot-market transactions, from around 1% at present. Assuming stablecoin velocity is unchanged, this would require the outstanding supply of stablecoins to ~$2tn by 2028E. [2] CME. [3] Reuters. [4] CoinDesk. [5] Ledger Insights, BCG / Ripple. [6] PayPal. [7] Not currently contemplated under the GENIUS Act.

USD Stablecoins Dominate the Market, Driving a Near-Term Focus on Potential Legislative Frameworks

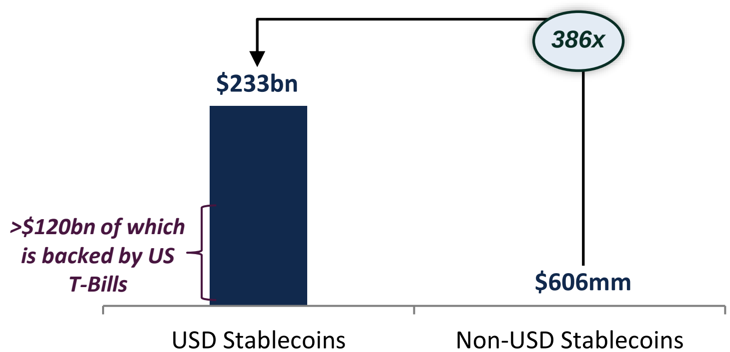
The currently proposed GENIUS Act (2025) is the latest of three former bills on US stablecoins (none have become law). Given the dominance of USD-pegged stablecoins in the market, the enactment of such a bill is likely to impact the USD stablecoin market's future direction of travel.

Quantity of Fiat-Pegged Stablecoins by Currency Type[1]



Current Market Cap of USD vs. Non-USD Stablecoins[1]

USD stablecoins have consistently represented **more than 99%** of the overall stablecoin market cap



Current US Legislative Stablecoin Framework Proposal[2]

On March 13, 2025, the US Senate Banking Committee voted in favor of the GENIUS Act.
The bill, introduced by **Senator Bill Hagerty (R), establishes a regulatory framework for US issued stablecoins and creates a definition for the term "payment stablecoin"**

Definition	■ **Definition**: A digital asset designed to be used as a means of payment, which the issuer is obligated to redeem for fixed amount, and which represents (or creates reasonable expectation) that it will maintain a stable value relative to a fixed amount ■ **Exclusions**: cannot offer yield or interest, not a national currency, security, commodity, or a deposit (including a blockchain-based deposit)
Issuer	■ **Regulatory Authority**: **Federal or State** (but Federal regulators determine licensing process for all issuers). Can be approved as a: — **Subsidiary of a bank,** or — **Non-bank** issuer (Fed or State regulated if less than $10bn M/C)
Reserves	■ **1:1 backing**: USD coins and currency (including Federal reserve notes); funds held in demand deposits, treasury bills, notes or bonds with a remaining / issued with maturity of 93 days or less; repurchase agreements with maturity of 7 days or less backed by T-Bills with a maturity of 90 days or less; reverse repurchase agreements with maturity of 7 days or less collateralized by Treasury notes, bills or bonds; money market funds that invest in the aforementioned; or central bank reserve deposits ■ **Monthly disclosure requirements**
Blockchain	■ **Public blockchains** only
Other	■ **Legal control:** Issuers must be able to freeze, burn or prevent transfer of stablecoins if required by law ■ **All permitted issuers are subject to Fed laws applicable to financial intuitions for the purposes of Bank Secrecy Act** and are required to establish BSA/AML compliant programs

Implications for Compliant Stablecoins

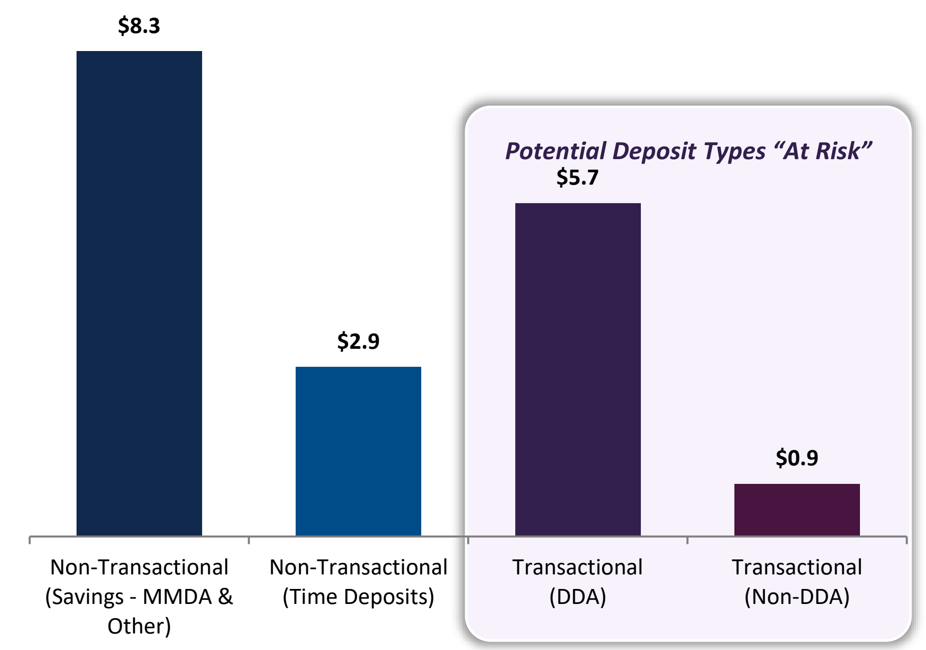
■ The GENIUS Act would provide a clear framework for "payment stablecoins," eliminating ambiguity of applicable regulation

[1] DeFi Llama. Includes fiat-backed stablecoins only. [2] GENIUS Act.
Note: Market data as of 14-Apr-2025.

What are the Potential Impacts of Stablecoin Growth on Bank Deposits?

While current regulatory proposals do not consider stablecoins being interest-bearing, the ultimate design of stablecoins will likely dictate the potential magnitude of impact to bank deposit flows.

Total US Deposits as of 4Q'24[1] ($tn)



Characterizing "At-Risk" Deposit Types

- Current transactional deposit types are already non-interest bearing
- Unlike savings or time deposits, transactional deposits are primarily utilized for daily activities and can be easily transferred to other accounts
- More broadly uninsured deposits can leave holders to rationalize where to park deposits opportunistically or during periods of uncertainty (as evidenced in past migrations to MMFs during periods of stress)[2]

Hypothetical Design Components That Could Influence Market Behaviour

Potential Impact

Potential Magnitude of Impact: Lowest → Highest

1 Non-Interest Bearing Stablecoins

- Potential rotation from stablecoins into tokenized MMF overnight in order to capture yield
- As stablecoins are already non-interest bearing today, growth will likely be a continued function of payment utility and overall Digital Assets market activity

2 Interest Bearing Stablecoins[4]

- Potential rotation from traditional deposits into stablecoins, which may offer more usability or competitive rates[3]
- Reinforces global attractiveness of USD-pegged stablecoins, particularly for existing on-chain holders and for those utilizing USD-pegged stablecoins as a store of value

[1] Quarterly Reports of Condition and Income (call reports) filed with US Federal Deposit Insurance Corporation (FDIC) as of 4Q24. Data represents U.S. domestic deposits only and includes both external and affiliate deposits. [2] SEC – "Charting the Course: A Systematic Exploration of Influences Shaping Money Market Fund Growth". [3] Assuming limited movement in deposit rates. [4] This is a hypothetical design feature that is not currently contemplated by the GENIUS Act.

What are the Potential Consequences of Stablecoin Growth on the Treasury Market?

With an expectation that stablecoins will continue being backed by fiat assets and that tokenized MMFs will continuing serving as an attractive investment product for investors, the portion of USTs held by such issuers is likely to be correlated with overall instrument growth.

Key Takeaways

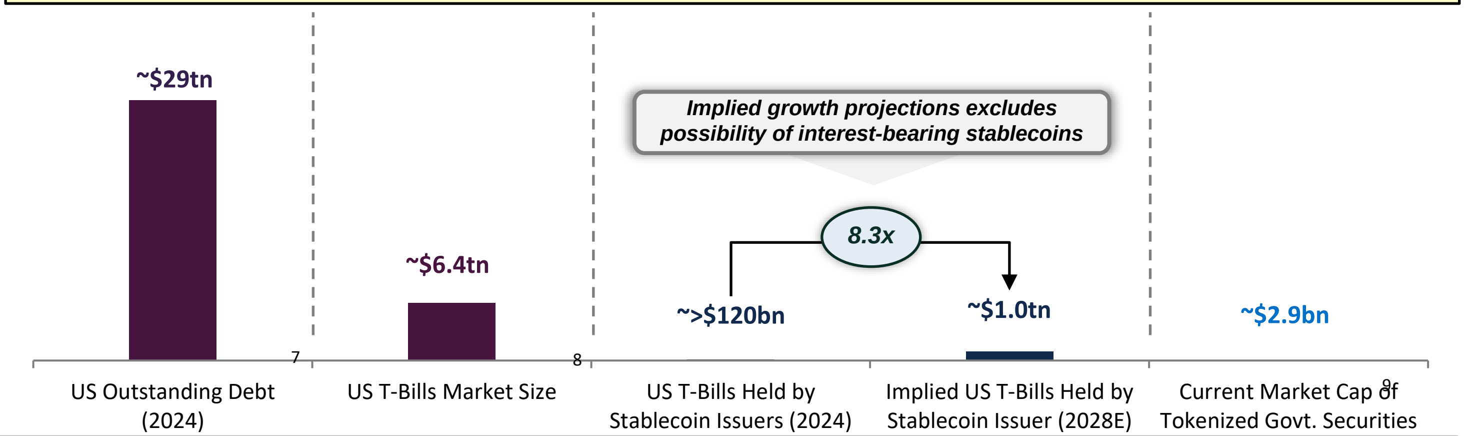
- Based on the publicly available reserve filings of the dominant stablecoins in the market, **stablecoin issuers are estimated to currently hold >$120bn in T-bills**
- Rapid growth in stablecoins, as well as market volatility, could lead to a materially heightened demand for or supply in USTs, with an implied incremental demand of ~$900bn for T-Bills
- If stablecoins experienced exponential growth, the demand for USTs should be correlated, likely at the expense of bank deposits
- These shifts in market dynamics could be potentially exacerbated in moments where there is a loss in confidence in stablecoins or if a stablecoin de-pegs

Comparison of Self-Reported Stablecoin Issuers' Reserves (As of Dec-2024)

	Tether[1]	*Circle*[2]	*Ripple*[3]	*PayPal*[4]
Stablecoin Issued	**USDT**	**USDC**	**RLUSD**	**PYUSD**
Reserve Composition:	*(as of Dec-2024)*	*(as of 17-Apr-2025)*	*(as of Dec-2024)*	*(as of Dec-2024)*
Reverse Repo	$17.2bn / (12.0%)	-	-	$488.0mm / (95.8%)
Money Market Funds	$6.5bn / (4.5%)	$53.3bn[5] / (88.8%)	$30.1mm / (36.3%)	-
Cash	$0.1bn / (0.1%)	$6.7bn / (11.2%)	$23.0mm / (27.5%)	$21.4mm / (4.2%)
US T-Bills	$94.5bn / (65.7%)	-	$30.1mm / (36.2%)	-
Other	$25.4bn / (17.7%)	-	-	-
Avg. T-Bill Residual Duration	Less than 90 days[6]	Less than 12 days[6]		

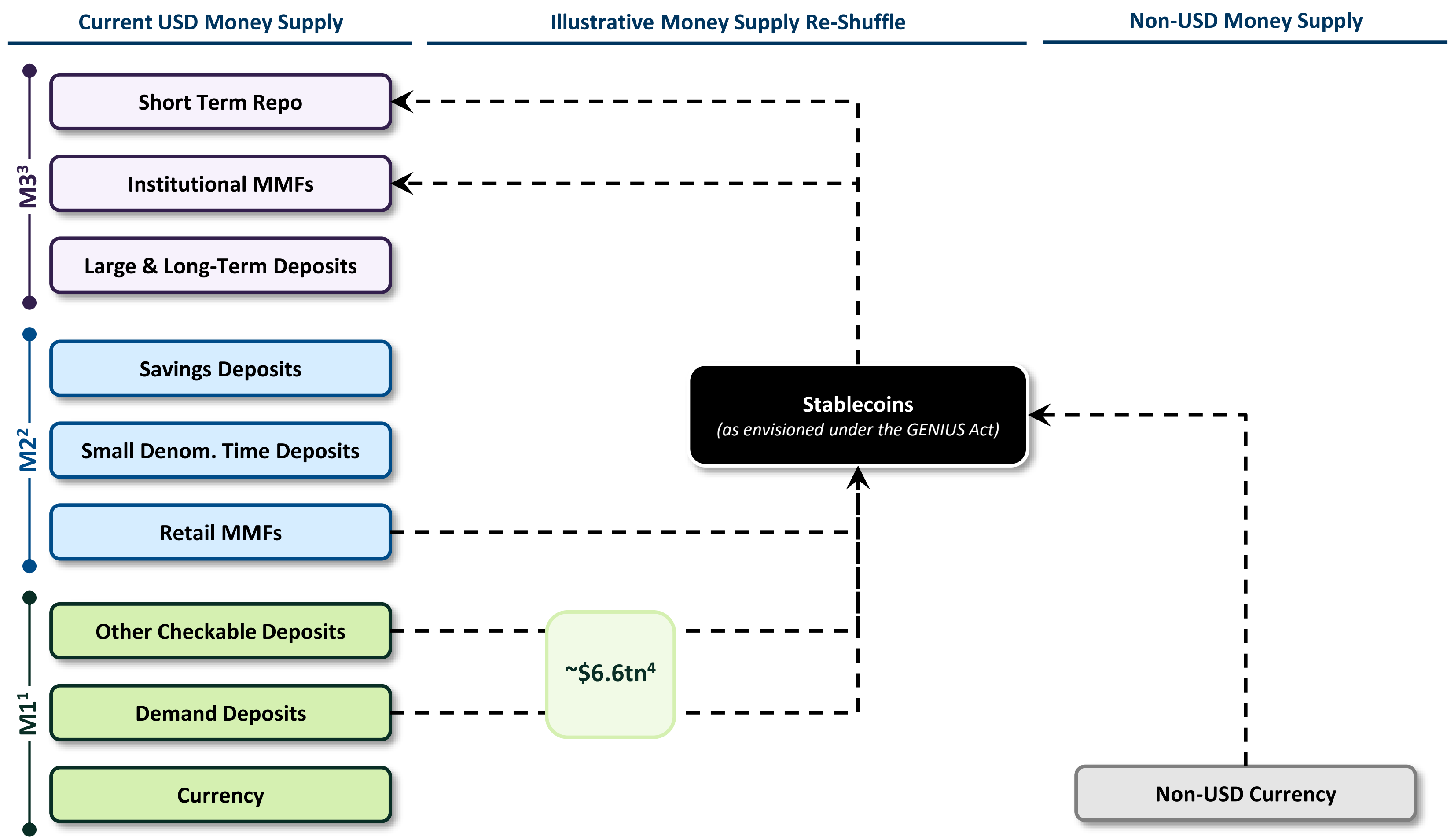
Market Sizing

Stablecoin issuers' demand for T-Bills is expected, to in some part, be impacted by the requirements of the GENIUS Act on treasuries with short-dated maturities.



[1] Tether. [2] Circle. [3] Ripple. [4] Paxos. *Note: These reserve compositions are self-reported and were not independently verified by TBAC or Treasury. Note: Overall WAM for reverse repo agreements and cash backing PYUSD is 2 days.* [5] *USDC Reserves are held in the USDC Reserve Fund which invests in T-Bills, Cash and Repo transactions.* [6] *Standard Chartered: "Stablecoins, USD Hegemony, and UST Bills" (15-Apr-25).* [7] Fiscal Data. *Reflects debt held by the public.* [8] OFR. [9] The Block.

What are the Implications of Stablecoin Growth on the Monetary Supply?



Potentially generates no net change to the US money supply, but a catalyzes a potential shift of funds away from M1 / M2.
Stablecoins may gain momentum as a store of value and way to access USD for non-USD holders – in turn, increasing inflows to the US money supply .

[1] FRB. [2] FRB. [3] FRB. [4] Reflects transactional deposits only. Quarterly Reports of Condition and Income (call reports) filed with US Federal Deposit Insurance Corporation (FDIC) as of 4Q24. Data represents U.S. domestic deposits only and includes both external and affiliate deposits.

How Could Stablecoin Growth Potentially Affect Existing Market Structures?

Historical stablecoin de-pegs have highlighted run-risk and the potential need for stablecoin issuers to have more access to markets (akin to banks). However, the narrow reserve requirements proposed by current legislation resembles MMF regulatory reforms aimed at mitigating "break-the-buck" scenarios.

Historical Stablecoin De-Pegs

- Moody's defines a de-peg as a stablecoin fluctuating by more than 3% in a day against their fiat currency peg. De-pegs can be driven by macro, coin-specific, or economic factors[1]
  - In 2022, there were **2,347 de-pegs** and **1,914 de-pegs up to Nov-2023**[1]
- These de-pegs demonstrate what a "run on the bank" could look like for stablecoins and the corresponding volatility stablecoin issuers need to navigate during periods of stress
  - One of the more notable de-pegs was USDC in Mar-2023[2], which highlighted the interconnectivity between the traditional banking and Digital Assets markets
- A major de-pegging event has the potential to create a loss of confidence and trigger withdrawals. In turn, this could lead to potentially dampening crypto market liquidity, triggering automated liquidations, impairing crypto trading platforms' ability to meet redemptions, and potentially having a broader contagion effect on the financial system[4]

Illustrative Remediation Solutions for Stablecoin Issuers in Periods of Stress

- FED Access?
- Deposit Insurance?
- Access to 24/7 Repo Markets?

Could Stablecoin Regulation Draw Inspiration from MMF Reform to Mitigate Future De-Pegs?

- In 2010, reforms focused on the maturity limits, credit quality, and the liquidity of MMFs was implemented as a response to "break-the-buck" instances in 2008[5]
- A regulatory framework for stablecoins that already encapsulates the learnings from such a reform has the potential to mitigate stablecoin de-pegs and the potential need for stablecoin issuers to have enhanced access to the markets

Evolution MMF Regulation[6]

	Before 2010 Reforms	Post 2010 Reforms (Select New Requirements)
Liquidity Requirements	▪ No minimum liquidity mandates ▪ <10% of fund in illiquid assets	▪ > 10% of assets must be in cash, USTs, or securities that convert into cash within one day ▪ >30% of assets in cash, USTs, certain other government securities with remaining maturities of 60 days or less, or securities that convert into cash within one week ▪ <5% of fund in illiquid assets
Maturity Limits	▪ No Weighted Average Life maturity limit ▪ Weighted Average Maturity of 90 days	▪ Weighted Average Life < 120 days ▪ Weighted Average Maturity < 60 days
Stress-Testing	No stress test requirements	▪ Required periodic stress testing for redemption shocks, credit events, and rate movements
Reporting	"Shadow" NAV reported twice a year with a 60-day lag	▪ Monthly disclosure of portfolio holdings, including "shadow" NAV

Currently proposed US stablecoin regulatory frameworks take a reserve requirement approach that is more in-line with those imposed on MMFs post the 2010 reforms

[1] Moody's. [2] CNBC . [3] Citi. [4] Congress – Money Market Mutual Funds: A Financial Stability Case Study. [5] SEC and SEC.

Key Takeaways

1. Stablecoins could grow to ~$2tn by 2030[1] in response to continued market and regulatory breakthroughs

2. The stablecoin market is primarily comprised of USD-pegged stablecoins, driving near-term focus on potential US regulatory frameworks and the accelerated impact legislation could have on stablecoin growth

3. Stablecoins could disrupt traditional banks by drawing away deposits. However, they also present chances for banks and financial institutions to create innovative services and to benefit from the use of blockchain technology.

4. The ultimate design and adoption of stablecoins will drive the magnitude of impact that stablecoins have to the traditional banking system, as well as the demand for US Treasuries

[1] *Standard Chartered: "Stablecoins, USD Hegemony, and UST Bills" (15-Apr-25).*

Appendix

What are Stablecoins and How are They Used Today?

Stablecoins are digital assets designed to maintain a stable value by pegging their worth to a reserve asset, such as fiat currency (USD). The intended stability of stablecoins has made them a key enabler for payments and as a store of value in on-chain ecosystems.

Types of Stablecoins

Backed by Traditional Assets

1 Cash and US Treasury Backed Coins

- Reserves include USTs, UST Reverse Repo and MMFs

Select Examples Include: USDC, RLUSD, PYUSD

2 Diversified Asset Backed Coins

- Reserves primarily include a combination of deposits, USTs, private credit, gold and/or Bitcoin

Select Examples Include: USDT, XAUt, KAU

Backed by Crypto

3 Crypto Collateralized Stablecoins

- Reserves involve other cryptocurrencies that are deposited by stablecoin users to collateralize the stablecoin. Reliant on smart contracts for value stabilization

Select Examples Include: DAI, sUSD, LUSD

4 Algorithmic Stablecoins

- Reserves usually do not exist as stablecoins are not collateralized. Reliant on smart contracts for value stabilization

Select Examples Include: USDD, AMPL, CUSD

Stablecoin Use Cases

1 Payment Tool

Used for payments as a medium of exchange, disintermediating the need for traditional payment processors

2 Store of Value

Used for value purposes, given a peg to the value of an asset ensures price stability (as many stablecoins are backed *fully* by HQLAs)

Illustrative Real-World Applications

Cross-Border Transfers
Serves as a more cost effective and accessible alternative to traditional remittance processes

On-Chain Settlement
Facilitates trading, lending, and other settlement-based activities across CeFi and DeFi

Merchant Payments
Allows businesses to transact directly with consumers, bypassing traditional payment networks

Collateral
Given the intended price and/or underlying reserve stability, stablecoins can be posted as collateral and utilized for on-chain borrowing

Dollar Access
Stablecoins can allow individuals in emerging markets to get access to both USD and the yield on USD (if yield bearing), acting like a savings account

Jurisdictional Comparison on Proposed Stablecoin Regulations

The table below compares features across selected proposed/active stablecoin regulations in the US, Singapore, EU, and Hong Kong.

	US GENIUS ACT (2025)[1]	MAS Stablecoin Regulatory Framework (2023)[2]	MiCA (2023)[3]	Hong Kong Stablecoins Bill (2024)[4]
Jurisdiction	■ US	■ Singapore	■ EU	■ Hong Kong
Definition	■ A digital asset designed to be used as a means of payment, which the issuer is obligated to redeem for fixed amount, and maintains a stable value relative to a peg	■ **Single-Currency Stablecoin ("SCS")**: stablecoin pegged to a single currency ■ **MAS-Regulated Stablecoin**: SCS pegged to the SGD or G10 currencies issued in Singapore, and fulfil requirements set out by MAS	■ **Asset Referenced Tokens ("ARTs"):** A crypto-asset that is not an EMT and maintains a stable value by being linked to one or more assets ■ **Electronic Money Tokens (EMTs):** A crypto-asset that purports to maintain a stable value by referencing the value of one official currency	■ **Specified Stablecoin**: A digital representation of value that purports to maintain a stable value, with reference to one or more currencies or other HKMA-specified units of account
Issuer	■ Authorised by Federal or State (but Federal regulators determine licensing process for all issuers) ■ Can be approved as a: — Subsidiary of a bank, — Non-bank issuer (Fed or State regulated if less than $10bn market cap)	■ Must obtain a license from MAS to carry out Stablecoin Issuance Service ("SIS") ■ Can be approved as a: — Non-bank entity (subject to market cap requirements)	■ **ART Issuer:** Defined as a legal person or other undertaking (subject to certain criteria) established in the EU ■ **EMT Issuer:** Defined as an authorized credit institution or an electronic money institution (subject to certain criteria)	■ Must obtain a licence from the HKMA ■ Can be approved as a: — Hong Kong incorporated company — Authorized Institution incorporated outside of Hong Kong with certain personnel based in Hong Kong
Reserves	■ USD coins, currency and funds held in demand deposits ■ Treasury securities with maturity of 93 days or less ■ Repo with maturity of 7 days or less backed by T-Bills ■ Reverse repo with maturity of 7 days or less MMFs ■ Central Bank reserve deposits	■ Denominated in the currency of the stablecoin peg and held in cash, cash equivalents or debt securities ■ Debt securities have an up to 3-month residual maturity and is issued by either a government or international organization with a minimum credit rating of "AA-"	■ Investment guidelines: — At least 30 % of the funds received is always deposited in separate accounts in credit institutions — The remaining funds are invested in HQLA assets with minimal market, credit and concentration risk, and are denominated in the same official currency as the one referenced by the EMT	■ Reserve assets must be HQLA with minimal investment risks ■ Except with prior written approval of the HKMA[5], reserve assets must be held in the same reference asset for each Specified Stablecoins. ■ No algorithmic stablecoins
Blockchain	■ Public blockchains only	■ Public or Private	■ Public or Private	■ Public or Private
Yield	■ Non-interest bearing	■ Non-interest bearing	■ Non-interest bearing	■ Non-interest bearing

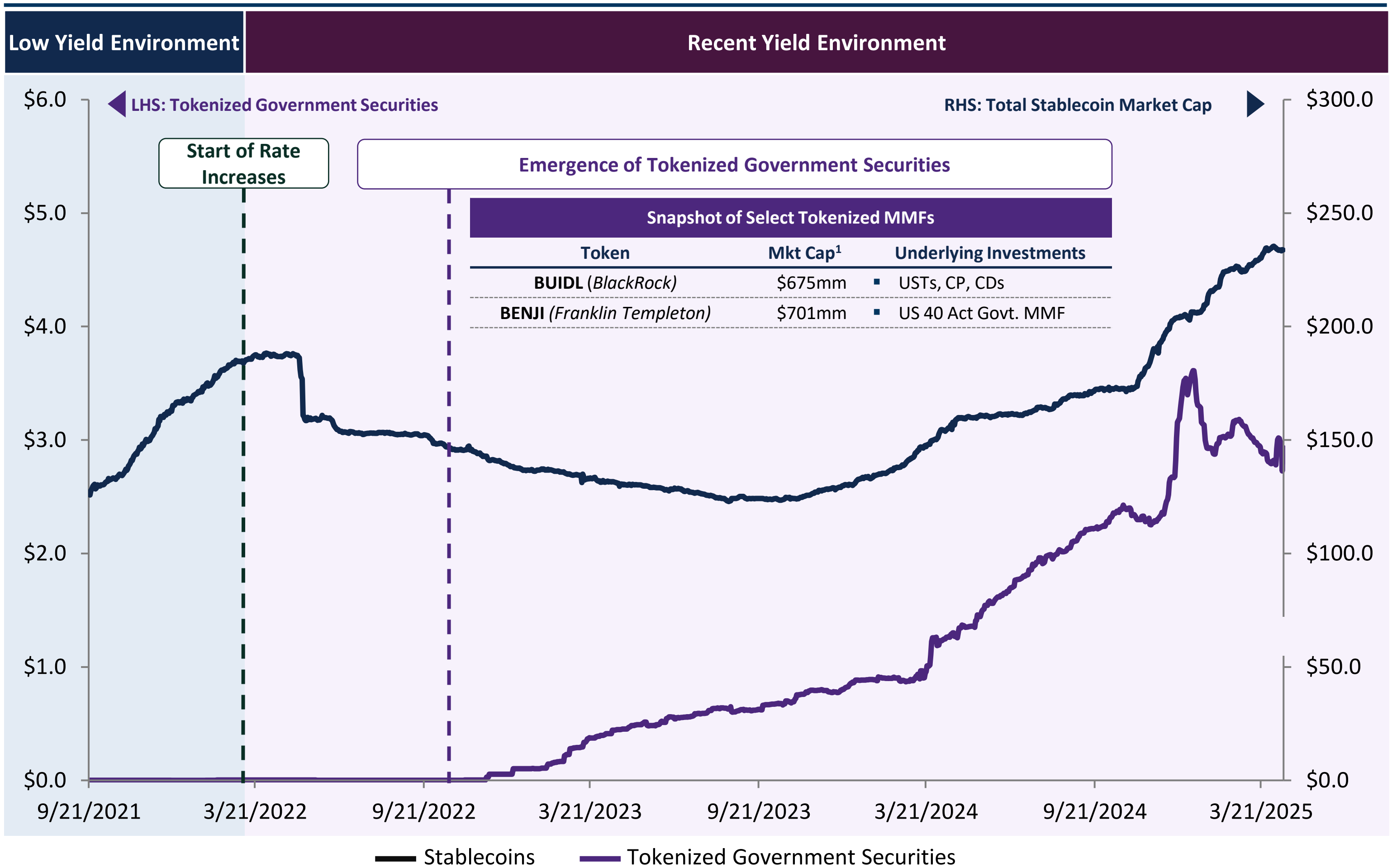
[1] GENIUS Act. [2] MAS. [3] MiCA. [4] Hong Kong Stablecoins Bill. [5] HKMA.

Emergence of Tokenized Government Securities

($ in billions)

Tokenization is the process of using blockchain technology to create digital representations of underlying assets. The rise of tokenized government securities (including MMFs) swiftly proved product market fit – enabling investors to access the benefits of the traditional security, while remaining in the Digital Assets ecosystem

Evolution of Tokenized Government Securities[1]



Snapshot of Select Tokenized MMFs

Token	Mkt Cap[1]	Underlying Investments
BUIDL *(BlackRock)*	$675mm	▪ USTs, CP, CDs
BENJI *(Franklin Templeton)*	$701mm	▪ US 40 Act Govt. MMF

Key Takeaways[2]

- The digital assets market cycle during the low yield environment saw experimentation with decentralized finance (DeFi) and the use of stablecoins
- The emerging participation of well-established financial service providers contributed to the development and launch of tokenized government securities and other fixed income products
- **These product solutions swiftly proved a market-fit – catering for investors' yield-seeking behavior in the Digital Assets ecosystem and the ability to optimize their cost of capital with instant settlement**

[1] *DeFi Lama and The Block.*
Note: Market data as of 14-Apr-2025.