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# A Spotlight On The Stablecoin Sector

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Stablecoins have become critical financial infrastructure, enabling the transfer of value, facilitating trades and acting as a safe haven against the volatility of other cryptocurrencies. This report guides the reader through the creation and growing importance of stablecoins, leading companies to monitor in the space, emerging trends likely to guide how the industry develops, and how the increasing adoption of stablecoins will impact the broader blockchain ecosystem.

This report is a product of the TenSquared Capital (10SQ) research team.

TenSquared is a growth equity firm focused on Inflection Point Investing where Digital Asset Ecosystem (DAE) companies transform into future technology leaders.

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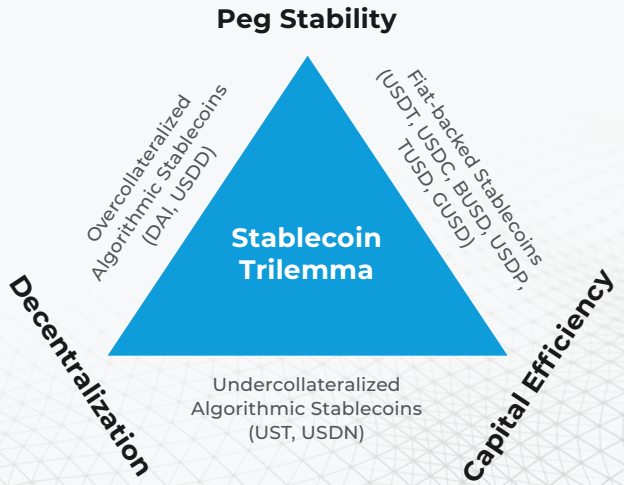
## Stablecoin Design Explained

- Stablecoins are cryptocurrencies designed to be pegged to a fiat currency (ex. USD). There are several different stablecoins with different design mechanisms.
  - Fiat-backed: Stablecoins that are backed 1:1 with corresponding pegged fiat currency.
  - Overcollateralized: Stablecoins that are backed with a mix of different assets, other than the pegged fiat currency. The mix of assets required to create the stablecoin is greater than the value of the stablecoin to provide a margin of safety.
  - Algorithmic: Stablecoins that rely on an algorithmic system to maintain its peg.




*Source: J.P. Morgan*

# The Importance of Stablecoins in the Digital Asset Ecosystem

### Why Are Stablecoins Important

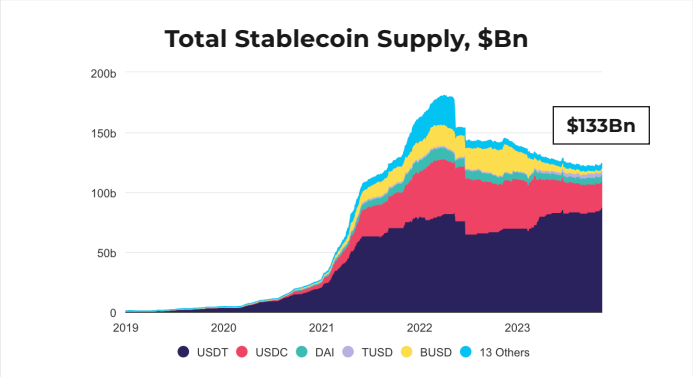
- **Digital Money:** One of the original purposes for BTC & cryptocurrencies was to serve as digital money. Stablecoins serve as an excellent form of digital money with minimal volatility and ease of transferability. As the world becomes increasingly digital, the importance of stablecoins will rise. As of 2023, there are **25M+** crypto wallets holding stablecoins, with **5M** of these wallets sending stablecoins weekly.[1]
- **Market Liquidity:** Stablecoins are essential to the liquidity of all cryptocurrencies. 74% of cryptocurrency trades involve a stablecoin as of the summer of 2023.[2]
- **Dollarization:** 99%+ of stablecoins are denominated in USD. Stablecoins allow individuals without access to the dollar to purchase, hold, and use USD. In addition, USD-stablecoins increase the dominance of the US financial system.
- **Self-sovereignty/Wealth Protection:** Stablecoins, similar to other cryptocurrencies, allow their holders self-sovereignty over their assets. Especially in emerging markets, where there is hyperinflation, or a government has more capital controls, holding assets in a stablecoin is important to the citizens of those countries.

### Stablecoin Business Model

- Earn Interest On Reserves: Stablecoin issuers can invest their reserves into short-term treasuries and earn interest. Given the increase in interest rates over the past year; issuers have significantly increased their revenue over the past year.
- As a group, stablecoins are the 16th largest holder of US treasuries as of Oct. 2023.[3]
  - Minting & Redeeming: Some issuers charge a small fee (5-10 bps) when issuing or redeeming stablecoins for fiat.

*1) Brevan Howard Digital*
*2) Kaiko Research*
*3) The Block*

# Growing Importance of Stablecoins




Source: The Block as of Oct. 2023

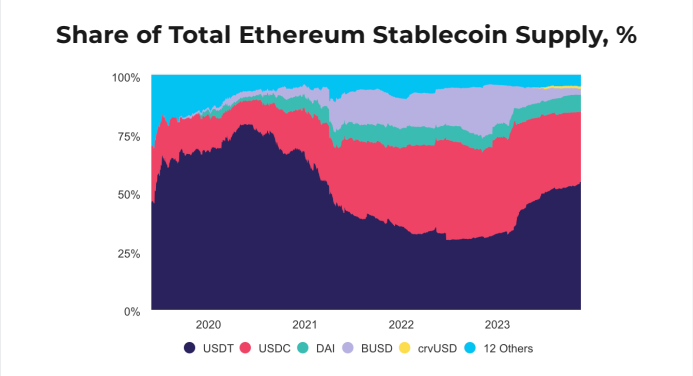
**2022 Transaction Volumes**

| | Transaction Volume ($) | # of Transactions |
|---|---|---|
| **Stablecoins** | $11.1 Tn | 1.3 Bn |
| **PayPal** | $1.4 Tn | 22.3 Bn |
| **Visa** | $11.6 Tn | 192.5 Bn |
| **ACH** | $76.7 Tn | 30.0 Bn |
| **Fedwire** | $1,060.3 Tn | 0.2 Bn |

Source: Brevan Howard Digital

- Since the start of 2020, stablecoins have continued to grow in importance alongside the broader digital asset economy.
  - At the beginning of 2020, there was just over $4Bn in stablecoins, and that has since grown to over $130Bn in total stablecoins issued now.
- At its peak, there was over $180Bn of stablecoins issued. The collapse of the LUNA stablecoin in June 2022 and general market conditions as investors pulled back from investing in cryptocurrencies were the main drivers behind this decline.
- Stablecoins are also being used beyond the facilitation of trading on crypto exchanges. Users have sent $11Tn of stablecoins on-chain in peer-to-peer transactions.

# Market Dominated by Two Key Players




Source: The Block as of Oct. 2023

**2021 H1 Weekly Stablecoin Transaction Volume Per Blockchain**

| | USDT | USDC | BUSD | TUSD | TOTAL |
|---|---|---|---|---|---|
| **Ethereum** | 264,777 | 109,321 | 4,942 | 729 | 379,769 |
| **Tron** | 2,405,015 | 5,165 | - | 2,679 | 2,412,859 |
| **BSC** | 1,017,846 | 47,647 | 310,212 | - | 1,375,699 |
| **Polygon** | 146,861 | 186,194 | - | - | 333,055 |
| **Optimism** | 14,234 | 74,610 | - | - | 88,844 |
| **Arbitrum** | 80,250 | 137,184 | - | - | 217,434 |
| **Fantom** | 2,617 | 31,093 | - | - | 33,710 |
| **Avalanche** | 35,950 | 63,597 | - | - | 99,547 |
| **TOTAL** | 3,967,550 | 654,805 | 315,154 | 3,408 | 4,940,917 |

Source: Brevan Howard Digital

- A few large players dominate the stablecoin market. Tether's stablecoin USDT has a 52%[1] market share as calculated by market cap, and Circle's stablecoin has a 31% market share. Both these stablecoins are backed 1:1 with US dollars.
  - Tether accounts for 80% of active addresses and 75% of transactions.
- The third largest stablecoin is MakerDAO's DAI stablecoin, with a 7% market share. MakerDAO is a DeFi protocol that creates a US dollar-denominated stablecoin that is backed by a basket of assets (cryptocurrencies and real-world assets).
- Two previous stablecoins that had greater than 10% market share included Terra's stablecoin, which de-pegged last year and Binance's stablecoin, BUSD.
- While there are stablecoins that are pegged to other currencies, such as the Euro or to gold, the majority of stablecoins are pegged to USD.

1) *Brevan Howard Digital*

# Stablecoin Landscape – Key Players

- The stablecoin landscape is currently dominated by centralized fiat-backed stablecoins. The opportunity exists for an emerging player to offer an alternative solution to the incumbents.

| | Centralized | Decentralized |
|---|---|---|
| **Fiat-Backed Pegging Mechanism** | Tether (USDT), GEMINI dollar, TUSD, USD Coin, USDP, Mountain Protocol, BUSD, PayPal USD, First Digital USD, USDF CONSORTIUM<br>***90% market share*** | CUSD |
| **Alternative Pegging Mechanism** | tether GOLD, PAX GOLD, BICIX | DAI, Liquity, FRAX, USDD Decentralized USD, USDJ, AAVE GHO, AMPL |

# TAM: Annual Net Revenue Generated by Stablecoin Issuers Projected to Reach $3.0Bn-$5.0Bn in 2028

*($ in Billions)*

| 2023 Stablecoin Supply | Stablecoin Supply Growth Rate | 2028 Stablecoi Supply | 2028 Interest Rate | 2028 Stablecoin Gross Revenue | Yield Shared With Holder | 2028 Stablecoin Net Revenue |
|---|---|---|---|---|---|---|
| $133 | 7.5% | $191 | 3.0% | $5.7 | 90.0% | $0.6 |
| $133 | 7.5% | $191 | 4.0% | $7.6 | 70.0% | $2.3 |
| $133 | 7.5% | $191 | 5.0% | $9.5 | 50.0% | $4.8 |
| $133 | 15.0% | $268 | 3.0% | $8.0 | 90.0% | $0.8 |
| $133 | 15.0% | $268 | 4.0% | $10.7 | 70.0% | $3.2 |
| $133 | 15.0% | $268 | 5.0% | $13.4 | 50.0% | $6.7 |
| $133 | 25.0% | $406 | 3.0% | $12.2 | 90.0% | $1.2 |
| $133 | 25.0% | $406 | 4.0% | $16.2 | 70.0% | $4.9 |
| $133 | 25.0% | $406 | 5.0% | $20.3 | 50.0% | $10.1 |
| $133 | 50.0% | $1,010 | 3.0% | $30.3 | 90.0% | $3.0 |
| $133 | 50.0% | $1,010 | 4.0% | $40.4 | 70.0% | $12.1 |
| $133 | 50.0% | $1,010 | 5.0% | $50.5 | 50.0% | $25.2 |

*Note: Net revenue is revenue available to stablecoin issuers after paying out yield to token holders*

*Source: 10SQ Research*

**By 2028, a stablecoin issuer with a 10% market share can be generating $300M-$500M in annual revenue**

# Emerging Trends Shaping the Stablecoin Landscape

- **Higher Interest Rates:** The increase in interest rates over the last year has increased the rev. opportunity of stablecoin issuers by 5x without any changes in the business model. A higher interest rate, as implied by five to ten-year bond yields, could be a continued tailwind for stablecoin issuers.
- **On-Chain Yields:** Real world assets with yields such as Treasuries and money market funds are being tokenized. This development allows issuers to generate yield in a decentralized manner.
- **Central Bank Digital Currencies:** Countries around the world are in the early stages of deploying their own versions of "digital dollars." A digital dollar could give a government unprecedented insight into its economy but may also raise privacy concerns. Some governments may push their citizens away from stablecoins and towards their digital dollar.
- **Increased Transparency:** Users are demanding more transparency from issuers to prove that stablecoins are properly backed. In response, issuers are providing audits on its reserves and improving its banking and custodian partnerships.

# Growth Opportunities in the Stablecoin Ecosystem

## Primary Opportunities

- **Existing Stablecoin Issuers:** As disclosed by Tether and Coinbase's revenue share agreement with Circle, the largest stablecoin issuers are currently making hundreds of millions in revenue in interest from their reserves.
  - Ex. Circle (USDC).
- **Emerging Issuers:** New stablecoin issuers are offering different value propositions and a tweak to the currently dominant fiat backed stablecoin model.
  - Centralized: Mountain Protocol (shares interest generated on reserves with token holders), First Digital (HK trust registered company with segregated accounts), Digix (gold-backed stablecoins).
  - Decentralized: Celo (fiat-backed stablecoins that can be transferred using your mobile number), Frax (fractional stablecoin), Ampleforth (algorithmic stablecoin).

## Secondary Opportunities

- **On-Chain Yield Generation:** Decentralized stablecoin issuers need a way to invest their assets on-chain to generate a yield on its reserves.
  - Ex. Ondo Finance (tokenized US treasuries), Centrifuge (on-chain credit platform), Goldfinch (Lending pools for emerging markets).
- **Financial Infrastructure:** Stablecoin issuers need banking partnerships and regulatory licenses to operate around the globe.
  - Ex. Paxos (Regulated By NYDFS), Gemini (Regulated custodian & issuer of GUSD), Deltec Bank (Bahamian bank that services Tether).
- **Blockchain Infrastructure:** Stablecoins can be issued on public blockchains, or corporations / governments may choose to issue permissioned stablecoins or CBDCs on private blockchains.
  - Ex. Ripple, Stellar.

# Additional Sectors with Exposure to Wider Adoption of Stablecoins

## Tertiary Opportunities

- **Exchanges:** Cryptocurrency exchanges have been a beneficiary of the rise of stablecoins. Many exchanges and traders can face difficulty sending fiat currencies directly to a centralized exchange, and DeFi exchanges can only interact with on-chain assets. Stablecoins allow traders to trade against a fiat currency (BTC/USDT) rather than using cryptocurrency pairings (BTC/ETH). For the majority of exchanges, stablecoins comprise the majority of their volumes.
- **Custodians/Trust Companies:** Stablecoin issuers hold their reserves with trust companies, custodians, or banks, and the increase in stablecoins has increased the assets under custody.
- **Payment Networks:** Historically, crypto payments have been limited by the volatility of cryptocurrency prices. Both purchasers and merchants disliked the volatility associated with making a payment in crypto. The adoption of stablecoins allows both parties to benefit from the technological advantages of blockchain payments without the volatility downside.
- **Forensics:** Forensic companies that monitor and investigate crimes associated with cryptocurrency transfers and thefts benefit from stablecoins. In general, stablecoins are more regulated cryptocurrencies, with most requiring some form of KYC when redeeming massive amounts. Forensic companies can track these identified accounts to discover the identity of individuals/groups behind illicit transactions.

# Key Risks

- **Reliance On Interest Rates:** The vast majority of revenue for a stablecoin issuer is from the interest it earns on its reserves. When interest rates decrease, revenue for a stablecoin issuer decreases through no fault. The issuer either has to accept lower rates or invest in riskier assets to maintain revenue. In addition, it is expected in the future that issuers will have to share part of their yield generated with token holders, thus reducing their revenue potential.
- **Counterparty Failure:** The two largest stablecoins are owned and operated by a centralized entity. There is a small risk that a single point of failure could lead to either stablecoins failing. Examples that could lead to a depeg could include a security incident or fraud.
- **De-pegging:** Stablecoins, in particular ones that aren't 1:1 backed by fiat, have the risk to de-peg if there is an error with its code/token design or the stablecoin loses investor confidence. Once a de-peg occurs, it can lead to a loss of investor confidence, and a run on the "bank" can occur, resulting in a further divergence from the stablecoin's peg.
- **Regulatory:** Regulatory action towards a stablecoin could limit its ability to issue or redeem stablecoins. For example, regulatory action against Binance has led to the rapid decline of Binance's stablecoin BUSD.

# Stablecoin Regulation

- Stablecoins have come under increasing regulatory scrutiny around the world for multiple reasons:
  - **KYC/AML:** Given the ease of use to transfer large sums of value using stablecoins, regulators and law enforcement are concerned about stablecoins being used to finance illegal activities. Regulators have asked issuers to freeze assets and block transactions they suspect of being affiliated with criminals. Laws are also implemented into place where issuers will have to report information on the sender and receiver of transfers and redemptions of stablecoins above a certain value.
  - **Security Instrument:** Some regulators have considered stablecoins to be securities. In particular, stablecoins backed by short-term treasuries or stablecoins that offer a yield, have been a focus for regulators.
  - **Capital Control:** As countries introduce their digital currencies, there may be a desire to limit other stablecoins to maximize the government's control of their economies.
- The increase in regulations allows new stablecoins to carve out a niche in different regulatory jurisdictions and in their approach of how regulatory-complaint they choose to be.
  - For example, a stablecoin issuer can select to adopt a fully decentralized model that chooses not to "blacklist" or block any transactions vs. to closely follow guidance from OFAC and other regulatory agencies to block certain transactions and freeze assets.

# Stablecoin Regulation by Geography

| | Fiat-backed stablecoins | Asset-backed stablecoins | Algorithmic |
|---|---|---|---|
| **United States** | **Payment stablecoins**<br>H.R. 4766 stablecoin bill, currently discussed in the House, proposes to regulate stablecoins depending on the status of their issuer (bank or non-bank, federal or state level). | Not applicable | A previous version of the stablecoin bill suggested a temporary ban on "endogenously collateralized stablecoins," but has since been abandoned |
| **European Union** | **E-money tokens (EMT)**<br>Fall under the Electronic Money Regulations (EMRs) unless issued by a credit institution. | **Asset-referenced tokens (ART)**<br>The Markets in Crypto-Assets Regulation (MICA) sets specific rules for ART issuers. ARTs could include cryptocurrency backed stablecoins if issuers can guarantee sufficient reserves and redemption mechanisms. | Not applicable |
| **United Kingdom** | **E-money tokens**<br>Fall under the Electronic Money Regulations, but UK regulators have yet to specify the rules applying to stablecoin issuers. | Non e-money stablecoins currently fall under theFCA perimeter for AML/CFT rules. | Non e-money stablecoins currently fall under the FCA perimeter for AML/CFT rules. |
| **Switzerland** | Tokens linked to a specific fiat currency with afixed redemption claim, such as 1 token = CHF 1, are classified as deposits under banking law. | Tokens linked to a basket of currencies may be considered as a collective investment scheme. Tokens backed by commodities could be considered as securities or as derivatives, depending on the contractual claim they provide to the holder. | Stablecoins based on an "alternative stabilization mechanism" can trigger licensing requirements, particularly if significant. |
| **Singapore** | **Single-currency stablecoins (SCS)**<br>SCS pegged to the Singapore dollar and G10 currencies are regulated under a specific framework labeled "MAS-regulated stablecoins," which follows the electronic money regulation of the Payment Service Act (PSA). | Non-SCS fall under the digital payment token (DPT) regulation of the 2019 Payment Service Act (PSA), but are not eligible to the "MAS-regulated" label. | Do not fall under the PSA licensing regime, but are not forbidden.<br>MAS is considering the possibility to bring alternative stablecoins under its scope. |
| **Hong Kong SAR** | **Payment-related stablecoins**<br>HKMA still deciding whether to amend existing electronic money laws and licenses (the Payment Systems and Stored Value Facilities Ordinance), or create a new framework for stablecoin supervision. | HKMA aims to develop a regulatory approach with enough "built-in flexibility" to scope in other stablecoin structures in the future. | Under current guidance, algorithmic stablecoins and "stablecoins that derive their value based on arbitrage" are banned. |

*Source: Moody's*

# Audits / Proof of Reserves

- **Higher Interest Rates:** The increase in interest rates over the last year has increased the revenue opportunity of stablecoin issuers by 5x without any changes in the business model. A higher interest rate is expected for the next few years and will be a continued tailwind for stablecoin issuers.
- **On-Chain Yields:** Real world assets with yields such as Treasuries and money market funds are being tokenized. This development allows issuers to generate yield in a decentralized manner.
- **Central Bank Digital Currencies:** Countries around the world are in the early stages of deploying their own versions of "digital dollars." A digital dollar could give a government unprecedented insight into its economy but may also raise privacy concerns. Some governments may push their citizens away from stablecoins and towards their digital dollar.
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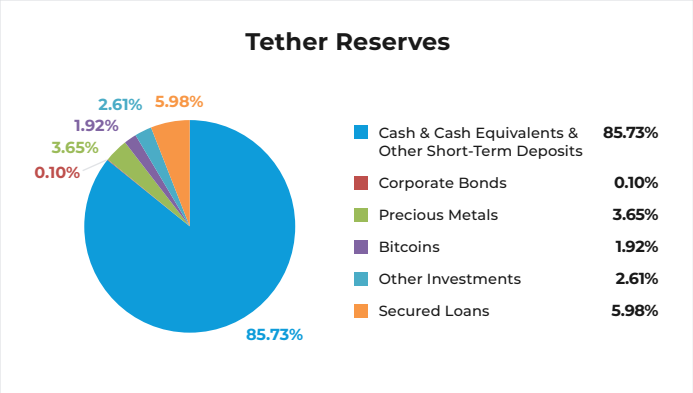
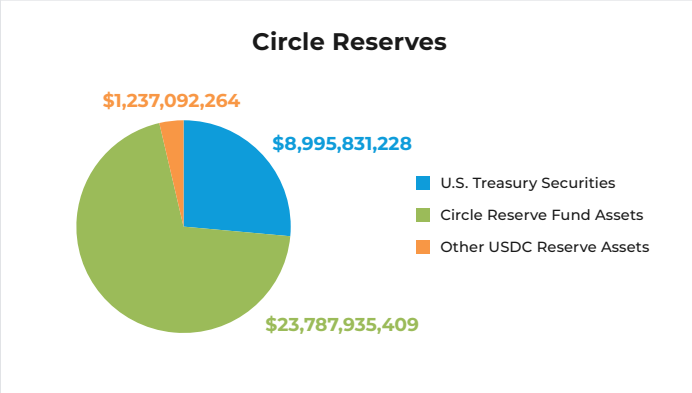



*Source: Tether, Q3 2023*




*Source: Circle, Q3 2023*

# Hybrid Enterprise Stablecoins: JPM Coin + Figure

- Separate from publicly available stablecoins such as USDT and USDC, banks have created their own stablecoins issued on internal permissioned blockchains that are used for cross-border and interbank settlements.
  - A permissioned blockchain allows banks to control who has access to the blockchain (usually international divisions of the same bank and other banks with whom the issuing bank transacts frequently).
- Banks are using stablecoins to take advantage of the blockchain's ability to provide a faster settlement time and lower transaction cost.
- Two examples of permissioned stablecoins include:
  - **JPM Coin:** J.P. Morgan recently revealed that its wholesale clients have been using JPM Coin to make $1Bn worth of transactions daily. J.P. Morgan has indicated that in the future it would like to expand its stablecoin program to allow for cross-border settlement and, eventually, usage for its retail clients.
  - **USDF:** A consortium of US banks built a USDF stablecoin on Figure's Provenance blockchain. The stablecoin represents a digitalized version of deposits held at the partner banks. Customers of the bank can transfer funds between the partner banks and redeem the USDF for USD.

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