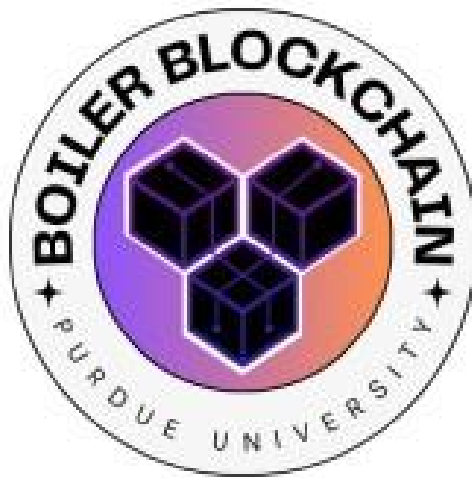


Stablecoins Explained: Why Crypto Needs a Dollar Twin



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Abstract

Stablecoins represent a transformative innovation within digital finance, offering stability in the otherwise volatile market of crypto. Their long-term viability depends on practical applications that consistently maintain a reliable peg to reserve assets like the USD. This article explores the potential and limitations of stablecoins relative to traditional finance. By evaluating risks, investment advantages, payment innovations, and global integration, the study highlights stablecoins' potential to reshape international transfers, modernize payment systems, and expand financial inclusion. As infrastructure and regulations continue to develop over time, stablecoins are positioned to continue their exponential growth, posing as a catalyst to reshape the global economy.

Introduction to Stablecoins

In the rapid, volatile world of crypto, there is one unique class of crypto asset attributed to a steady value that opens the doorway for cryptocurrencies to be massively adopted on a global scale. This subset of financial assets creates room for innovation in areas of crypto investment and local or international payment methods, spurring substantial growth in the area and calling for institutional and government adoption within existing financial systems. These assets are called stablecoins; to truly grasp their relevance in the scope of both crypto's integration into the global economy and the crypto economy itself, the definition of a stablecoin must be understood.

A stablecoin is defined as a cryptocurrency that has a 1:1 peg with fiat currencies, preventing price fluctuations (Frankenfield, Oct. 2023). This is aimed to provide stability in the crypto market while also maintaining the benefits of cryptocurrencies, including high-speed transactions and decentralized ownership. There are three major classifications for current stablecoins. Fiat-backed stablecoins come first. This type of stablecoin is most notable for being backed with real-world assets similar to a U.S. dollar bill, treasury bonds, or other government-issued currency. This allows for coins like USDC and USDT to maintain a constant \$1 value during periods of volatility (Appendix A). USDC is a highly trusted stablecoin that connects traditional finance with the cryptocurrency world, as demonstrated by Circle, which has managed to bridge more than \$277 billion between the banking system and the blockchain through the minting of USDC as of October 12, 2023 ("Transparency & stability," 2025). Similarly, Tether released USDT, another leading stablecoin that connects traditional finance with the cryptocurrency world. Unlike USDC, USDT only holds \$144.3 billion and has been

historically known to be less transparent than USDC, raising potential liquidity risks. (Frankenfield, June 2024). Another type of stablecoin is algorithmically crypto-backed. These stablecoins are known for being decentralized with assets stored on the blockchain itself, qualities that fiat-backed stablecoins lack due to their actual backings being centralized. Traders would deposit cryptocurrency, such as ETH, into a smart contract, and in response, the smart contract would issue a stablecoin, such as DAI, in return. DAI used to be backed solely by ETH, but MakerDAO has transitioned into a Multi-Collateral DAI system, allowing for DAI to be backed by a variety of assets (MakerDAO, 2017). The final type of stablecoin is algorithmic-backed. These coins are run on computer algorithms that would either print or burn more coins, attempting to maintain a constant price. While algorithmic stablecoins have shown to grow 30% annually since 2021, there have been many potential risks with unbacked algorithmic stablecoins (Elad, 2025). This subset of stablecoins has proven to be riskier historically, as there is a higher volatility risk in which the system may not be able to supply quickly enough as the market changes, essentially losing its value.

Risks Associated with Stablecoins

The risk of stablecoins losing their valuation is a danger that must be taken into consideration when discussing their potential for global innovation. Stablecoins pose certain risks, though these can be significantly reduced with certain precautions. Historically, major companies that manage fiat-backed stablecoins have been the most secure, with 90% of stablecoin supply being fiat-backed (Sandmark, 2023). The two highest market cap stablecoins by a significant margin are USDC and USDT, both of which are backed by fiat. USDC is well-regarded for being relatively transparent, run by a company called Circle that frequently releases audits. USDT, the stablecoin with the current largest financial backing, has been criticized for transparency. Audit releases have been infrequent, and they misrepresented their reserves, resulting in fines, which led to changes (Liu, 2025). While these large stablecoins have held up relatively securely, they don't come without risks. For instance, during the Silicon Valley Bank collapse, USDC saw its price fall from its 1:1 peg with the US dollar to just \$0.87 (Frankenfield Mar. 2023). This resulted from USDC's parent company, Circle, being heavily invested in the Silicon Valley Bank, and its collapse caused panic among investors, cutting around \$6 billion off of USDC's market cap. Although Circle did agree to cover this deficit, and USDC quickly rebounded, this incident proves that these stablecoins are not invulnerable. In other cases, outside of the stablecoin industry leaders, many other previous stablecoins have struggled. Most notably, algorithmic stablecoins of the past frequently collapsed. On May 22nd, Terra/UST, an algorithmic stablecoin, collapsed overnight, wiping out \$42 billion in value (Techopedia 2023). Historically,

algorithmic stablecoins have been prone to collapse, as one flaw in their system can cause users' capital to be completely wiped out without warning. These instances portray how there is still work to be done in ensuring the stability and security of stablecoins, so that safe large-scale adoption can be done.

Investment Benefits

It is widely recognized that investing in crypto is risky, not only considering technological and tokenomic issues, but also overall market conditions, especially relative to other financial markets such as the stock market. A space where coins can skyrocket or crash in short time frames often causes investors to be wary when looking at long-term investments. However, stablecoins provide an effective solution to this issue. If investors are scared of potential volatility, wish to secure profits, or anything similar, they do not have to exchange their crypto for fiat or another asset outside of crypto. Instead, they could quickly and seamlessly swap their volatile cryptocurrency to a stablecoin, retaining their current value of investment, which would theoretically be a stored value that wouldn't budge until users decide to exchange it for something else. Empirical studies illustrate this. For instance, during the Russian invasion of Ukraine, markets were thrown into turmoil. Allen, J. G., & Massari found that stablecoins, such as USDT, acted as an easy-to-access "haven" for financial assets, securing their value in a turbulent economy. Not only does this provide a quick way to safeguard investments, which is necessary in an extremely volatile industry, but it retains the benefits of cryptocurrencies. This value is stored in a decentralized platform, meaning it is the users alone who control it. No central party or other authority has the power to freeze or seize this asset. Furthermore, it can be sent or exchanged on a whim, with minimal processing time and without third-party restrictions, which is important for financial freedom. In this way, stablecoins are essential to investments in cryptocurrencies, yet this is only the surface level of their utilization. In fact, stablecoin integration goes much deeper. While

investment protection is one of the key utilities of stablecoins, their use extends further into day-to-day transactions and cross-border payments.

Payment Methods

Another major use case for stablecoins lies in payment methods. The most common digital payment methods today go through a few major companies, including Master Card, Stripe, Visa, and more. These companies all charge businesses a fee for processing the payment. In addition to that, businesses typically don't instantly get the funds, being forced to sit through a processing period. With cryptocurrencies, this problem is eliminated. Third parties are effectively cut out, and there isn't one centralized third party controlling their payments. Not only does this remove processing times, but it also ensures that the business receives the full amount paid by the customer, without a third party taking a chunk (McKinsey & Company 2023). Programs like Coinbase commerce offer this for businesses, accepting crypto as a payment and then transferring it to the merchant's wallets (Frankenfield, May 2023). However, many businesses and consumers likely wouldn't prefer holding a currency that fluctuates frequently. Stablecoins solve this because they are pegged to the value of the local currency, often the USD. Many researchers agree, with a 2023 Harvard Law School article stating that "Stablecoins could revolutionize [our payment system] and save consumers billions of dollars." Today, there are additional steps being taken to further build upon this groundbreaking technology. Coinbase is creating a protocol called x402, integrating blockchain technology as a fully AI-managed payment method, making transactions even easier and more convenient for customers. Microtransactions, such as calling APIs, accessing sections of eBooks, and many more, can now be paid in automation with x402. Not only does it remove extra fees from other payment methods like before, but it also fully automates the process. In addition to improving local transactions and payments,

stablecoins have the potential to transform international payments. With the centralization of fiat currencies, meaning they're controlled by a central government, such as the USD, there is a lengthy and sometimes costly process to make international payments. Unlike fiat, stablecoins and crypto have no borders. Regardless of where someone is in the world, they can send or receive crypto, while the same isn't reflected in fiat currencies. An individual can send stablecoins almost instantly across the globe, without reliance on a central authority and foreign exchange fees. Then, the receiver can swap that stablecoin to their local currency in one seamless transaction, with relatively low fees and extremely minimal wait times. This is a huge step forward for the global economy, breaking international barriers and reducing fees for consumers as a whole.

Growth Trajectory

The stablecoin market has gone through exponential expansion. Most of the supply is going into fiat-backed coins like USDC and USDT, growing each year. This growth reflects stablecoins' increasing reliability in trading, DeFi, and international payments. Throughout the years, there has been a notable growth in the USD stablecoins, rising to around \$200 billion market cap, showing the increasing incorporation of these stablecoins in the US economy (Appendix B). If that rate of growth were to continue, stablecoin transactions could surpass legacy payment volumes in less than a decade (McKinsey, 2023). This wave of modernization offers many solutions to problems such as speed, cost, and international payments, which stablecoins fix. Due to the exponential growth seen in Appendix B, the market cap can be projected to rise exponentially from 2026 onwards (Appendix C). This growth in market cap exhibits an increased adoption of people who are using or holding these stablecoins. As these stablecoins become more of the norm, they start to outrank larger payment networks. In 2024, stablecoins managed to outrank both Visa and Mastercard in terms of transfer volume (Appendix D). Stablecoins have already surpassed major payment networks in transfer volume, signaling growing financial dominance. As a result, massive organizations are starting to implement stablecoins into their systems.

Integration

Given the investment benefits, innovative payment methods, and rapid growth that stablecoins provide, governments and financial institutions have begun adopting cryptocurrencies and stablecoins into their systems. On October 1st, 2025, Trump stated, “Crypto will preserve US dollar dominance.” This speaks to the scale of attention that cryptocurrency is starting to garner, with the United States and other countries establishing cryptocurrency reserves in 2025. Stablecoins align directly with this. “Guiding and Establishing National Innovation for US Stablecoins of 2025” or the “GENIUS Act” was the first piece of federal legislation created for stablecoins, signed on July 17th, 2025. This is a vital first step in creating rules and regulations regarding stablecoins, such as regulating fiat-backed stablecoins to ensure the companies providing them and their financial assets backing them are secure. This process would push stablecoins to be even more mainstream. For instance, there has been much discussion about allowing stablecoins to be collateral in the US derivatives market. Chairman Pham of the Commodity Futures Trading Commission announced on September 23rd, 2025, that the CFTC will launch an initiative for the use of tokenized collateral, including stablecoins in derivatives markets. This would significantly further the scope of stablecoins’ utilization, as the largest government in the world would then recognize stablecoins as a reliable financial asset that can back loans and other claims, providing more real-world use cases for stablecoins that they now lack relative to other financial assets. This process of government integration and implementation, which is now starting to occur with increased urgency, will bring stablecoins more utility and recognition, which is essential for crypto as a whole.

In addition to the federal and legal side of cryptocurrency integration directly tied to stablecoins, large financial institutions are also taking actions related to crypto and stablecoins. Large companies such as Visa and Mastercard already consider stablecoins as potential competitors to their somewhat monopolized current system over merchants, and this directly relates to the banking system. For instance, both JP Morgan and PayPal have launched their own stablecoins in anticipation of this revolution, so that their customers can experience unparalleled transaction times and ease of transfer in the future. On the other hand, Mastercard and Visa initially played down the stablecoin threat (Payments Dive 2024), citing stablecoin's substantial edge over them in transfer volume as shown in Appendix D as merely trading volume, and not actual consumer transactions like their companies provide (CryptoSlate 2024). However, Mastercard then went on to partner with Circle, the company behind the second-largest stablecoin by market cap, USDC, to allow merchants in the EMEA region to settle payments with stablecoins. In general, stablecoins make a strong case for improving business for banks through modernizing their payment infrastructure, transforming the efficiency of their everyday financial services, creating more profit margins, and overcoming key infrastructure challenges (GFT 2024). This proves that stablecoins are gradually creeping into corporate financial systems as a result of their numerous benefits over traditional finance.

Implications & Future Targets

As one can garner from this paper, stablecoins have the potential to have an extremely lucrative future, connecting the technology of DeFi and crypto with real-world utility. However, there are still many steps that need to be taken for the large-scale applications that many envision to be achieved. First, stablecoins need to continue to grow, DeFi liquidity needs to grow, and significant stablecoin legislation still needs to be passed globally. Eventually, this will lead to stablecoins competing with banks for deposits or being directly integrated into banks, as some even possess their own stablecoins. Stablecoins would also be used in security settlements. In the long term, this could lead to stablecoins having a dominant role in monetary policy and eventual global dollarization. However, this is not without risks. Many regulations and security steps must be taken to ensure that stablecoins have the infrastructure to remain pegged to reserve assets, which becomes increasingly difficult and important as they grow. This could also pose systemic risks if stablecoins surpassed current payment networks, requiring careful oversight. That being said, given the lucrative benefits that stablecoins have the potential to bring about, if handled correctly, they will have a distinguished role in the future of finance.

Conclusions

Stablecoins occupy a pivotal intersection between innovation and regulation, embodying both the promise of modernization and the systemic risks it entails. As this paper has expressed, stablecoins are indispensable as they provide investment stability among cryptocurrencies, far cheaper and more efficient payments on both the local and global scale, and a bridge between TradFi and DeFi. However, their future hinges on transparency within reserve structures, delicately handled legal work, and global coordination. As long as these elements are securely implemented, stablecoins' rapid exponential growth will turn them into an instrument that revolutionizes traditional finance, bringing us into the next stage of digital finance.

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Appendix

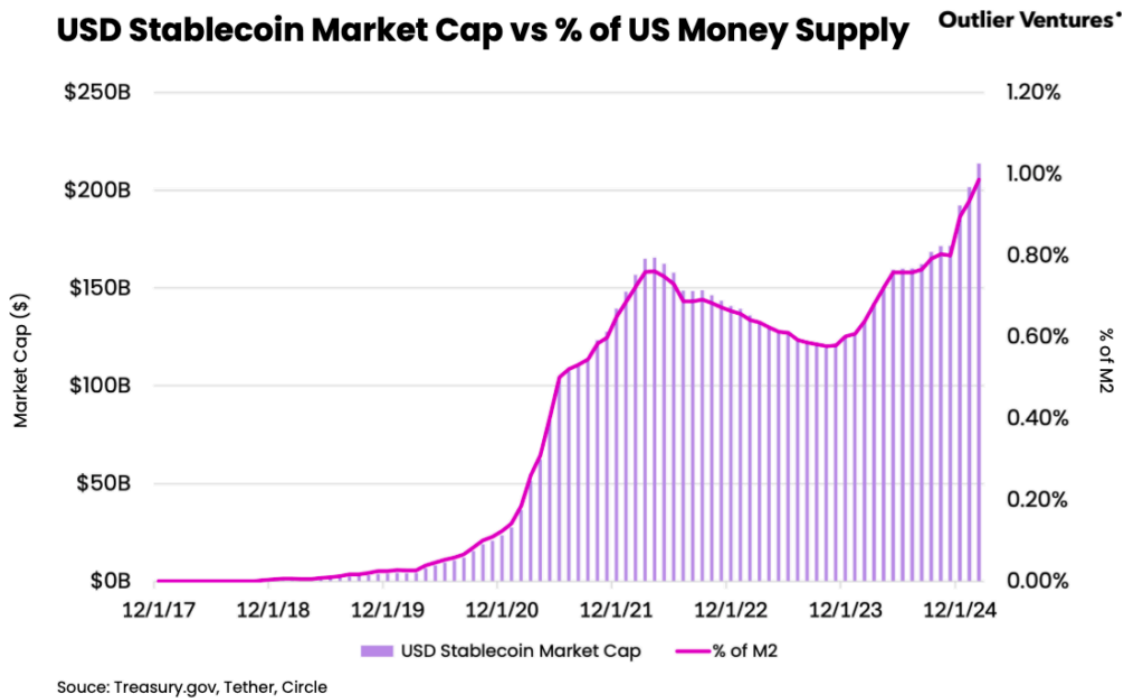
Appendix A

Breakdown of Common Fiat and Crypto-backed Coins

Stablecoin	Issuer	Backing type	Key facts
USDT (Tether)	Tether Limited (Hong Kong)	Fiat-backed	Largest by market cap; criticized for lack of transparency in reserve composition
USDC (USD Coin)	Circle (US)	Fiat-backed	Fully backed by cash and US Treasuries; publishes monthly attestations
PYUSD	PayPal (US)	Fiat-backed	Launched in 2023; issued by Paxos; integrated into PayPal and Venmo
FDUSD	First Digital Trust (Hong Kong)	Fiat-backed	Gained traction on Binance following regulatory uncertainty around BUSD
TUSD	TrueUSD	Fiat-backed	Temporarily lost its peg in 2024; concerns over reserves and issuer control
DAI	MakerDAO	Crypto-backed	Overcollateralized by ETH and other assets; governed by a DAO
sUSD, LUSD, crvUSD	Various DeFi protocols	Crypto-backed	Niche use cases in decentralized finance (DeFi); rely on smart contracts and governance

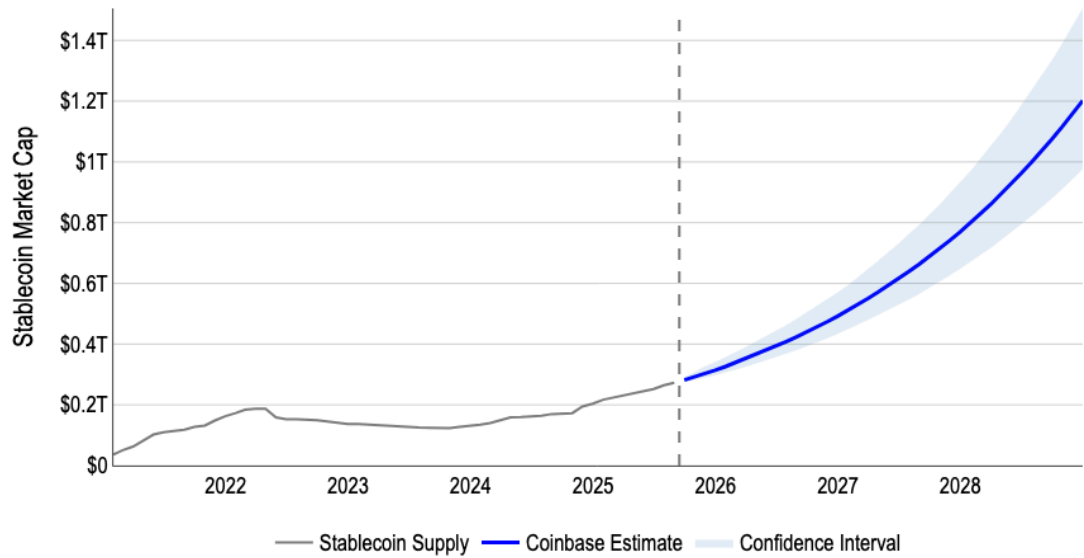
Appendix B

Percent of M2 Money Supply Stored as USD Stablecoin



Appendix C

Stablecoin Market Cap Prediction



Sources: DefiLlama and Coinbase

Appendix D

Comparison of Various Quarterly Transfer Volumes

