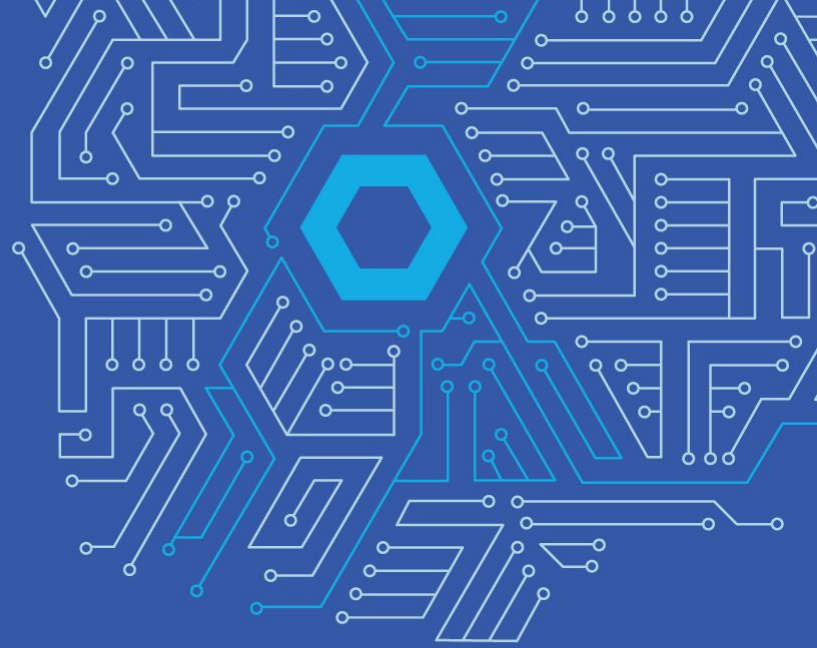


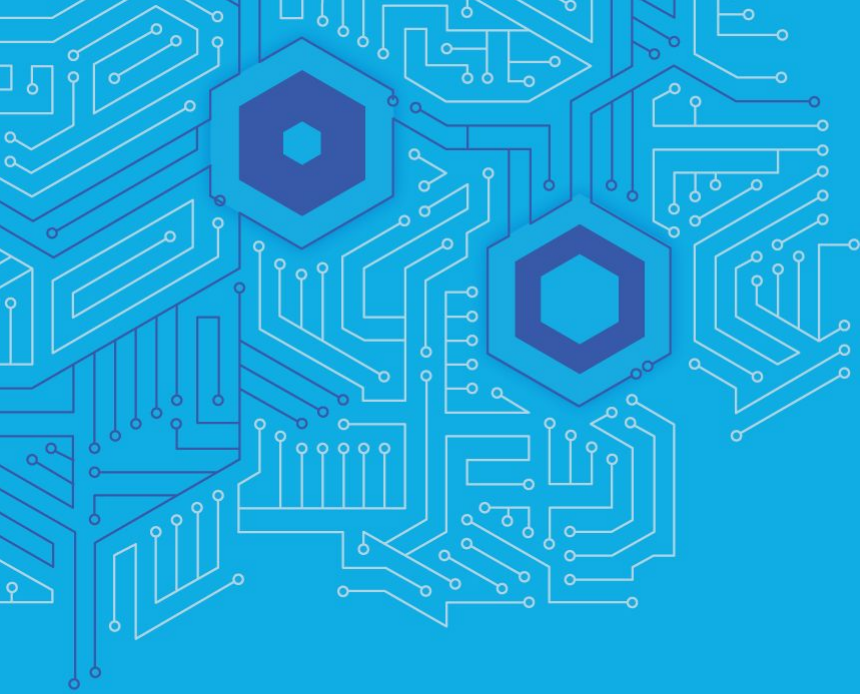


2019 STATE OF
STABLECOINS

CONTENTS

- 01 Introduction
- 02 Landscape
- 03 Use Cases
- 04 Adoption
- 05 Looking Ahead



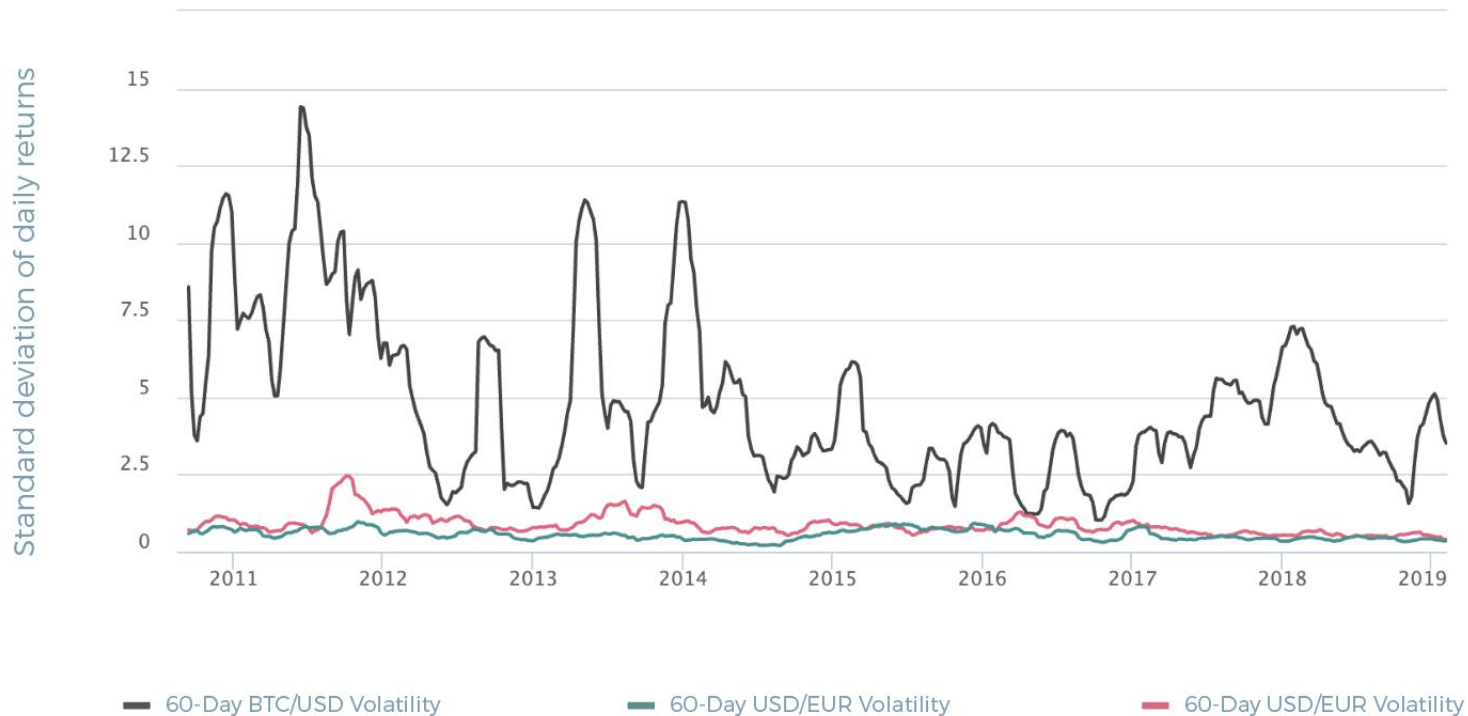


01

INTRODUCTION

Cryptocurrencies are notoriously volatile

Figure 1: Volatility - Bitcoin vs Gold vs Fiat



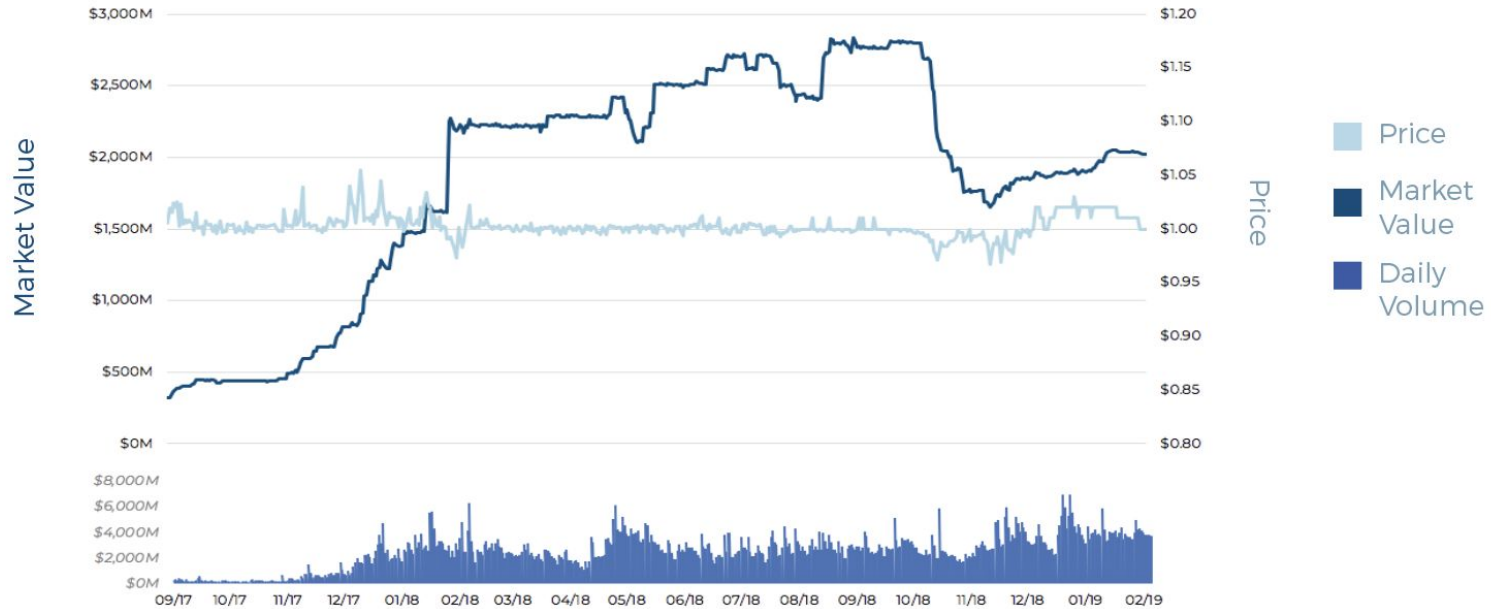
Stablecoin Projects Have Proliferated

There is a total of 54 identified stablecoins, 45% of which are live



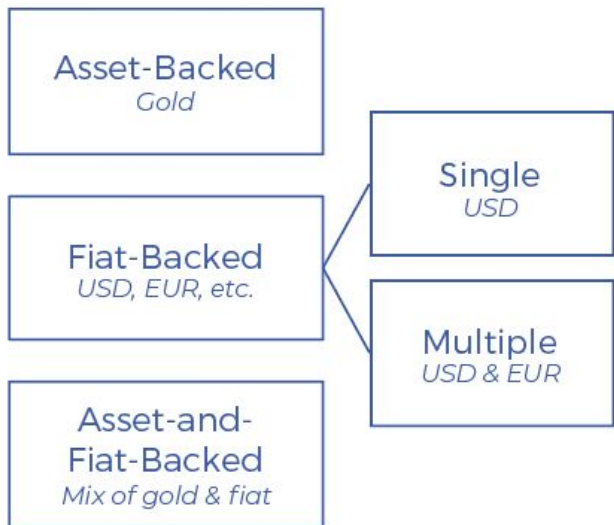
Stablecoin have delivered (well enough) on their stability promise

Figure 2: Tether (USDT) - Exchange Rate and Market Value, 2017-Present

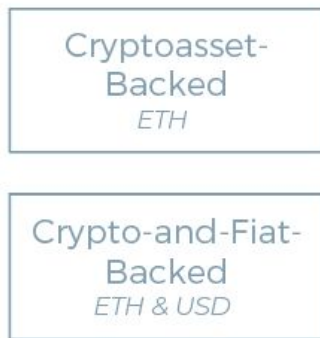


Taxonomy of Main Stablecoin Design Types

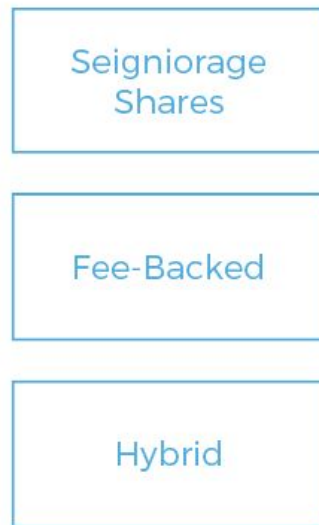
Traditional Collateral: 31%

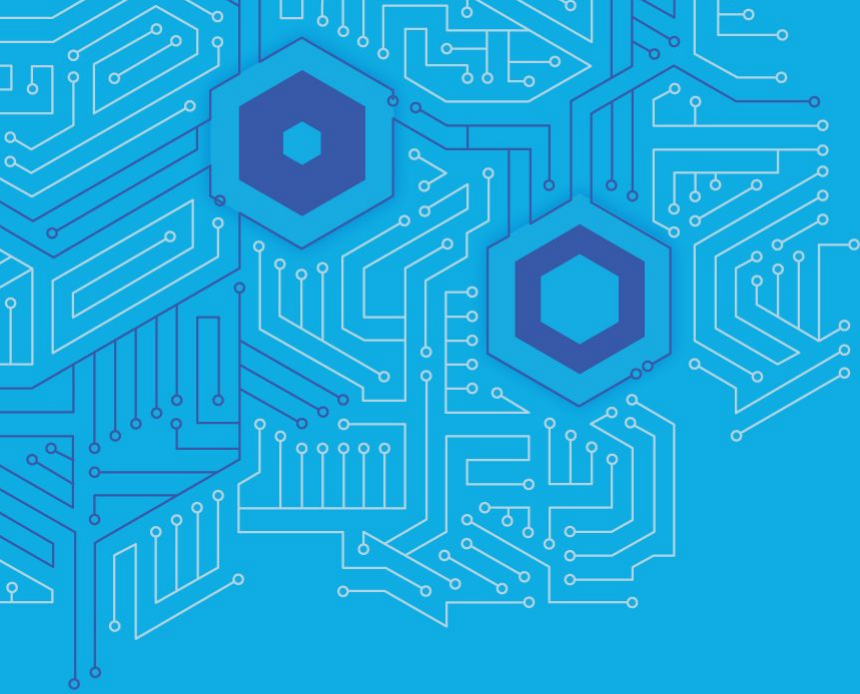


Crypto Collateral: 52%



Algorithmic: 17%



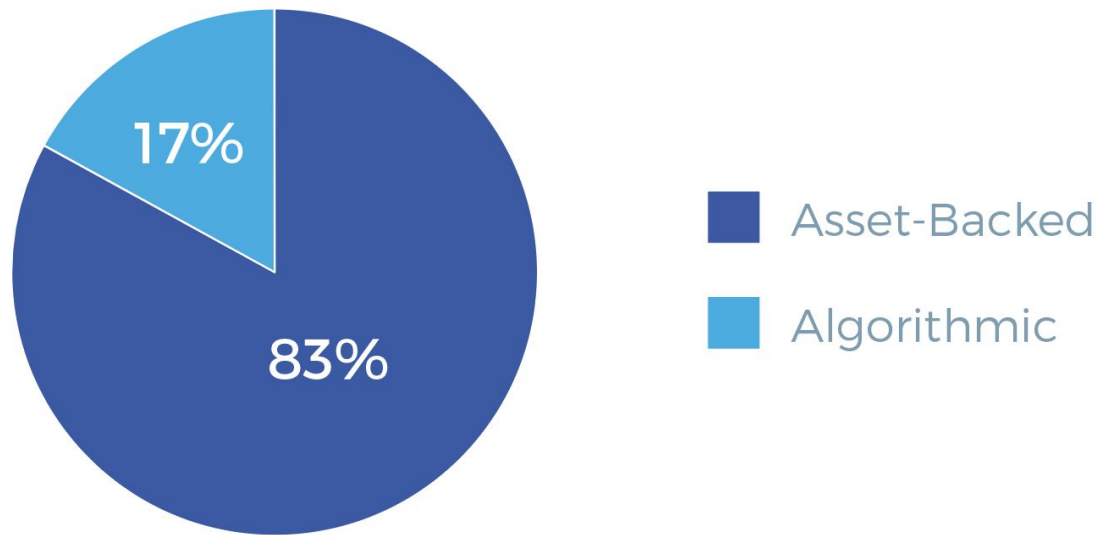


02

LANDSCAPE

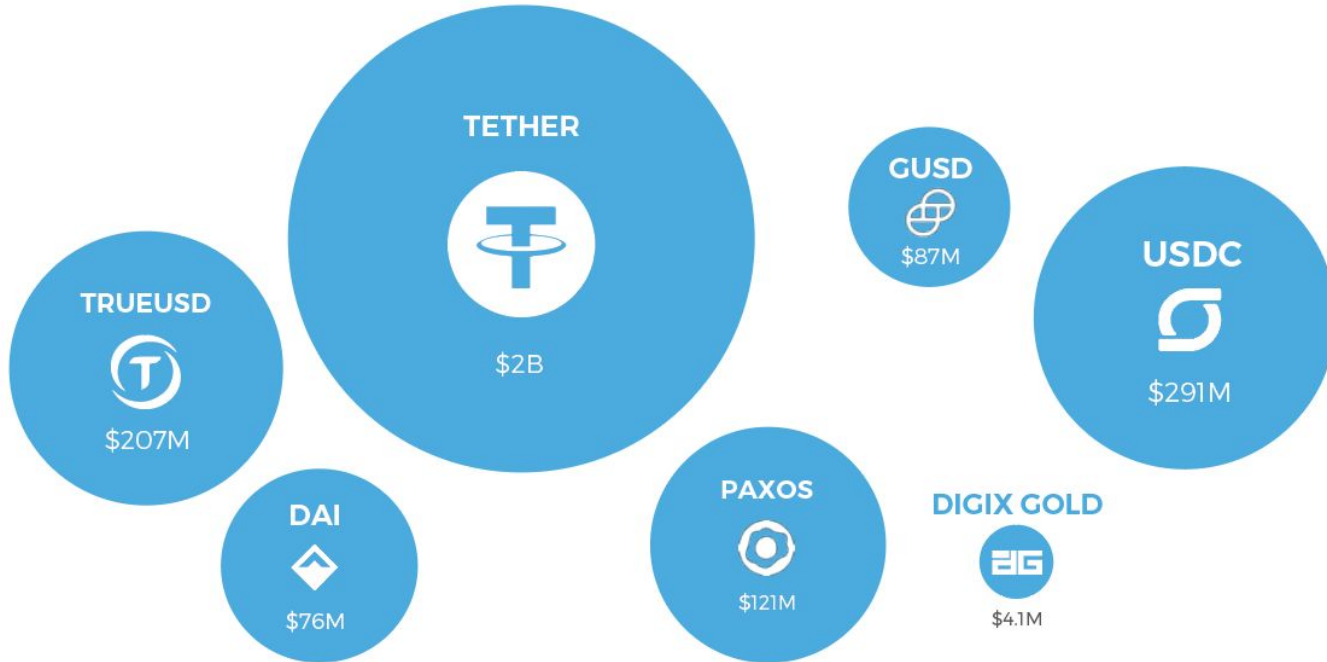
Today, asset-backed stablecoin designs dominate

Figure 4: Asset-Backed vs. Algorithmic Stablecoins



Stablecoin market value share has grown 2.7%, up from 1% in 2018

Figure 6: Market Value of Live Stablecoins



US and Europe are most popular homes for stablecoin teams...

Figure 11: Primary Physical Location of Stablecoin Project Teams



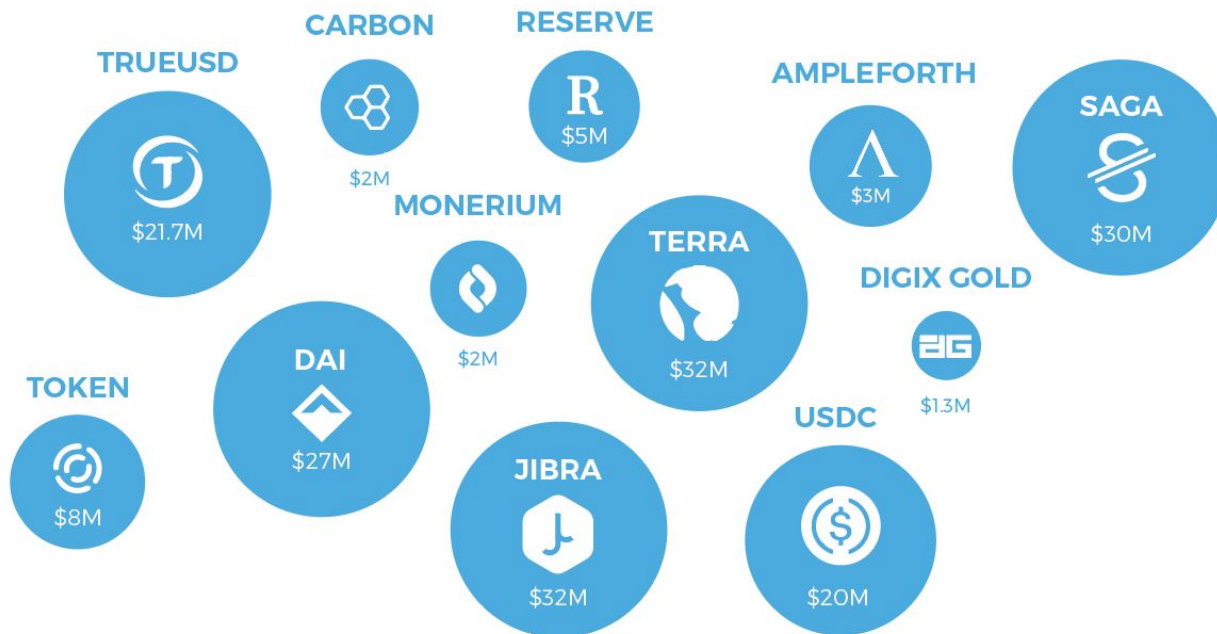
...as well as for legal registrations

Figure 12: Legal Domicile of Stablecoin Projects



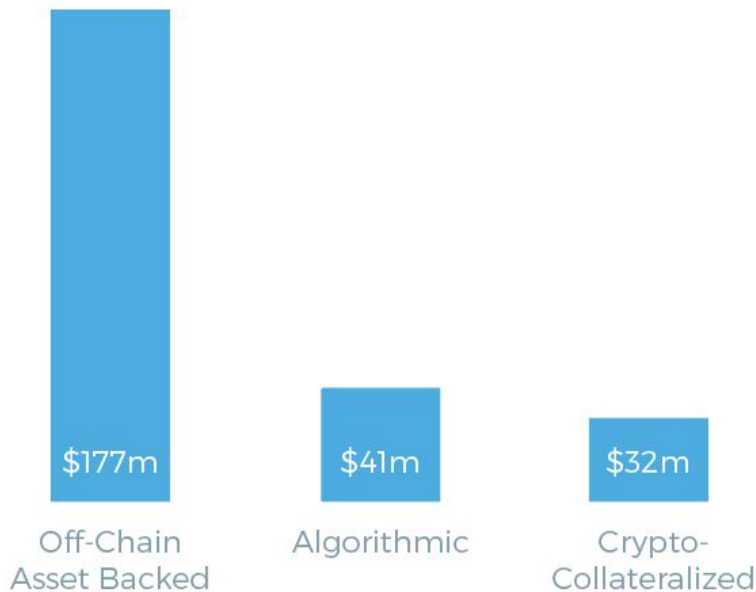
\$260M in venture funding has been raised by stablecoins to date

Figure 13: Stablecoin Project Funding

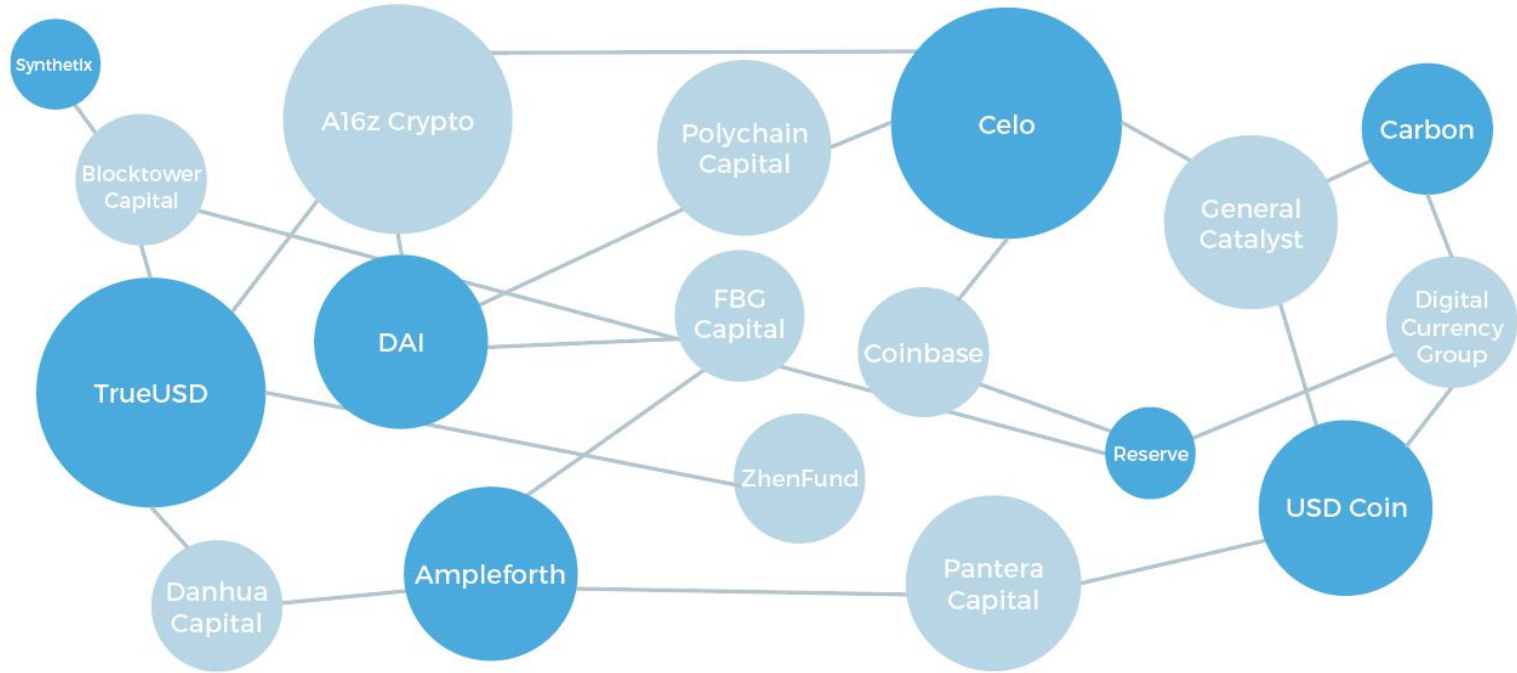


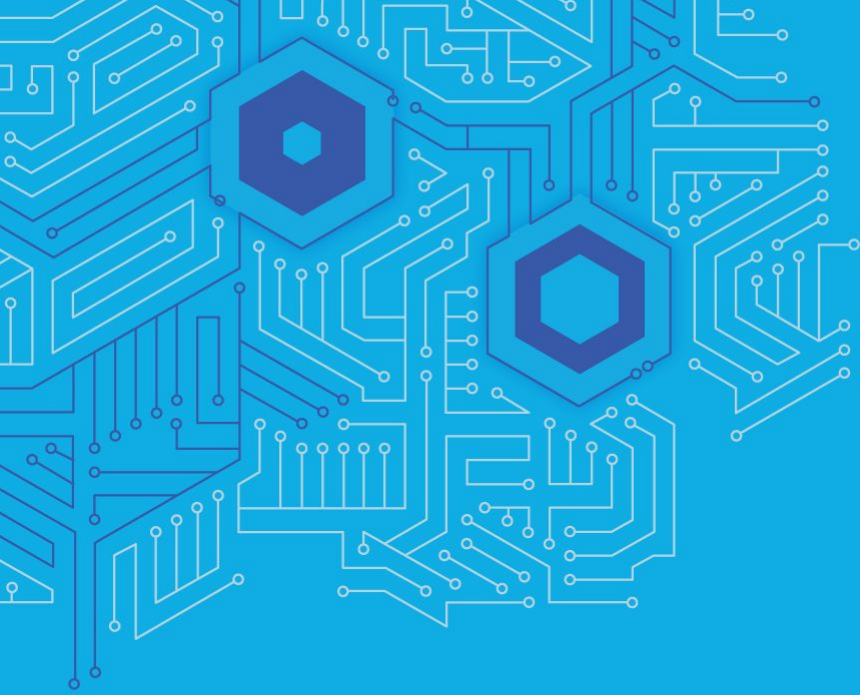
More conservative asset-backed stablecoins dominate funding to date

Figure 15: Funding by Stablecoin Type



Many investment funds have backed multiple stablecoins





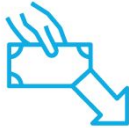
03

USE CASES

Stablecoin Use Cases



Performance
Measurement



Remittance



dApps



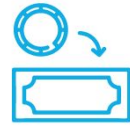
Store of
Value



Medium of
Exchange



Unit of
Account



Pegged
Lending



Synthetic
Gold

Projects Are Targeting Different Use Cases

Store of Value
Short-Term



Digital US Dollar



Digital Fiat



Store of Value
Long-Term



Synthetic Gold



Currency Basket



Pegged Lending



Unit of Account
Long-Term



Algorithmic
Central Bank



Remittances



dApps Medium
of Exchange



USE CASES

Smart Insurance

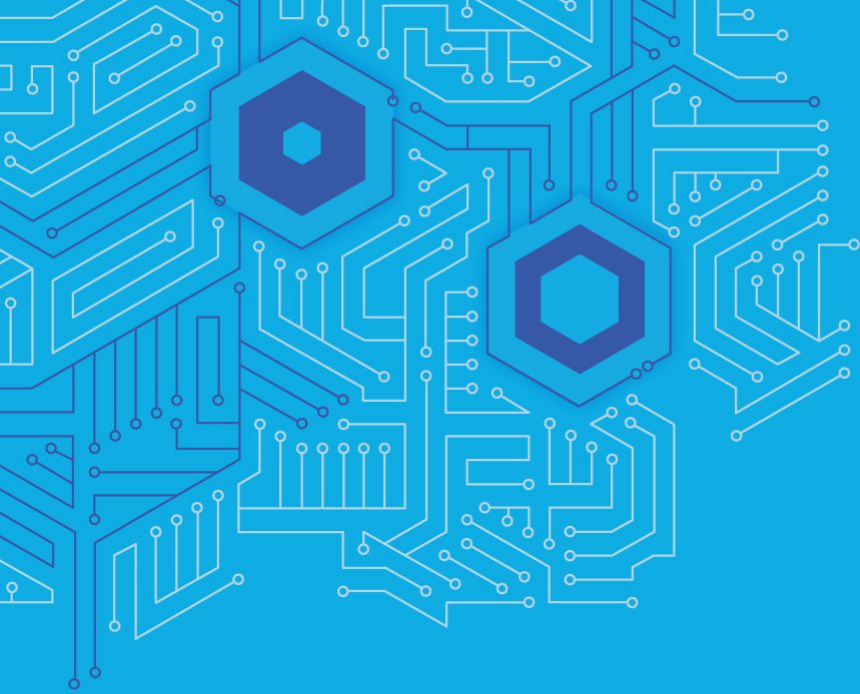
Source: BankInnovation

- Stablecoins are a more appropriate currency than other cryptocurrencies for smart insurance
- 'Smart travel insurance' is one compelling example of the application of this technology
- Approximately 600k annual passengers do not file eligible insurance claims for delayed/cancelled UK flights
- A delayed/canceled flight is a public record that can be queried by a 'smart flight insurance' software application
- If the flight is delayed or canceled then the smart contract automatically pays the claimant, eliminating the painful claims process
- Insurance premium can also be escrowed 'on-chain' to eliminate counterparty risk

Today, stablecoins are primarily used for trading against other cryptoassets

Figure 10: Number of Cryptocurrency and Fiat Trading Pairs for Stablecoins

	Tether	TrueUSD	USD Coin	Paxos	Gemini	Dai	BitUsd	Stasis	Digix Gold Token	AAA Reserve
Number of fiat pairs	4	5	2	1	3	3	0	2	1	3
Number of crypto pairs	396	140	109	76	58	67	24	13	3	0

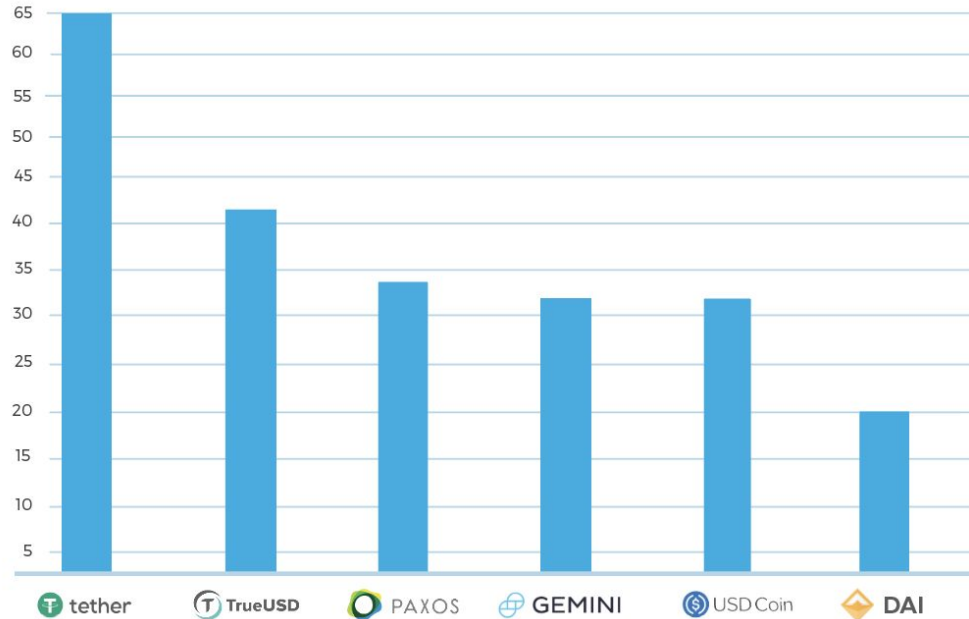


04

ADOPTION

Stablecoins are popular cryptoassets to list as exchanges right now

Figure 7: Number of Cryptoasset Exchange Listings for Live Stablecoins



The 'better Tethers' are catching up on some measures, like Tier-1 exchange listings...

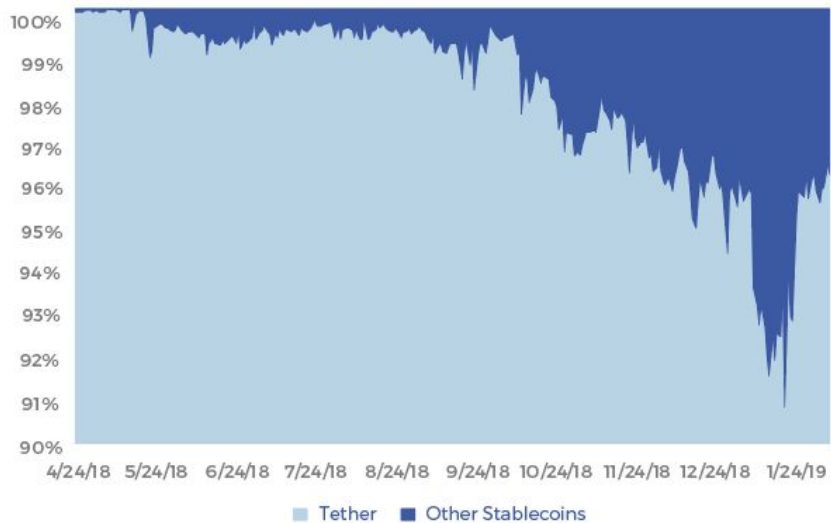
Figure 8: Stablecoins Listed on Major Cryptoasset Exchanges



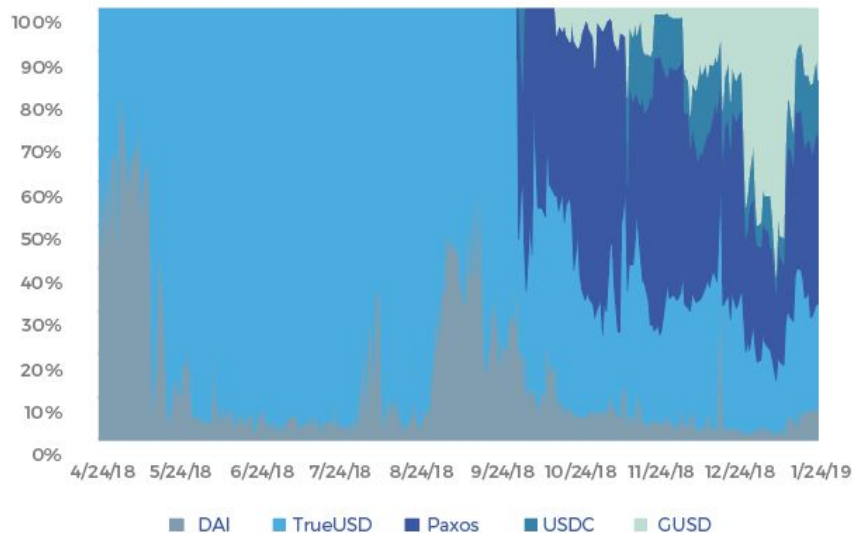
...but still lagging behind in trading volume

Figure 9: Stablecoin Exchange Trading Volumes - April 2018-Jan 2019

Trading volume: Tether vs. other Stablecoins



Trading volume: other Stablecoins (sans Tether)

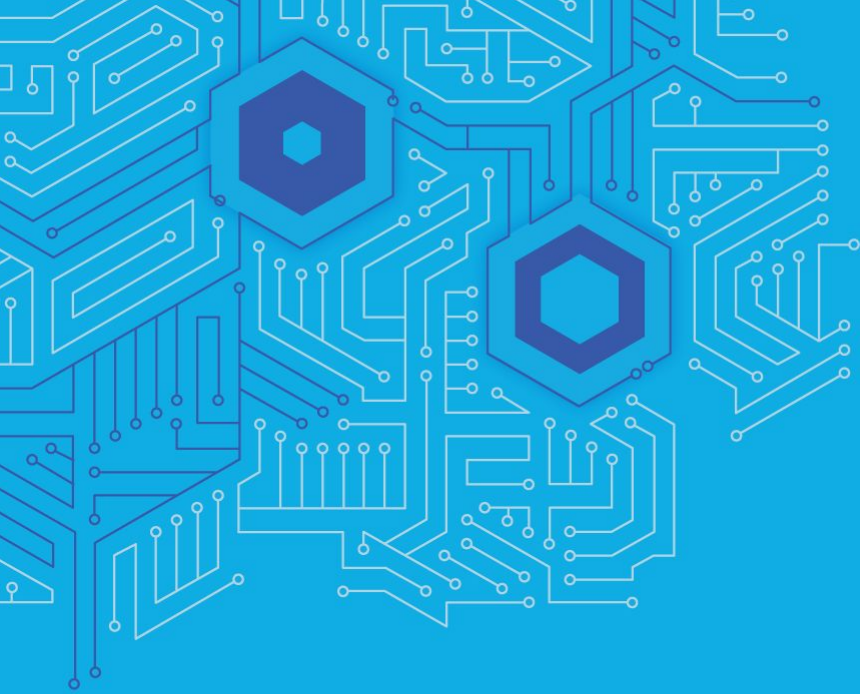


Stablecoins - Q3 vs. Present



	26 Sept.	7 Feb.	\$ Change	% Change
Market Value	\$3B	\$3.1B	+\$100M	+3%
Avg. Daily Volume	\$4.2B	\$3.9B	-\$211M	-5%
# of Top-100 Coins	3	7	+4	133%
Private Funding	\$352M	\$260M	-\$92M	-26%

Source: CoinMarketCap



05

LOOKING AHEAD

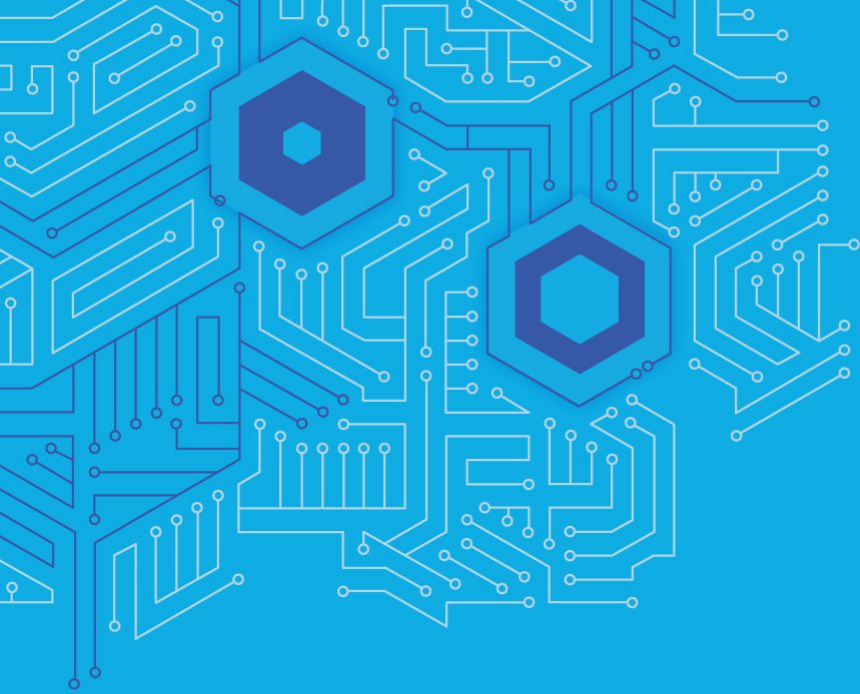
Today, the more decentralized the stablecoin design, the less confidence exists in its price stability

Platform	Stablecoin	Transparency	Automation	Complexity
Ethereum	AAA Reserve	Low-Medium	Low	Low
	Ampleforth	High	High-Medium	High
	Augmint	Medium-High	Medium-High	Medium
	Bridgecoin	Low-Medium	Medium	Medium
	Carbon	High	High-Medium	High
	Coin Payment Processor	Low-Medium	High	Medium

LOOKING AHEAD

Closing Thoughts

- The technology is still nascent; highly unlikely perfect stablecoin design exists
- Hybrid Tether-esque fiat launches (due to stability concerns)
- Space exists for approximately 5-8 significant stablecoins in the short to medium-term
- Regulation: some stablecoins spark a competitive response / backlash from central banks; also securities and money licensing laws
- Overall, stablecoins are best viewed as a form of 'infrastructure' or foundational layer for cryptoassets and many believe they could help create a tipping point for much broader cryptoasset adoption



06

APPENDIX

Table 1: Overview of Paxos Standard, USD Coin and Gemini Dollar

MEASURE	PAXOS	USD CENTER	GEMINI DOLLAR
Outstanding supply	\$124m	\$302m	\$89m
Avg daily volume (60d)	\$73m	\$22m	\$53m
Price daily standard deviation (60d)	0.4%	0.6%	2%
Most actively traded exchanges (% vol.)	ZB (33%), Binance (21%) and Okex (14%)	Binance (22%), Coinbase (16%) and Coinbase pro (12%)	Fragmented (Gemini volume not disclosed)
Issuers	Paxos Trust	Circle and Coinbase	Gemini Trust
Regulated under	NYDFS	MSB under FinCEN & BitLicense	NYDFS
Explicit fund freeze	Only if law enforcement	Yes	Only if law enforcement & requires fork
Fees / min size redemptions	None / \$100	None / \$100	None / \$0
Key differentiator	Strong relationships in Asia to grow more quickly	Onboarding, multiple issuers, inclusive approach	Wire processing, issuance and redemption

Figure 16: Issuance Process for Paxos Standard, USD Coin and Gemini Dollar

Retail/Institution:



Stablecoin Issuers:

Custodian Banks:



Table 2: Rating Paxos Standard vs USD Coin vs Gemini Dollar




	 PAXOS	 USD Coin	 GEMINI dollar
BRAND	Strong	Strong	Strong
GENERAL INDUSTRY ADOPTION	Medium	Medium	Low
HISTORICAL STABILITY	Average	Average	Average
CREDIBILITY OF BANKS	Average	Average	High
TIME IN USE - LINDY EFFECT	Recent	Recent	Recent
REGULATED	Pre-issuance approval by NYDFS	Registered	Pre-issuance approval by NYDFS
TEAM	Very Credible	Very Credible	Very Credible
OPERATIONAL "PLUMBING"	Average	Average	Good
FEES	Zero	Zero	Zero
COMMITMENT TO LOW FEES	Yes	Yes	Yes
LONG-TERM COMMITMENT	Medium	High	Medium
BANKING BACK-UP/ REDUNDANCY	Medium	High (multi issuer)	High (2 more tiers in Q1/2)
PLAN FOR MULTI CURRENCY?	Yes	Yes	Yes

Table 3: Account Setup and Know Your Customer (KYC) Process

	Paxos Standard	USD Coin	Gemini Dollar
Account Setup & Login	Typical requirements. Overall quick. 2FA required every time, no option to trust device	Existing Circle and Coinbase accounts can be used	After confirming email address requires entering a phone number to setup 2FA. Does not accept Google Voice phone numbers, forcing user to enter a regular carrier phone number. Also forces the use of a country code for the country of residence. Had to contact customer support to get help. Was directed by customer service to make phone number change via Authy, which has a multi-day process.
KYC Requirements	Relatively straightforward for PAX. Enabling 2FA required to proceed. Uploaded US drivers license (or passport or ID card). No live photo required. Process was less smooth during onboarding to the itBit exchange.	Additional KYC beyond existing Circle account required to gain access to USDC, including confirming: country of birth, country of residence, SS#, address. No delay after this information was added.	Passport and proof of address
KYC Speed	1-day approval process	Instantaneous	1-day approval process

Table 4: Funds Deposit and Banking Process

	Paxos Standard	USD Coin	Gemini Dollar
Bank Wire - Deposit	Wire information was presented in a clear way. \$0 fee from Paxos.	After entering my US bank information was sent an email to confirm the addition of the bank account. However, the bank account did not appear after completing this step. I repeated and the bank account was added the second time. To wire funds a unique reference number needs to be included in the wire instructions.	Only same-day wire transfer is allowed. Was required to send funds to Silvergate with reference code.
Wire Speed	Wire received less than 24 hours after being sent, although not sure exactly when it arrived as no email confirmation was provided; under the transaction 'Date' heading it states "Invalid date".	Received email confirming that wire was converted to USDC 2.5 hours after sending the wire.	Yet to to be received after 24 hrs and no emails from Gemini
Bank Wire - Withdrawal	\$0 fee from Paxos. \$100 minimum withdrawal amount.	A redemption fee of 0.1% (with a minimum of \$50) is charged by Circle. \$100 minimum withdrawal amount	N/A

Table 5: Coin Minting, Transactions, and Redemptions

	Paxos Standard - Paxos	Paxos Standard - Binance	USD Coin - Circle	USD Coin - Coinbase
Stablecoin minting	Requires the user to already have an Ethereum address to mint new PAX into existence. \$100 minimum minting requirement.		Minted directly to the Circle web wallet. In contrast with PAX, no other wallet or address is required to mint USDC into existence.	
Stablecoin Transfers - Outbound User Experience	Took over three hours to be received by Binance. Newly minted PAX transferred to Binance. Paxos provides an Etherscan link to the transaction after it is confirmed.		Circle requires that you first approve by email the ETH address where USDC will be sent.	
Fees - Transfer Out	0 fee from Paxos	Binance charged a \$0.80 withdrawl fee (\$0.025 reported as standard gas fee on https://etherscan.info)	Circle charges ETH gas fees: \$0.10 on \$100 transfer. Etherscan reported that the gas fee was lower, only \$0.06. \$99.90 was transferred to Coinbase.	In contrast with Circle, a lower gas fee that what was shown on Etherscan was charged by Coinbase (\$99.90 - \$99.87 = \$0.03 vs Circle's \$0.10; Etherscan showed the gas fee at \$0.04)
Stablecoin Transfer - Inbound for Redemption	itBit does not support PAX (they say because they offer USD). Was not as intuitive how to transfer PAX back to Paxos Standard account (which is separate from itBit support). Process is confusingly called "Redeem PAX" but did not look at this menu item because assumed would first have to transfer PAX in before they could be "redeemed" for USD.		Within about 5 minues received email from Coinbase that USDC had been sent back to Circle. Different synchronization: funds showing as received in Circle within approximately 10 minutes, but still showing "Pending" on Coinbase. Email from Circle confirming receipt arrived within approximately 15-20 minutes of transaction.	Within 1-2 minutes of transfer from Circle, received email from Coinbase that USDC had been received. Received status also reflected on Coinbase web wallet.

Table 6: Overall User Experience - Rating Paxos Standard vs USD Coin vs Gemini Dollar

	Paxos Standard	USD Coin	Gemini Dollar
Account Setup & Login	Overall, good UX for crypto, but not quite as polished (particularly for less savvy/experienced users) as Circle.	Overall, good UX for crypto. Some slight issues on getting the bank registered and some questions about gas fees, as noted above. Main UX concern is the \$50 min fee Circle charges to redeem USDC for USD.	Significant work needed on both user account setup and funds deposit experience.