

STABLECOINS

Current Status and Outlook

May 2023

In corporate partnership with AXON







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MARKET CONDITIONS

The past year has been guite a challenging one for the crypto industry. The stablecoin industry has also suffered, first with the collapse of the algorithmic stablecoin Luna and then with the demise of the USDC real-dollar security. Stablecoins are digital currencies whose value is pegged to other assets, most commonly the US dollar, but also to other fiat currencies or physical assets, such as gold. Although the first stablecoins were launched in 2014, their actual adoption and relevance in the market only began in 2017 with the rise of USDT. So, even by the standards of the crypto industry, stablecoins are a young technology that is still being tested in different variations.

There are three main forms of stablecoins (1) traditional asset-backed stablecoins, (2) cryptobacked stablecoins, and (3) algorithmic stablecoins (with or without senorage shares).

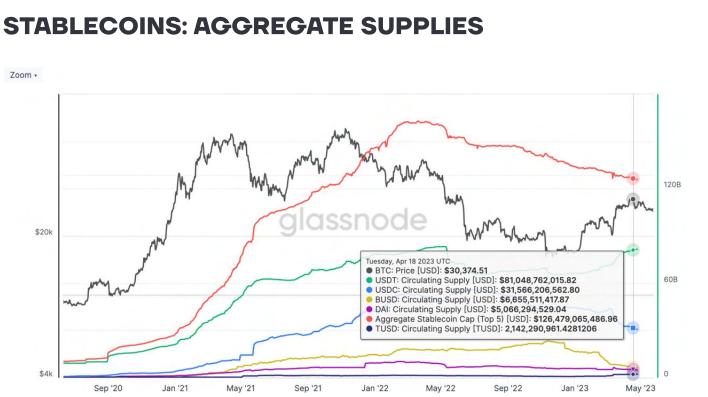
In the first and most common case, a stablecoin issuer collects fiat deposits and issues a corresponding number of fiat-backed stablecoins (e.g., USDT, EURt, USDC, BUSD).

Cryptocurrency stablecoins essentially follow the same approach, except that overcollateralized cryptocurrencies are typically used as collateral in case of a sharp exchange rate change.

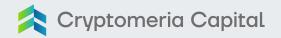
Finally, algorithmic stablecoins are crypto-assets whose pegs, such as the US dollar, are managed by algorithms via blockchain-based smart contracts that dynamically minimise token price volatility based on predefined expiry dates.

Hybrid forms have also recently emerged, such as fractional algorithmic stablecoins, which use both (fractional) collateral and algorithmic volatility reduction (FRAX, USDD).

Since there is no single material that can clearly show the difference between the various types of stablecoins and their collateral, we decided to compile all the information in this article and analyze each stablecoin so that readers can better understand the real state of the industry and calculate the risks.

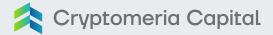


Source, end of May 2023





I. FIAT, COMMODITIES, **CRYPTO BACKED (USD)**







USDC was created in 2018 by Circle in collaboration with BITMAIN. USDC was the first stablecoin on Coinbase and now holds a monopoly there. According to US state law, Circle is a licensed money transmitter, just like PayPal, Stripe, and Apple Pay. ability for app developers to pay for gas instead of users. The update also added the ability to charge fees for transfers on the Ethereum network not only in ETH tokens but also in USDC.

Team and Background

©CIRCLE coinbase BITMAIN

As a major competitor to USDT, the popularity of USDC has increased due to the constant FUD surrounding Tether. Like DAI, USDC is actively used in decentralized finance (DeFi).

Users who have passed Know Your Customer verification (KYC) have access to a bank account and can exchange USDC for USD, which will be sent to the client via bank transfer. This also works in reverse as the USD reserve in the bank is maintained until withdrawal, and the smart contract mints the same amount of USDC and transfers it to the depositor's wallet.

In 2020, a new version of USDC 2.0 was introduced, which integrated the



Circle was founded in October 2013 by Jeremy Allaire and Sean Neville. Circle's headquarters are located in Boston.

The team consists of ultra-professionals, mainly from the large American fintech and IT sphere, with experience in international relations, banks, and world-class consulting conglomerates. Circle and Coinbase jointly created the Center Consortium enterprise, which was responsible for developing the basic technology and managing USDC.

As a result of four investment rounds: Circle raised over \$135 million between 2013 and 2016. In the first round, Goldman Sachs and IDG Capital were lead investors, investing \$50 million.





- In June 2016, the company raised \$60 million in a series D, with the support of <u>Baidu Inc.</u> (a partner of China Citi Bank Corp.), Sam Palmisano (former chairman of International Business Machines Corp.), as well as Breyer Capital, CICC Alpha, China Everbright Ltd., and Glenn Hutchins (cofounder of Silver Lake Management).
- On February 26, 2018, Circle announced the acquisition of the Poloniex exchange for \$400 million.
- On May 15, 2018, Circle raised another round of \$110 million to create USDC. This round included IDG Capital, Breyer Capital, General Catalyst, Accel, Digital Currency Group, and Pantera. Blockchain Capital and Tusk Ventures also joined them.
- In July 2021, Circle announced plans to merge with Concord Acquisition Corp in a \$4.5 billion deal, making Circle a public company. However, this deal was terminated in December 2022.
- In April 2022, Circle Internet Financial announced a \$400 million funding round with support from BlackRock, Fidelity Investments, Marshall Wace LLP, and Fin Capital. There was no announcement of the closing of the round, so it is possible that this round is still open to new investors. According to the latest data from SPAC, the company is valued at \$9 billion.

The issuer

The issuer of USDC, Centre, is a consortium formed by Circle and Coinbase. Centre is responsible for the governance of the USDC network, and it is regulated by the Financial Crimes Enforcement Network (FinCEN), a division of the U.S. Department of Treasury. In terms of licensing, the USDC is not licensed but instead governed by a set of standards called the Centre Consortium's Multi-Tiered Membership Framework. The framework outlines the governance structure of the consortium, which is designed to ensure the stability and transparency of the USDC stablecoins.

Collateral and Reserves

Open information about collateral and annual reports for 2018-2022 for the SEC can be found <u>here</u>. Circle undergoes monthly attestations (but not audits) by Grant Thornton, LLP. Holdings reports can be found on <u>Circle's website</u>, and they are available to everyone. The attestation procedure is carried out in accordance with AICPA standards.





USDC is backed by fiat funds and short-term US Treasury obligations. Circle invests part of USDC's reserves in the Circle Reserve Fund, a registered SEC state fund that owns a portfolio of short-term US Treasury bonds and cash.

According to January 2023 report from Deloitte, the cash collateral (\$9.865b) was held in the following banks: Bank of New York Mellon, Citizens Trust Bank, Customers Bank, New York Community Bank, a division of Flagstar Bank, N.A., Signature Bank, Silicon Valley Bank (\$3.3 billion or 8% of reserves, as of March 2023), and Silvergate Bank. The portfolio of short-term US Treasury bonds and cash is held by The Bank of New York Mellon and managed by BlackRock.

SVB recently went bankrupt, and some other banks on the list have been in the risk zone. To stabilize the USDC collateral, Circle bought \$2.9 billion and issued \$0.7 billion. As part of its current initiatives to strengthen USDC reserves, the cash portion of the reserve is now held at BNY Mellon, except for limited funds held with transactional banking service partners supporting the USDC minting and redemption process.

Open information about USDC's security, plus annual reports for 2018-2022 for SEC, can be found there. The portfolio of the Circle Reserve Fund, which consists today of short-dated US Treasuries and cash, is custodied at The Bank of New York Mellon and is managed by BlackRock.

KEY FIGURES

Source, end of March 2023

83.53% (\$28.9b)

US Treasury Debt (end of March)

16.47% (\$5.7b)

USD cash balance at BNY Mellon and payment service partners (end of March)







Tether (USDT) was launched on October 6, 2014, as Realcoin by Brock Pierce, Reeve Collins, and Craig Sellars (a member of the Omni Foundation), and trading began in 2015. Initially, all Tether tokens were issued on the Bitcoin blockchain using the Omni Layer protocol in 2015, but they can now be issued on any network supported by Tether.

USDT is issued by Tether Limited, a company registered in Hong Kong in 2014. It shares owners with Bitfinex, which led to a scandal related to an attempt to cover up the fact that \$850 million went missing at Bitfinex.



For a long time, operations were tied to the shadow bank Crypto Capital, which was involved in numerous scandals. Its accounts were frozen or were somehow involved in the loss of Bitfinex's \$800M+. In November 2018, the exchange took an \$850 million loan from its affiliated stablecoin issuer Tether to cover the loss of funds at Crypto Capital. Tether's claims of full backing of USDT with one US dollar were no longer true after Bitfinex's loan. Later, Bitfinex conducted an IEO of the LEO token for 800+ million, and these funds could theoretically be used to repay the debt to Tether.

As for the volumes, in 2022, Tether processed transactions totaling \$18.2 trillion, surpassing traditional payment systems. For comparison, Visa and Mastercard conducted operations worth \$14.1 and \$7.7 trillion, respectively, that same year.

Team and Background

According to Offshoreleaks, some of the shareholders and directors are Gianciarlo Devasini and Philip Grzac Potter (who is not listed on the website). The most famous member of the team is CTO Paolo Ardoino, who appears in public most often. The CEO is Jl Van Der Velde.



Tether was not included in the New York Department of Financial Services' order requiring mandatory daily reporting of reserve status, which included only BUSD, USDP, GUSD, and USDZ <u>since June 2022</u>.



In the fall of 2021, there were even rumors that it was tied to the papers of the scandalous Chinese developer Evergrande. And supposedly, if the Chinese go bankrupt, Tether will die too. The information was not confirmed, but in early March 2022, hedge fund Fir Tree Capital Management decided to "short Tether" to take a short position on Chinese securities.

The issuer

Tether Limited is owned by the Hong Kong-based company iFinex Inc., which also owns the Bitfinex cryptocurrency exchange. While iFinex is registered in the British Virgin Islands, it is based in Taiwan. Tether Limited has had partnerships and relationships with various banks, including Noble Bank in Puerto Rico, but these have shifted over time. Tether has a few different licenses and regulations to which it adheres. One of the licenses that Tether holds is a money transmission license, which is necessary for its operation as a stablecoin. Tether also holds various other licenses and regulatory approvals in different jurisdictions around the world, including licenses from the Financial Conduct Authority in the UK and the New York State Department of Financial Services.

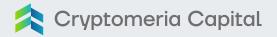
Collateral and Reserves

The collateral is claimed to be either 100% or overcollateralized:

- 44% is placed in short-term US government bonds (Treasury Bills).
- 9% is placed in bank deposits and money market funds.
- 31% is in corporate bonds with a maturity of up to one year it is unknown which companies are there.
- 16% is allocated to loans to undisclosed companies, longer-term bonds, precious metals, and other investments.

Since 2017, they have promised to share the results of the audit. However, they constantly postpone the deadlines.

Due to the lack of financial transparency and confirmation of reserves, in October 2021, the financial investigation firm Hindenburg Research announced a reward of up to \$1 million to anyone who could share previously unknown details about Tether's reserves.





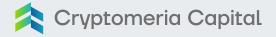
There are only approximate reports, for example, from independent auditors BDO. Specifically, this report indicates that as of 2022, Tether had collateral of \$66.4 billion in various assets based on scattered data provided by Tether itself:

There is also a report from Moore Cayman, which Tether itself does not recognize as an audit, which states that as of June 30, 2021, Tether had the following assets: Consolidated total assets of not less than \$62,773,190,075 and Consolidated total liabilities (issued tokens) of \$62,628,932,116, of which \$62,610,829,196 relates to digital tokens.

On 10 May 2023, Tether Holdings Limited published the audit report for the first quarter of 2023 by BDO Italia on its official blog.

CRR also indicates, and BDO's independent attestation confirms, that Tether's consolidated assets again exceed its consolidated liabilities.

which USD 79,372,401,626 relate to digital tokens issued. (4,14%) and Bitcoins (1,83%):



The Company's management states the following as at 9 May 2023:

- The Group's consolidated total assets are at least \$81,833,149,345.
- The Group's consolidated total liabilities amount to USD 79,390,359,036, of
- The data on reserves in this report is presented as follows, it can be noted that unlike previous reports, new assets have been added - Precious Metals



Cash & Cash Equivalents & Other Short-Term Deposits (\$69,313b, 84,7%):

- 64,82% (\$53b): US Treasury Bills
- 9,16% (\$7,5b): Overnight Reverse Repurchase Agreements
- 0,93% (\$768,85m): Term Reverse Repurchase Agreements
- 9,1% (\$7,45b): Money Market Funds
- 0,58% (\$481,35m): Cash & Bank Deposits
- 0,058% (47,68m): Non-U.S. Treasury Bills

Other (\$12,519b, 15,3%):

- 0,17% (\$140,66m): Corporate Bonds
- 4,14% (\$3,39b): Precious Metals
- 1,83% (\$1,5b): Bitcoins
- 2,61% (\$2,14b): Other Investments
- 6,53% (\$5,35b): Secured Loans



Source, end of March 2023

44%

9%

is placed in shortterm US government bonds (Treasury Bills)

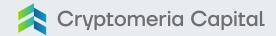
31%

16%

is in corporate bonds with a maturity of up to one year - it is unknown which companies are there

\$79.64b

Capitalization of reserves



is placed in bank deposits and money market funds

is allocated to loans to undisclosed companies, longerterm bonds, precious metals, and other investments.





BUSD was created by Binance in partnership with Paxos and approved and regulated by the New York State Department of Financial Services. Currently, Binance notes that BUSD is issued and owned by Paxos, and Binance only licenses its brand.





Each BUSD can be exchanged for 1 dollar from reserves. When BUSD is sent to Paxos, the tokens are burned and fiat currency is provided. This mechanism maintains a constant 1:1 ratio of supply and reserves. The BUSD smart contracts include a function that reflects the regulation of the stablecoin called SetLawEnforcementRole. This fragment allows Paxos to comply with NYDFS rules and track transfer data.

Recently, Paxos announced it no longer issues BUSD, meaning that the reverse process does not work. Thus, the market capitalization of BUSD will only decrease over time.



After this announcement, Binance began actively promoting trading pairs with Binance-Peg BUSD - a Binance product not related to Paxos or regulated by the New York State Department of Financial Services.

Amid scandals and lawsuits surrounding BUSD and Binance, the company may in the future stop using BUSD, per CZ's statements. It is unknown what will happen to Binance-Peg BUSD - it may become an alternative to BUSD, as it is currently being implemented on L2 chains. What backs Binance-Peg BUSD and how its issuance is controlled is unknown, while BUSD and Binance-Peg BUSD offer very similar trading functionality.



Team and Background

Binance and Paxos announced a partnership to launch BUSD in 2019, and itBit, the digital asset exchange managed by Paxos, also listed BUSD alongside many other crypto exchanges.

In February 2023, after a lawsuit from the SEC and discussions with the <u>New</u> <u>York State Department of Financial Services (NYDFS)</u>, Paxos announced the termination of its relationship with Binance. However, Paxos Trust Co., regulated by NYDFS, will continue to manage the dollar reserves of BUSD. The company also states that customers can redeem their dollars or convert BUSD to Pax Dollar (USDP).

Also, in late February 2023, Coinbase CEO made a loud coinbase statement about delisting BUSD from the main American crypto exchange, which further fueled FUD around BUSD.

The issuer

Binance USD (BUSD) is a stablecoin issued by <u>Paxos Trust Company</u> and is backed by US dollars on a 1:1 basis. Paxos is a regulated financial institution and has various licenses and registrations to ensure compliance with U.S. regulations. One of the notable licenses that Paxos has is a BitLicense from the New York State Department of Financial Services, which allows Paxos to operate a cryptocurrency business in New York.





Collateral and Reserves

BUSD is 100% collateralized by reserves stored either in fat on special omnibus accounts in insured US banks and/or US Treasury bills (including through repurchase agreements and/or money-market funds invested in U.S. Treasury bills).

Paxos supports insured FDIC deposits for stablecoins in the following depositories: BMO Harris Bank NA, State Street Bank and Trust Company, Customers Bank. In addition, Paxos may use deposit placement networks managed by IntraFi Network LLC and Reich & Tang Deposit Solutions, LLC. The total balances in these deposit networks are FDIC-insured up to \$250 million per ownership category.

Paxos conducts annual and monthly attestation of reserves (again, not an audit) according to AICPA standards through accounting firm WithumSmith+Brown, PC.

According to the Mazars audit, which was provided at the end of 2022, Binance had 582.5k BTC in assets and 597.6k BTC in liabilities, which could indicate a collateral deficit. And as many may have heard, Mazars immediately after publishing the audit announced the termination of work with crypto companies and deleted its website, which is highly suspicious.



Source, end of March 2023

20.34%

US Treasury Bills

3.9%

USD cash balance

75.76%

US Treasury Debt

\$16.42b







TUSD operates as a classic fiat-backed stablecoin. When USD is deposited on the TrustToken platform, new TUSD tokens are minted, and when TUSD is withdrawn, the tokens are burned. However, TrustToken does not charge a fee for buying or redeeming TUSD. Instead, the company earns revenue by collecting interest on the US dollars held in its accounts.

TUSD is licensed and fully regulated in the US. Additionally, TrustToken allows assets like oil, movies, real estate, small businesses, and more to be tokenized.

Individuals or entities that have passed AML and KYC checks on the TrustToken platform can exchange TUSD for USD. The minimum amount of TUSD required for withdrawal is \$10 000.

The stablecoin's operation is integrated into the Chainlink Proof of Reserve (PoR) consensus, which



100+ exchanges

It is traded on over 100 exchanges, with major volumes on Binance, Kucoin, Bitmart, and Whitebit, as well as several DEX platforms, such as Tidex, Sunswap (TRON ecosystem), and Estonian IndoEx. involves verifying collateral amounts and publishing data on-chain. Paxos USD uses the same consensus.

Team and Background

The team consists of employees from Stanford, UC Berkeley, PwC, Google, and Palantir. TrustToken has four co-founders: CEO <u>Danny/Jae An</u>, CTO <u>Rafael</u> Cosman, COO Stephen Kade, and Product Strategist Tory Reiss.

As of October 2022, TUSD officially received the status of an authorized digital currency in the Commonwealth of Dominica.

After Paxos banned the minting of new BUSD, Binance plans to strengthen TrueUSD's (TUSD) presence on the platform. To achieve this, 180M TUSD were issued from February 16 to 24. Additionally, TrueUSD has been a partner of Binance since 2019 and exchanges in TUSD pairs occur without fees.

The issuer

TrueUSD is a stablecoin that is registered with the United States Financial Crimes Enforcement Network (FinCEN). It is issued by TrustToken, which uses banks and trusted partners to hold the U.S. dollars that back the TrueUSD in escrow accounts.



Collateral and Reserves

The dollar assets of TrueUSD are distributed across five banks, including Signature Bank, Silvergate Bank, Prime Trust, First Digital Trust, and BitGo. All parties involved have signed a binding agreement to conduct monthly audits and publish collateral assets. The TrueUSD token uses several conditional deposit accounts to reduce counterparty risk and provide legal protection for token holders against theft.

TUSD's collateralization data is collected directly from multiple banking and trust company partners every thirty seconds. This data is then aggregated, reconciled, and subjected to automated checks using the Trust Explorer Real-Time Audit platform against the Ethereum and BinanceChain nodes hosted by Armanino. The platform also timestamps the data and makes it available to the Chainlink oracle network via a highly-available API endpoint. This ensures that TUSD's collateralization data is accurate, up-to-date, and readily available for use by the Chainlink oracle network.

If the Proof of Reserve contract reports less holdings than the circulating TUSD, dApps can activate a customized circuit breaker to protect user funds by preventing transactions from being approved. TUSD offers users near-instant minting and redemption services through the Silvergate Exchange Network (SEN) and PrimeTrust's PrimeX technology. Users can redeem TUSD directly to their bank account using a five-character TUSD redemption address.



Source, end of March 2023

100%

Escrowed Fiat









Looking at the USDP metrics, there is a clear gap between liquidity and trading volumes (\$835m liquidity with 24h trading volume of \$23m). This may indicate lower popularity or a large portion of USDP could be locked in DeFi protocols and not currently be used in circulation.

Team and Background

Paxos was founded in 2018, when Paxos and Gemini became the first virtual currency companies to be granted a trust charter by NYDFS (New York State Department of Financial Services). In late 2021, USDP was added as a payment method in Novi—a wallet integrated into Whatsapp. And in June 2022, after NYDFS introduced mandatory daily reporting for stablecoins, PAX was renamed to USDP.



liquidity with 24h trading volume of \$23m

The issuer

PAX dollar was introduced by Paxos Trust Company, which is a regulated financial institution based in New York City. Paxos is regulated by the New York State Department of Financial Services (NYDFS), which granted Paxos Trust Company a limited-purpose trust charter. This charter allows Paxos to operate as a qualified custodian for virtual currencies and to offer services such as custodial and escrow services. Paxos is audited on a monthly basis and all the coins are 100% secured while over 90% of the assets are cash.



Backing and Reserves

Recently, Paxos proposed to deposit 1.5 billion USDP into the Maker DAO module called Peg Stability Module (PSM), which contains reserves supporting its stablecoin DAI and allows for free swaps to other stablecoins, including USDC, GUSD, and ZUSD. Paxos is also positioned as one of the three stablecoins (BUSD, GUSD) approved by Wall Street regulators. The backing is 1:1 with US dollars held in Paxos' bank accounts in the United States. However, it is worth noting that a portion of Paxos' assets were held in SVB.

KEY FIGURES

Source, end of March 2023

19.2%

U.S. Treasury Bills \$149.88m

23.87%

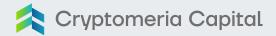
Cash Deposits via FDIC Deposit P \$185.5m

1.4%

Other Cash Deposits at Insured Depository Institutions \$10.92m



Capitalization of reserves





U.S. Treasury Debt \$357m

9.35%

Cash Deposits with **Private Insurance** Coverage \$72.49m





GUSD is a classic stablecoin backed by US dollars that can only be used in the Ethereum network. The company Gemini, which manages the issuance of the stablecoin, has the right to update the status of GUSD to enhance its functionality. Additionally, due to compliance with US laws, the company can block transactions and accounts or even stop the exchange of GUSD altogether.

A user who has gone through the KYC process can exchange USD for GUSD without having to pay commission in the mobile app and send it to any address in the Ethereum network. The reverse exchange process works the same way.

Recently, the company also launched the Gemini Credit Card and cashback for users who make payments in GUSD. Moreover, this stablecoin is supported on Nifty Gateway and OpenSea.



Team and Background

GUSD was launched in 2018 by the crypto exchange Gemini, founded and managed by Cameron and Tyler Winklevoss.

According to Crunchbase, Gemini has had four successful funding rounds since 2020. There is only data publicly available on the \$423.9M Series A, led by Morgan Creek Digital with the participation of 10T, ParaFi, Newflow Partners, Marcy Venture Partners, and Commonwealth Bank of Australia. After the Series A, the company was valued at \$7.1b.

In 2021, Gemini, in collaboration with Genesis Global Capital, launched the Gemini Earn program, which allowed for passive earnings on GUSD staking at a rate of 7%-8%. As of November 2021, Gemini Earn has provided crypto loans worth \$4b. However, a scandal erupted when Genesis incurred losses in the Three Arrows Capital incident, and the program stopped functioning. Due to users being unable to withdraw their funds, there was an outflow of GUSD worth more than \$250m.

After the mass outflow of clients, Gemini partnered with MakerDao in September 2022. As part of the collaboration, MakerDao allowed for the exchange of GUSD for DAI. As of Q3 2022, around 85% of all Gemini Dollars worth around \$590m were held on the popular DeFi protocol platform.

The issuer

GUSD, or Gemini Dollar, is a stablecoin issued by Gemini, a regulated cryptocurrency exchange founded by the Winklevoss twins. Gemini is based in



New York and is regulated by the New York State Department of Financial Services (NYDFS) and is subject to the New York Banking Law and other applicable U.S. laws and regulations.

Backing

According to official statements, Gemini holds dollars in accounts in US financial institutions insured by the Federal Deposit Insurance Corporation (FDIC). Money market funds (\$59m) are backed by short-term US Treasury bonds and U.S. Treasury obligations (\$248m).

The cash reserves of GUSD (\$267M) are insured by the FDIC and can be held by State Street Bank and Trust Company, Goldman Sachs, or Fidelity. If the bank holding such US dollar deposits in cash becomes subject to resolution or similar proceedings by the FDIC, the funds would be returned.

According to the company's statements, BPM Accounting and Consulting regularly tracks the value of GUSD and ensures its 1:1 peg to the US dollar. The total amount of GUSD is unknown. The attestation takes place once a month, but the last report on the website was for January 2023 (at the time of writing in March 2023). The reserves correspond to \$572m GUSD issued.

The smart contract audit was conducted by Trail of Bits, and its results can be viewed at the following link.

KEY FIGURES

Source: GUSD Reserves report January 2023 Date of reference: end of March 2023

10.49%

\$60m Money-market funds

46.68% 0.7%

USD cash balance \$267M



Capitalization of reserves



\$249m U.S. Treasury Bills

\$4m net cash receivable



USDD is a stablecoin by the Tron Foundation. The Tron Foundation created USDD with the aim of providing a stable and safe means of carrying out transactions on the Tron network. USDD is built on the TRC2O standard, which makes it compatible with other Tronbased tokens and smart contracts, as well as with decentralized applications on the Tron network.

Team and Background

Tron's Foundation team is made up of a diverse group of individuals from various backgrounds.



The founder and CEO of Tron, **Justin Sun**, is a well-known figure in the cryptocurrency community and has a background in technology and marketing.

He was formerly the chief representative of Ripple in the Greater China Region and was also the former chief representative of the Greater China Region for the Beijing BITWORK Information Technology Co.



Other key members of the team include **Lucien Chen** as the chief technical officer, who has a background in computer science, and Roy Liu as the chief operating officer, who has experience in project management and finance.



The team also includes a number of advisors, including **Feng Li**, who is a senior research scientist at Stanford and is an expert in digital media and communication.



Collateral and Reserves

To maintain its 1:1 peg with the USD, the USDD positions itself as an overcollateralized stablecoin backed by a reserve of US dollars or other assets of sufficient value, including BTC and USDC. As for audits, Tron Foundation has undergone several evaluations, which have been scrutinized by independent audit firms. Some of these evaluations include the Certik audit, Trail of Bits audit, and Roche Freedman's audit. The audits serve the purpose of a comprehensive review of the Tron blockchain to guarantee transparency and security.

KEY FIGURES

Source, end of March 2023

10.06%

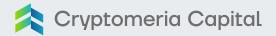
TRX \$125 153 876

31.7% BTC \$394 548 763

58.25%

burned TRX \$725 332 043









INFORMATION TABLE

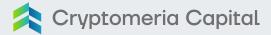
Name	Туре	Issuer	Code audits	Financial audits	Active Blockchains	Reserves
Tether USD (USDT)	Fiat backed, Commdities, Crypto	iFinex, registered in British Virgin Islands however is based in Taiwan	<u>OpenZappelin</u> January 3, 2018; <u>Callisto Network</u> July 2019; <u>Certik</u> December 2019.	Approximate report by <u>independent auditors BDO</u> for August 2022; <u>Report</u> by Moore Cayman for June 2021.	Ethereum, TomoChain, BSC, Solana, Algorand, HECO, Gnsosis Chain, Terra Classic, Waves, Fantom, Polygon, Klaytn, Avalanch, OKExChain, Bitcoin Cash, Conflux, Optimism, KCC, Tron, Harmony, Zilliqa, Moonbeam, Arbitrum, KardiaChain, Moonriver, Tezos, IoTex, Near, RSK RBTC, Telos, Velas, Cronos, Boba Network, Fusion Network, Hoo Smart Chain, Oasis Network, Secret Network, Aurora, Metis, Meter, Milkomeda, Bitgert, Everscale, Dogechain, Canto, ETHw, Aptos, ThunderCore, Syscoin, Cube Network, RedLight Chain, TON, Astra, Core, Fuse	Total reserves: \$79,64B (end of Mar 2023) 82.13% - Cash & Cash Equivalents & Other Short-Term Deposits & Commercial Paper 5.14% - Corporate Bonds, Funds & Precious Metals 8.73% - Secured Loans (None To Affiliated Entities) 4.01% - Other Investments (Including Digital Tokens) Cash & Cash Equivalents & Other Short-Term Deposits & Commercial Paper: 71.25% - U.S. Treasury Bills 13.39% - Money Market Funds 9.66% - Cash & Bank Deposits 5.53% - Reverse Repurchase Agreements 0.17% - Non-U.S. Treasury Bills 0% - Commercial Paper and Certificates of Deposit
USDC	Fiat backed	<u>Circle</u> , based in Boston, Massachusetts	No data	Monthly attestation reports from Grant Thornton LLP and Deloitte & Touche LLP: <u>https://www.circle.com/en/ transparency</u> ; Financial monthly S-4/A, 425 <u>reports</u> for 2021-2022; <u>Financial Statements reports</u> filed publicly with SEC for 2020-2021.	Ethereum, TomoChain, BSC, Solana, Algorand, HECO, Gnsosis Chain, Terra Classic, Waves, Fantom, Polygon, Klaytn, Avalanch, OKExChain, Bitcoin Cash, Conflux, Optimism, KCC, Tron, Harmony, Zilliqa, Moonbeam, Arbitrum, KardiaChain, Moonriver, Tezos, IoTex, Near, RSK RBTC, Telos, Velas, Cronos, Boba Network, Fusion Network, Hoo Smart Chain, Oasis Network, Secret Network, Aurora, Metis, Meter, Milkomeda, Bitgert, Everscale, Dogechain, Canto, ETHw, Aptos, ThunderCore, Syscoin, Cube Network, RedLight Chain, TON, Astra, Core, Fuse, Elrond, Ronin, Telos, Avalanche DFK, Elastos, Meter, Wabchain, Cosmos, Energi, SX Network, Wemix, zkSync	<u>Total reserves</u> : \$34,6b (end of Mar 2023, circle.com); 83,53% (\$28,9b): US Treasury Debt; 16,47% (\$5,7b): USD cash balance at BNY Mellon and payment service partners;
BUSD	Fiat backed, Commdities, Crypto	Paxos Trust Company, a regulated financial institution based in New York	The BUSD contract is based upon the PAX Standard smart contract which was audited by three third-party specialists (<u>Nomic Labs</u> , <u>ChainSecurity</u> , and <u>Trail of Bits</u>) in September-October 2018. In January 2019, Trail of Bits performed an additional audit for a potential upgrade to the PAX USD smart contract.	Paxos supports <u>insured FDIC deposits for stablecoins;</u> BUSD <u>Monthly reserves</u> holding by Binance; BUSD Financial <u>reports</u> from 2010 to 2023 by Macroaxis.	Ethereum, BNB Smart Chain, Avalanche C-Chain, Velas, Harmony, Solana, Polygon, Bitgert, Fuse	<u>Total reserves</u> : up to \$16,42b (end of Jan 2023, paxos.com); 20,34% (\$3,34b): US Treasury Bills; 3,9% (\$0,64b): USD cash balance; 75,76% (\$12,44b): US Treasury Debt;

INFORMATION TABLE

Name	Туре	Issuer	Code audits	Financial audits	Active Blockchains	Reserves
TrueUSD (TUSD)	Fiat backed	TrustToken, registered with the United States Financial Crimes Enforcement Network (FinCEN).	<u>Slowmist</u> June 20, 2018 <u>Certik</u> February 7, 2023	Regular Proof of Reserves attestations.	Ethereum, BNB Smart Chain, BNB Beacon Chain, Avalanche C-Chain, Tron20, Arbitrum	<u>Total reserves</u> : \$2,083b (05.04.2023, tusd.io) 100% Escrowed Fiat;
Pax Dollar (USDP)	Fiat backed	Paxos Trust Company, which is a regulated financial institution based in New York City.	The USDD contract is based upon the PAX Standard smart contract which was audited by three third-party specialists (<u>Nomic Labs</u> , <u>ChainSecurity</u> , and <u>Trail of Bits</u>) in September- October 2018. In January 2019, Trail of Bits performed an additional audit for a potential upgrade to the PAX USD smart contract.	<u>Monthly attestation reports</u> from Withum Smith+Brown.	Ethereum	According to <u>Paxos's Monthly Report</u> cash is holding by the follow way "February 2023": 19,2% - U.S. Treasury Bills - \$149,889,000 46,16% - U.S. Treasury Debt - \$357,000,014 23,87% - Cash Deposits via FDIC Deposit Placement Networks - \$185,500,000 9,35% - Cash Deposits with Private Insurance Coverage - \$72,490,408 1,4% - Other Cash Deposits at Insured Depository Institutions - \$10,923,002
Gemini Dollar (GUSD	Fiat backed, Commdities, Crypto	G <u>emini</u> , based in New York	<u>Trail of Bits</u> April 2018	Montly reports by <u>BPM</u> of GUSD, but the last <u>Reservse report</u> for January 2023.	Ethereum	<u>Total reserves</u> : \$571,9m (31.01.2023, ctfassets.net); 10,49% (\$60m): Money-market funds; 43,53% (\$249m): U.S. Treasury Bills; 46,68% USD cash balance \$267m; 0,7% (\$4m) – Net cash receivable (payable);
(S) USDD	Algorithmic, Crypto- backed	USDD is a stablecoin by the Tron Foundation.	Slowmist TRX Burning contract audit Slowmist Issuance contract audit Slowmist authorized contract audit Slowmist PSM contract audit	There are no collateral audits, but everything is visible on the presented wallet addresses on the <u>TRON DAO Website</u> .	Tron	<u>Total reserves:</u> \$1,245b (end of Mar 2023) 10,06% - TRX \$125,153,876 31,7% - BTC \$394,548,763 58,25% - burned TRX \$725,332,043 PSM USDT \$4



II. FIAT, COMMODITIES, **CRYPTO BACKED (OTHER)**







EURt is a stablecoin pegged to the euro and issued by Tether. EURt was launched in 2016 when OpenLedger and Coinsbank announced its release. Since the issuer is Tether, everything related to USDT is also true here, with the caveat that EURt is less popular and lags behind Circle's EROC in terms of issuance and trading volumes.

The situation with the collateral is similar to USDT: There is no transparency. The only question is what will happen if there is a USDT collapse; will the EURt rate hold up, as there is no accurate data on how EURt and USDt collateral are linked or unlinked, and there is no information anywhere.

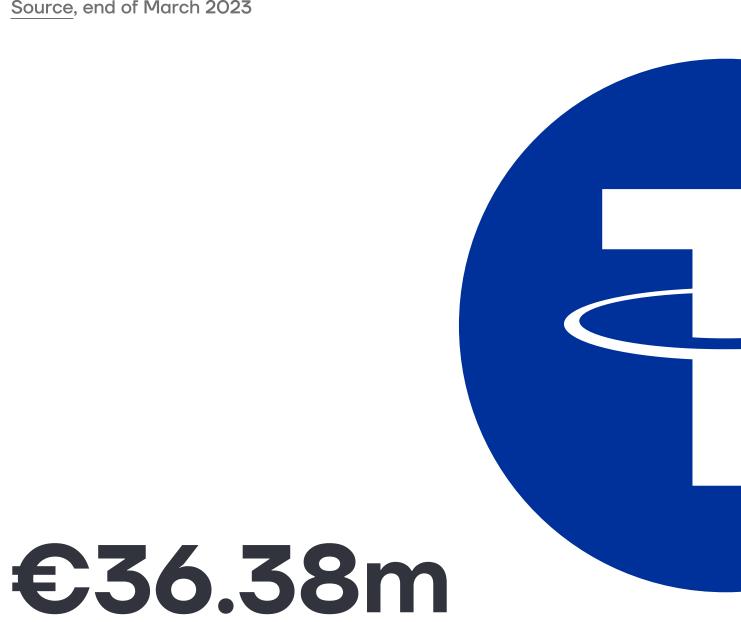
The issuer

The issuer for the EURt is the same as for the USDT - Tether. EURt is based on the Ethereum blockchain, while USDT was originally based on the Bitcoin blockchain, but has since expanded to other blockchains, including Ethereum and Tron. In terms of market adoption and liquidity, USDT is currently the most widely used stablecoin, with a larger market capitalization and a higher trading volume.

Was Audited by OpenZepellin on January 3, 2018, no critical issues were found.

KEY FIGURES

Source, end of March 2023





EROC is a euro-backed stablecoin from Circle. Overall, it can be noted that the supply and trading volume of EUR stablecoins are much lower than those of similar assets tied to USD from the same issuers. EURT is available only on Ethereum ERC-20.

The issuer

EUROC was created by the same company that launched USDC. EUROC is backed by Euro-denominated reserves held by a regulated U.S-based financial institution, making it a fully regulated and safe stablecoin. It is important to note that EUROC is the only Euro-linked stablecoin that is backed by Eurodenominated reserves in a regulated bank, which is why it is a reliable and trustworthy stablecoin. Additionally, its reserves are regularly audited and attested to by Grant Thornton LLP, ensuring transparency and accountability.

EUROC is backed 1:1 by real euros in bank accounts, and according to the Circle website, there is even overcollateralization: the circulation is 31.2 million euros, while reserves are 31.8 million euros. Based on available information, the collateral for USDC and EUROC is held in banks in different jurisdictions (Circle states that euro collateral is held in banks in the Eurozone). Such diversification is a good step.

KEY FIGURES

Source: EUROC Reserves report, January 2023. Date of reference: end of March 2023

€31.28m

Cash held at U.S. regulated financial institutions

€211 670

Cash due to/(owed by) the Company due to timing and settlement differences

€31.07m

Total EUROC reserve assets









XSGD is a stablecoin pegged to the Singapore dollar (SGD). It is issued by StraitsX, a Singaporean fintech company providing payment solutions for businesses in Southeast Asia. XSGD is built on the Ethereum blockchain and is an ERC-20 token, also functioning on the Polygon and Zilliga blockchains.

The issuer

XSGD is a stablecoin that is pegged to the Singaporean dollar, and it is regulated by the Monetary Authority of Singapore (MAS). The stablecoin is issued by Xfers (the trading name is StraitsX), a Singapore-based fintech company licensed by the MAS for e-money issuance. The stablecoin is backed by reserves held in segregated accounts with trusted banks in Singapore, ensuring that it maintains a fixed exchange rate with the Singapore dollar.

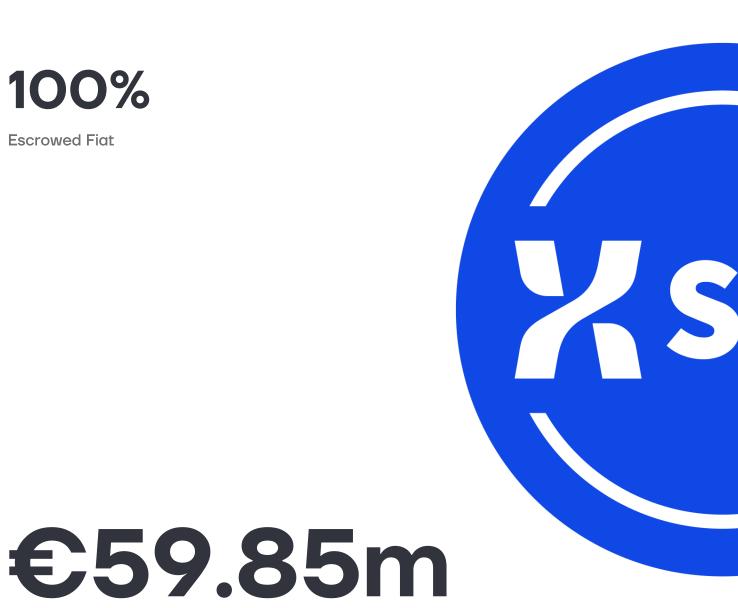
Collateral

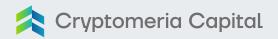
XSGD has been trading since the end of 2021 and has only experienced a oneday drop to 0.75 SGD, after which it quickly recovered. XSGD is collateralized 100% by Singapore dollars, with all of StraitsX's fiat held in the Bank of Singapore.



End of March 2023

Escrowed Fiat







Transfero issued Brazilian Digital Token, a stablecoin with a high issuance but low trading volume. Currently, the stablecoin's deviation from the Brazilian real is 37%, which is fairly significant. The issuing company and its subsidiaries are not responsible for the stablecoin losing its peg. Transfero offers a range of services and products in the crypto industry. Given Brazil's high inflation, Brazilians may prefer USD over the real. Transfero claims to maintain the exchange rate through active market making, but there is no information about audits or proof of reserves.

The issuer

BRZ is issued by Transfero Swiss AG, a Swiss financial intermediary that manages digital assets. The token's value is backed by a reserve of BRL held with a regulated Brazilian bank, ensuring its stability.

Collateral

Proof of reserves could not be found. There is also a disclaimer on the site: Transfero, creator of BRZ Token, intends to keep the value of BRZs pegged to the BRL (such that 1 BRZ = 1 BRL) via active market making. However, no assurances can be given that there will not be any mismatch between the value of BRZs and the BRL and neither Transfero nor any other of its subsidiaries or affiliates shall be responsible in case of any devaluation of BRL towards BRZs.



End of March 2023







IDRT is a stablecoin pegged to the Indonesian Rupiah (IDR). It is issued on the Ethereum blockchain as an ERC-20 token. IDRT aims to provide a reliable lowvolatility digital asset that can be used for various purposes such as trading, remittances, and payments.

The issuer

IDRT (Indonesia Digital Rupiah Token) is a cryptocurrency that is pegged to the Indonesian Rupiah. It is regulated by the Indonesian government through Bank Indonesia, the country's central bank. The goal of IDRT is to provide a stable digital currency that can be used for transactions within Indonesia and globally. IDRT is issued by PT Rupiah Token Indonesia.

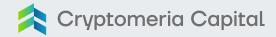
Team and Background



CEO **Jeth Soetoye** is a Harvard graduate and previously worked as a product lead at ConsenSys.



specialize in.



The core developers have more than 3 years of experience in crypto, particularly in fintech, which is what they



Collateral

RupiahToken issues monthly reports on its financial collateral and status. It is 100% collateralized by Rupiahs held in Bank Indonesia. It is issued by RupiahToken, a company registered in Indonesia.

In July 2019, an audit was conducted by <u>Certik</u> found no critical errors; it only offered suggestions regarding potential code improvements.

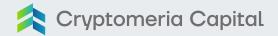
KEY FIGURES

Source: PT Independent Auditors' Report RUPIAH TOKEN INDONESIA, end of Feb 2023

100%

Escrowed Fiat









XCHF is a token that is pegged to the value of the Swiss franc (CHF). It is designed to provide a stable and secure digital asset tied to the value of a traditional fiat currency, in this case, the Swiss franc. The issuer of XCHF is Bitcoin Suisse AG. It is a large and reliable cryptocurrency asset management company in Switzerland, founded in 2013.

Team and Background

All co-founders, as well as core developers, are very smart and talented individuals with rich experience in leading positions in various fintech companies. Over the past 10 years, Bitcoin Suisse has established itself as an excellent and reliable company.

The issuer

XCHF, or Swiss Franc Stablecoin, is a cryptocurrency that aims to maintain a 1:1 peq with the Swiss franc. It is regulated by the Swiss Financial Market Supervisory Authority (FINMA) and is registered as a utility token with the Swiss Commercial Register. The XCHF stablecoin is issued by Sygnum Bank AG and Bitcoin Suisse AG.

Collateral

It is 100% collateralized by Swiss francs. Fiat funds are kept in Swiss Bank. The company Bitcoin Suisse AG itself is registered in Switzerland.



Source, end of March 2023

100%

Escrowed Fiat





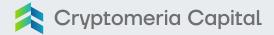


INFORMATION TABLE

Name	Туре	Issuer	Code audits	Financial audits	Active Blockchains	Reserves
Tether EURt (EURt)	Fiat Backed	<u>Tether</u> . Hong Kong	<u>OpenZappelin</u> January 3, 2018	No separate data for EURt, all <u>data is</u> indicated in the total mass	Ethereum	There is no accurate data on how EURt and USDt collateral are linked or unlinked
Euro Coin (EUROC)	Fiat Backed	<u>Circle</u> , based in Boston, Massachuse tts	No data	Mothly attestations by <u>Grant Thornton LLP</u> started from July 2022; Monthly attestation reports are available on <u>Circle's</u> <u>Website</u>	Ethereum	Total EUROC reserve assets as of 31.01.2023: €31,077,321 Cash held at U.S. regulated financial institutions: €31,288,991 Cash due to/(owed by) the Company due to timing and settlement differences, net: (€211,670) EUROC is 1:1 backed by cash EURO in Banks. Its reserves are also accounted for by monthly attestations through <u>Grant Thornton LLP</u>
XSGD	Fiat Backed	<u>Xfers,</u> Singapore	No data	Monthly attestation reports from KK YAP ል ASSOCIATES: <u>https://www.straitsx.com/</u> <u>xsgd;</u>	Ethreum, Polygon, Zilliqa	<u>Total reserves</u> : 70,67m XSGD or \$53m (end of Jan 2023, assets.website-files.com); 100% Escrowed Fiat;
Brazilian Digital Token (BRZ)	Fiat Backed	<u>Transfero</u> Swiss AG, Switzerland	No data	Risk Disclosure and Proof of Funds by BRZ are available on their <u>Website</u>	Ethereum, BNB Smart Chain, Algorand, Solana, Avalanche, Polygon, Stellar, Rootstock RSK	<u>Total reserves</u> : 70,67m XSGD or \$53m (end of Jan 2023, assets.website-files.com); 100% Escrowed Fiat;
Rupiah Token (IDRT)	Fiat Backed	<u>Transfero</u> <u>Swiss AG,</u> Switzerland	<u>Certik</u> July 3, 2019	Monthly attestation reports from KAP Arif & Glorius.	Ethereum, BSC, Polygon, Harmony	<u>Total reserves</u> : 104b Rp or \$7m (end of Feb 2023, PT Independent Auditors' Report RUPIAH TOKEN INDONESIA); 100% Escrowed Fiat;
F CryptoFranc (XCHF)	Fiat Backed	Bitcoin Swiss AG (BTCS), Switzerland	Chain Security AG	<u>Grant Thornton AG</u> , Zurich for Q2 2023	Ethereum	<u>Total reserves</u> : 2,95m CHF or \$3,21m (end of Mar 2023, bitcoinsuisse.com); 100% Escrowed Fiat;



III. ALGORITHMIC, CRYPTO BACKED



34



DAI is the most popular crypto-backed stablecoin, created by the Maker Protocol and governed by MakerDAO through the MKR governance token. DAI is used in DeFi protocols like 1inch, Curve Finance, Oasis Borrow, Uniswap, and Aave.



If liquidating the position is not enough to restore the peg, the protocol can mint new MKR tokens to sell them on the open market and pay off the debt for the under-collateralized position. Overall, DAI has captured markets and found its place, available in over 400 applications. The project is the most popular and active of all crypto-backed stablecoins.

Team and Background

Raised more than \$80,000,000 from Paradigm, a16z, Hex Capital, Polychain Capital, Dragonfly Capital, and others.

- December 2017 \$12,000,000
- September 2018 \$15,000,000
- April 2019 \$25,000,000
- December 2019 \$27,500,000

MakerDAO pays Circle and Paxos a huge subsidy for depositing their stablecoins in the PSM (peg stability mode). Maker supports the DAI stablecoin with USDC and USDP deposited at \$4b. At a rate of 1.7%, Circle and Paxos earn \$68m per year on these \$4b, of which Maker receives nothing.

The issuer

DAI is issued by MakerDAO, a decentralized autonomous organization (DAO) that was founded in 2014 by Rune Christensen and Wouter Kampmann. The two were later joined by Mariano Conti, a smart contract developer and investor. MakerDAO is registered as a Decentralized Autonomous (DAO) on the Ethereum



blockchain, which means it is not tied to any specific jurisdiction or location. Instead, the organization's authority is distributed among its members who hold voting power through Maker's governance token, MKR.

Collateral and Reserves

Overcollateralized at 150% mainly with USDC, USDP, ETH, WBTC.

Since March 14, following problems with the collateral in USDC, Maker Governance has introduced a series of changes to the PSM parameters to limit Maker's impact on volatile centralized stablecoins and strengthen DAI's peg. The daily USDC limit in the PSM (qap) was reduced from 950 million DAI to 250 million DAI. Conversely, the daily USDP limit in the PSM was increased from 50 million DAI to 250 million DAI. The USDP PSM debt ceiling (line) was also increased from 450 million DAI to 1 billion DAI.

Audits

Been held lot of third-part audits against The Maker Contracts: Trail of Bits, Bok Consulting, White Hat Group

Backed up by cryptocurrencies mainly as for June 27, 2022 in the report by Raynor de Best publiched on statista:



Reserves (collateralization) data

ERC20 - 16.28%			ERC20 LP - 5.15%		
ETH (A,B,C pools)	10.99%	\$582 154 421	UNIV2USDCETH	0.04%	\$2 280 463
WSTETH (A,B pools)	5.13%	\$272 083 192	UNIV2DAIUSDC	O.45%	\$23 983 389
RETH	0.03%	\$1 831 190	UNIV3DAIUSDC	3.09%	\$163 979 966
WBTC	1.62%	\$85 675 973	CRVV1ETHSTETH	1.57%	\$83 266 666
LINK	0.03%	\$1 507 549			
YFI	0.07%	\$3 512 422			
GNO	0.06%	\$3 017 784			





RWA Real World Assets - 11.89%

Monetalis Clydesdale	10.99%	\$499 950 318
H. V. Bank	1.89%	\$100 000 000
Centrifuge: BlockTower Credit	1.32%	\$69 892 431
6s Capital	0.27%	\$14 348 036
Centrifuge: New Silver	O.13%	\$6 900 531
Centrifuge: ConsolFreight	0.03%	\$1 340 890
Centrifuge: Harbor Trade Credit	0.02%	\$1 299 785
Centrifuge: Fortunafi	O.12%	\$6 500 579

KEY FIGURES

Source, end of March 2023

\$3.36b

Peg Stability Module (PSM) Source

53.6% 2.84b USDC

2.3%

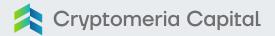
4.1% 217.54m USDP

125.60m aDAI

0.9% another actives



Capitalization of reserves



5.78% 306.26m GUSD





FRAX is a stablecoin backed by both asset collateralization and mathematical cryptographic algorithms and uses two assets: FRAX and FXS. When FRAX is minted, FXS is burned proportionally to the uncollateralized amount. For example, a 50% collateral ratio means that for each minted FRAX token, 0.50 USD worth of FXS is burned. The more FRAX is minted, the smaller the circulating supply of FXS gets. Additionally, when the protocol lowers the collateral ratio, more FXS is burned to mint the same amount of FRAX.

Essentially, the protocol aligns the stablecoin peq to USD by stimulating arbitrage opportunities for users, making the price higher or lower, and then buying or selling FRAX as a form of arbitrage bond.

100% collateral support

Frax aims to keep its collateral at 100% by buying or selling assets as needed, creating a decentralized and scalable system of algorithmic money in contrast to fixed supply assets like BTC.



Team and Background

The project, which started in May 2019, was formerly known as Decentral Bank and was founded by Sam Kazemian and Travis Moore. Sam Kazemian was previously a co-founder of blockchain project Everipedia, while Travis Moore worked as an engineer at Google. They successfully closed two rounds:

- July 2020 investor was Ascensive Assets
- August 2021 investor was Crypto.com Capital

The investment amount is unknown.

The issuer

The Frax protocol is a decentralized and permissionless stablecoin protocol that is secured by collateral. The legal registration of the Frax protocol is handled by its creators, Frax Finance. As a company, Frax Finance is incorporated and registered in the United States.



Collateral and Reserves

The Frax protocol contains a combination of USDC and FXS (Frax protocol management token) as collateral to support Frax tokens. The amount of USDC and FXS held in reserve is determined by the Frax protocol's partial reserve ratio, which is set by the protocol management mechanism.

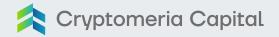
Frax passed an Audit by Certik on December 6, 2020, and reached 88/100 general score with 39 Findings where were three Critical, eight Major, 11 Medium and 17 Unformationals issues.

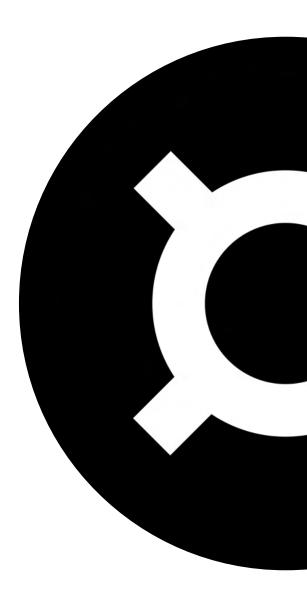
Reserves (collateralization) data				
Curve AMO	62.19%	\$625 775 874		
Investor AMO	12.78%	\$128 597 477		
Lending AMO	8.46%	\$85 069 104		
Liquidity AMO	7.74%	\$77 824 084		
Pool USDC	0.53%	\$5 432 110		
Algorithmic	8.3%	\$83 588 250		

KEY FIGURES

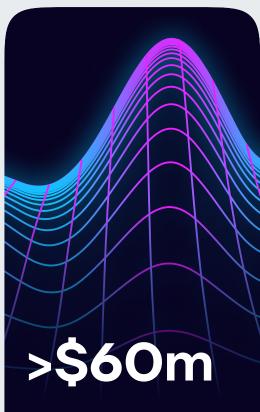
Source, end of March 2023











Synthetix has raised from investors like DWF Labs, Coinbase Ventures, Paradigm, Infinite Capital and more.

Introduction

sUSD is a synthetic USD token backed by the Synthetix protocol. It tracks the price of the US dollar using price feeds provided by the decentralized Chainlink oracle network. sUSD is integrated into the DeFi ecosystem as one of the most liquid decentralized stablecoins, including at Curve. The asset is managed by Synthetix algorithms and regulates prices by changing the amount of SNX (since sUSD is backed by them), changing the size of the exchange fee, or simply sending it.

Team and Background

- March 2018 \$30 000 000 in ICO
- October 2019 \$3 800 000
- December 2020 \$12 000 000
- March 2023 \$20 000 000

The team has extensive experience in international organizations such as Blueshyft (cryptoplatform in Australia), MongoDB, JPMorgan Chase.

The issuer

sUSD is a stablecoin which was originally issued by the Synthetix Foundation, a not-for-profit foundation based in Australia. It has shifted control to three decentralized autonomous organizations (DAOs) in 2020.



Collateral

Users can mint sUSD and trade it fully by staking SNX from the Synthetix Protocol. In August 2021, Iosiro conducted an audit and made only two recommendations for improving the code and minor optimization. The sUSD peg is maintained by ensuring high-quality and useful Synthetix products, which has helped maintain its stability so far.

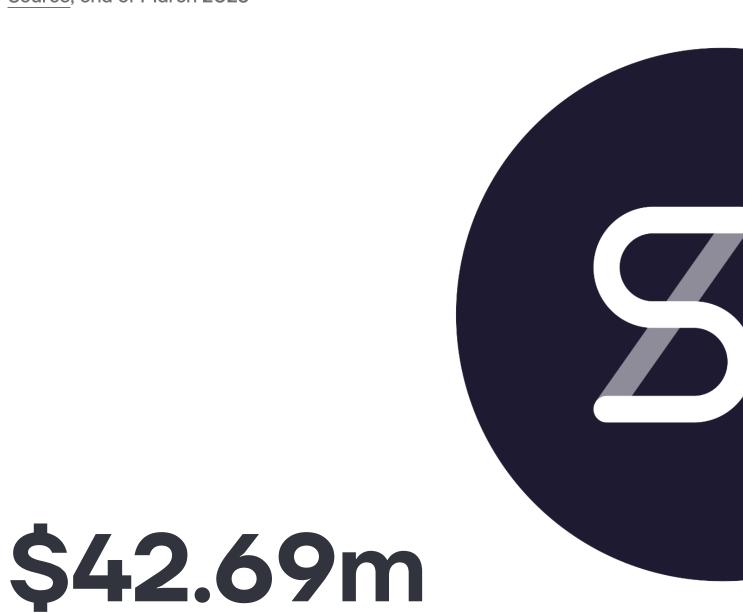
The Synthetix smart contract allows SNX holders to mint sUSD by locking their SNX as collateral. When an SNX holder mints, the following processes are taken:

- The Synthetix contract verifies that an SNX staker can mint Synths with their SNX, which necessitates a Collateralization Ratio of less than 400 percent.
- When minting or burning sUSD, debt shares are issued to a staker to track the staker's issued debt amount. The Synthetix contract enables the sUSD contract to issue the revised amount now that the debt has been assigned to the staker. It adds it to the total supply and places the newly created sUSD in the user's wallet.
- If the price of SNX rises, a staker's SNX is immediately unlocked as collateral in proportion.

sUSD is collateralized by the SNX token.

KEY FIGURES

Source, end of March 2023





It can be noted that the trading volume is 10 times lower than the supply. This may be partially due to LUSD being staked by Liquidity protocol users in pools to earn rewards in ETH and LQTY.

Additionally, over-collateralization with Ether may carry risks as the ETH price fluctuates, causing the collateral evaluation to change, which must be balanced through arbitrage.

There is also LQTY, which users can place their tokens to earn a share of the borrowing/repayment fees charged by the protocol. These fees are distributed through the protocol's staking contract and accumulated as ETH and LUSD.

It is interesting to note that Liquity AG itself does not offer any interfaces and only provides backend solutions. Everything related to the frontend is provided by thirdparty providers and is allocated to a separate section on the official website: https:// www.liquity.org/frontend

The price is fixed in such a way that if due to changes in the asset prices held as collateral LUSD falls below \$1, then liquidity providers and users have an incentive to buy LUSD, as its price becomes slightly lower. The price is also maintained through arbitrage as it is possible to withdraw the deposited Ether, which will be worth more.

The issuer

LUSD is issued and managed by the Liquity protocol, a decentralized organization. Liquity protocol is based in Switzerland and operates as a non-profit foundation that aims to provide decentralized lending and borrowing services to the blockchain community.

Team and Background

The Liquity AG development company emphasizes everywhere that they have no relation to the Liquidity protocol since it operates autonomously.

The presence of Dfinity in investors raises concerns - Dominik is a pretty toxic person, and the project looks quite scammy overall, despite all the developments.

They raised \$8.4m in two rounds of funding:

- September 2020 \$2.4m in Seed from Polychain, Lemniscap, 1kx, and Dfinity
- March 2021 \$6m in Series A from Pantera, Nima, Melten, Calvin Liu, George Lamberth.





Collateral and Reserves

The over-collateralization is at 110% in ETH and can be increased to 150%. To maintain the hard peg mechanism, where each 1 LUSD is genuinely equal to 1 US dollar, the team has developed a redemption mechanism, where people can use 1 LUSD for redemption (1 dollar ETH - a certain fee set by the protocol). This mechanism is mainly used by arbitrageurs to profit if the price of 1 LUSD becomes less than 1 USD.

Arbitrageurs can buy USDC, exchange USDC for LUSD on Curve or Uniswap, then exchange LUSD for ETH on Liqudity, and finally sell the received ETH for USDC.

Users can also deposit LUSD into the pool to earn rewards in ETH and LQTY.

There are only <u>smart contract and protocol audits</u>, where were found a couple of Major Problems and some warnings, but not liquidity audits.

KEY FIGURES

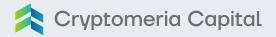
Source, end of March 2023

62.7%

LUSD in Stability pool (\$168m)



Capitalization of reserves





43



Celo has raised \$60,000,000 in investments from Polychain Capital, a16z, Coinbase Ventures, Dragonfly Capital, and others. Currently, it is actively developing its mobile blockchain ecosystem.

- June 2018 \$6,500,000
- April 2019 \$30,000,000
- May 2020 \$10,000,000 in ICO
- February 2021 \$20,000,000

For Celo, a certain amount of collateral needs to be locked up to issue new cUSD tokens. Collateral is usually provided in the form of CELO, the native cryptocurrency of the Celo network. The collateral ratio is currently set at 200%, which means that for every cUSD issued for \$1, CELO worth \$2 must be locked up as collateral.

The issuer

The issuer of the CELO stablecoin is Celo Foundation, a non-profit organization based in San Francisco. Celo's stablecoins are backed by a basket of assets (CELO, BTC, ETH), which are held by a trust company that is licensed and regulated in the state of New York. The Celo company itself is based in San Francisco, USA.

In February 2021, an audit was conducted by OpenZeppelin and found two critical errors, three high-priority errors, and 14 medium-priority errors.

Source, end of March 2023

Reserves (collateralization) data: all collateral is listed simultaneously for cUSD, cEUR and cREAL (Source)

Celo	54.46%	
BTC	5.83%	
ETH	5.35%	
DAI	18.05%	
USDC	16.22%	
cMCO2	0.09%	



Capitalization of reserves

133 460





MAI offers several advantages compared to other stablecoins. For example, it uses a "smart pool" mechanism that provides more stable and predictable returns for liquidity providers. This is achieved by using an automated market-making algorithm that adjusts the price of MAI depending on market conditions.

MAI also uses a "liquidation-free" mechanism for borrowers. This means that users who borrow assets on the MAI Finance platform are not at risk of being liquidated, even if the market experiences a downturn. This is achieved through the use of a reserve fund, which can be used to cover losses and prevent liquidation.

The issuer

MAI Finance and its stablecoin MAI are powered by the Ethereum blockchain and are built to facilitate lending and borrowing without intermediaries. MAI is backed by collateral, which means that it is only created when users deposit other accepted tokens (such as MATIC) into a vault as collateral. While MAI is not registered with any specific regulatory body, its creators have ensured that it complies with all applicable laws and regulations wherever it is used. Additionally, the smart contract code that governs the MAI stablecoin is open source and audited by third-party auditing firms to ensure its security and compliance.





Collateral

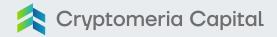
MAI is backed by tokens like MATIC, FTM, ETH, OP, METIS, but any other token can be used as collateral. MAI is overcollateralized at 130-150%. MAI Finance issues MAI.

In October 2021, an audit was conducted by Cloakwire, which did not find any critical errors, only offered recommendations for code improvement.

KEY FIGURES

Source, end of March 2023









Ampleforth sets a target price of \$1 per token. Every 24 hours, the Ampleforth protocol calculates whether the currency price has deviated from the target price. If the price is above the target value, the protocol increases supply by issuing new tokens to all AMPL holders. If the price is below \$1, the protocol reduces supply by burning a certain amount of tokens belonging to each AMPL holder. This technology is called rebase. The supply regulation mechanism is designed to respond to the market and stabilize the price of AMPL. As the supply of Ampleforth tokens adapts to market demand, the price should approach the target price of \$1 per token.

\$10,000,000

Ampleforth has raised a total of \$10m from investors, including True Ventures, Arrington XRP Capital, Nima Capital, Slow Ventures, Pantera Capital, FBG Capital, and The Spartan Group.

Team and Background	The	
 March 2018 - Seed Round - \$3,000,000 	Ampl	
December 2018 - Venture Round -	(DeFi	
\$1,800,000	block	
 June 2019 - Initial Coin Offering - 	regis	
\$5,000,000		
\$5,000,000	overs	
 The team has a rich background in companies 	a set	
like Uber, Google, Yahoo, and Amazon. Before	autor	
Ampleforth, many collaborated in FAANG-like		
companies and gained years of experience		
working on projects together.		

issuer

Fi) project that is built on top of the Ethereum kchain. As a decentralized protocol, it is not stered in the traditional sense, as it does not on a central authority or regulatory body to see its operations. Instead, it is governed by t of smart contracts that are executed matically on the Ethereum blockchain.



Collateral and Reserves

Ampleforth is not backed by any physical assets or fiat currencies, unlike stablecoins that are pegged to a specific asset or currency. Instead, Ampleforth is an algorithmic stablecoin that is backed by its own network tokens. The value of Ampleforth is not guaranteed by any external organization or government, but is determined solely by market forces.

In May 2020, an audit was conducted by Certik, which did not find any major or critical errors, only 10 informational recommendations for code improvement and minor optimizations.

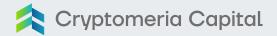
Capitalization of Reserves

Ampleforth is an algorithmic stablecoin that is working by its own rebase mechanics.

KEY FIGURES

Source, end of March 2023







The most concise description of RAI is that it is a true algorithmic stablecoin, similar to what DAI was before transitioning to partial collateral in stablecoins. The majority of RAI tokens are held in pools of the most popular DeFi protocols. What makes RAI unusual is that it is not pegged to USD and its price is dynamic, but held in the same range.

The algorithmic stablecoin RAI was launched in 2021. Its price relative to USD fluctuates based on demand and supply in the market. This means that RAI has a "floating" or "sliding" peg. It's a fork of Maker's DAI.

This stablecoin has fewer use cases than its peers, but it proves its resilience to external factors while maintaining decentralization. Holders of ETH actively use the Reflexer protocol to obtain instant liquidity in a relatively stable asset, without selling their ETH.

Similar to DAI, when the market price of RAI falls, the target price of RAI begins to rise, and if the market price is higher than the target price, the target price begins to decrease. Thus, arbitrage aligns the market price and brings it closer to the target price.

Savior

The liquidation process ensures that there is always enough ETH in the system to support the issued RAI. And here comes the unique feature—"Savior," which helps not to lose all funds during sharp market movements. This feature allows you to save yourself during liquidation by using the LP tokens of the RAI/ETH pool as additional collateral.

Anyone can stake ETH tokens in the protocol and receive RAI tokens in exchange. Depending on the level of collateralization, a staker can receive a different number of RAI tokens. The ratio of collateral and loan directly affects the liquidation price. When RAI is returned, the tokens are burned, thereby reducing the supply. Users can also unstake their ETH.

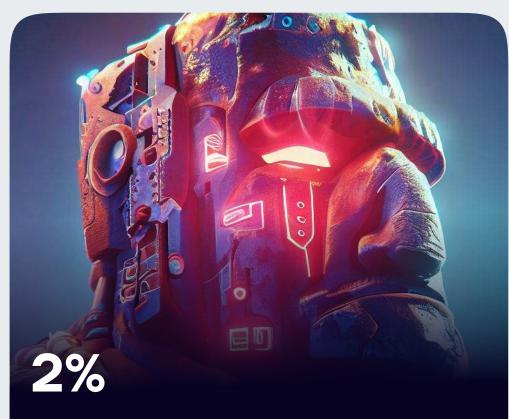




Reflexer, just like DAI, uses the Maker MCD mechanism, and the price change process is controlled by the RAI PID (Proportional Integral Derivative) algorithm. The protocol updates the current market data on-chain thanks to the Chainlink oracle.

Team and background

The Reflexer project was founded in early 2020. The team previously worked on the Plasma project and maintains a good relationship with Vitalik Buterin. The main investors among partners are Metacartel Ventures, Paradigm, and Pantera. Block Science also helped with the protocol development. There are plans to expand RAI minting on some L2s, but as of today, the only way to use it on Polygon, Optimism, and Arbitrum networks is through a bridge.



RAI minters pay a fixed stability fee of 2% per annum. The fees accumulate in the protocol balance and can be allocated for the needs of the protocol according to the DAO governance decision.

The issuer

While Reflexer Labs and its stablecoin RAI are not technically registered, they operate under Swiss law and are built on the Ethereum network. RAI stablecoin has been audited by Certora, a leading provider of formal verification services for smart contracts, to ensure its security and stability.



Collateral and Reserves

Only ETH is used as collateral.

In critical situations of collateral shortage, FLX liquidity pools can be used. This is the second token system of the Reflexer protocol-its governance token. FLX works similarly to the AAVE security module, staking FLX serves as both a liquidity provision incentive and a quarantee of the RAI collateral system. Regular buybacks and burning of FLX are carried out to attract stakers and holders.

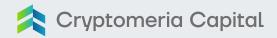
KEY FIGURES

Source, end of March 2023

3.38m / 10m RAI

Currency RAI mcap











Stablecoin pegged to Euro from Celo and was launched in April 2021. Like with Celo Dollar, Celo Euro is supported by <u>Celo Reserve</u>, a diversified portfolio of cryptocurrencies.

The issuer

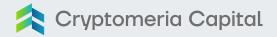
The issuer of the CELO stablecoin is Celo Foundation, a non-profit organization based in San Francisco. Celo's stablecoins are backed by a basket of assets (CELO, BTC, ETH), which are held by a trust company that is licensed and regulated in the state of New York.

In February 2021, in an audit was conducted by <u>OpenZeppelin</u>, there were found two critical errors, three high-priority errors, and 14 medium-priority errors.

KEY FIGURES

Source, end of March 2023





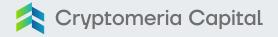


Fei is a decentralized DeFi-native stablecoin protocol. Fei Protocol's goal is to scalably issue a \$1-pegged decentralized stablecoin. FEI Protocol is a products from Tribe DAO. DAO is managed by a native governance token called TRIBE. FEI is backed 1:1 by the DAI stablecoin. The price is held using the Protocol Controlled Value (PCV) model, which creates a pool of ETH/FEI liquidity on Uniswap. In order to mint FEI, you just need to wrap DAI using the official <u>minter</u>.

The team, for the most part, is young and has not had time to acquire much experience yet, only the <u>CEO</u> has experience in <u>Uber</u> and <u>Dharma</u>

\$19,000,000

Raised a funding round in Nikodimah 2021 by \$19,000,000 from Andreessen Horowitz (a16z), Coinbase Ventures, Framework Ventures, <u>AngelList</u> and <u>Naval Ravikant</u>.







The issuer

The issuer of FEI protocol and its stablecoin is a decentralized autonomous organization (DAO) called Fei Labs.

Security

Fully backed up with DAI token, no custody information found.

An audit by OpenZeppelin on February 5th, 2021 found five critical bugs, three major bugs, six moderate bugs and 10 minor bugs.

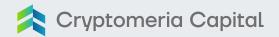
KEY FIGURES

Source, end of March 2023

Fully backed up with DAI token

Capitalization of reserves







CrvUSD is a stablecoin designed as a collateralized debt position (CDP). Users deposit collateral to take out a loan in crvUSD. Although the specifics have not been determined yet, it's likely that crvUSD will start by accepting ETH as collateral, just like MakerDAO's DAI. In the future, other collateral options like liquidity pool positions may also be included.

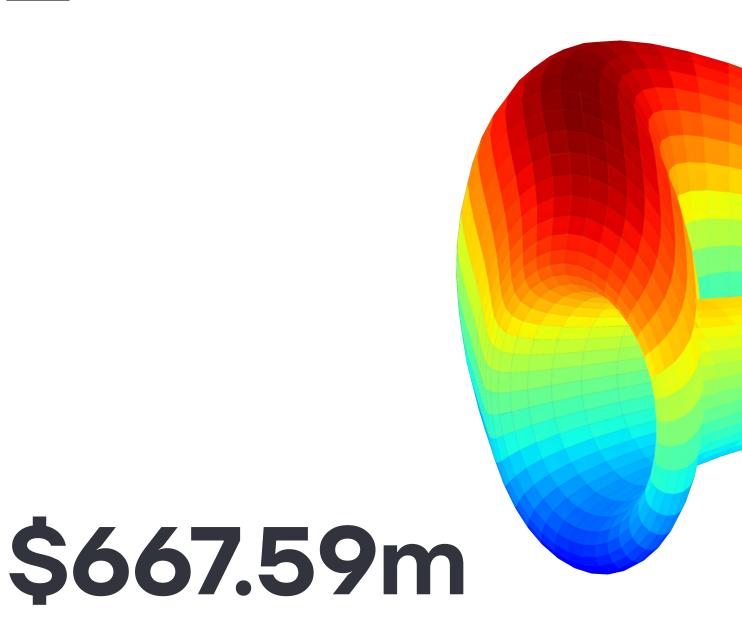
As with all CDP stablecoins, a robust liquidation system is necessary to ensure timely liquidations of collateral that falls below the liquidation threshold. Curve showcases its innovation with its proprietary Lending-Liquidating AMM Algorithm (LLAMMA), which handles the liquidation process.

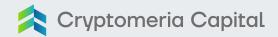
LLAMA fixes specific price bands to liquidate portions of the collateral rather than liquidating it fully at a specific price. This means that as the price of the collateral falls, portions of the collateral are sold for crvUSD. As a result, when the collateral value reaches the liquidation point, there will already be enough crvUSD to cover the loan value, avoiding a typical liquidation scenario. Conversely, as the price of collateral recovers, crvUSD is converted back to the posted collateral. Curve Finance announced on May 4 that it had deployed smart contracts for its highly anticipated stablecoin, crvUSD.

On May 5, Curve posted an update stating that the third deployment of crvUSD was complete, explaining it had to fix an issue of unexpectedly high gas usage in certain cases.

KEY FIGURES

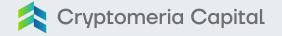
Source, May 2023





INFORMATION TABLE

Name	Туре	Issuer	Code audits	Active Blockchains	Reserves
MakerDAO (DAI)	Crypto backed	<u>MakerDAO</u> , it is registered as a Decentralized Autonomous Organization (DAO) on the Ethereum blockchain, which means it is not tied to any specific jurisdiction or location.	<u>Trail of Bits</u> August 6, 2019	Ethereum, BNB Smart Chain, Gnosis Chain, Fantom, Polygon, Avalanche C-Chain ,Optimism, Sora, Arbitrum, Harmony, Moonriver, Boba Network, Solana, Terra Classic, Moonbeam, Aurora, Klaytn, Metis Andromeda, Cronos, Near, Everscale, Bitgert, Energi	 Reserves (collateralization) data: 16,28% - ERC2O \$949,782,531 (ETH, WBTC, LINK, YFI, GNO) 5,15% - ERC2O LP \$273,510,484 11,89% - RWA \$700,232,570 63,48% - PSM \$3,364,566,329 2,3% - Direct Deposits 125,601,346 aDAI 0,9% - another actives Source: <u>https://daistats.com</u>
FRAX	Algorithmic / Crypto Backed	<u>Frax Finance</u> , registered in the United States.	<u>Certik</u> December 6, 2020	Ethereum, Fantom, Avalanche C-Chain, Moonriver, Polygon, Solana, BNB Smart Chain, Arbitrum, Near	Reserves (collateralization) data: • 62,19% - Curve AMO \$625,775,874 • 12,78% - Investor AMO \$128,597477 • 8,46% - Lending AMO \$85,069,104 • 7,74% - Liquidity AMO \$77,824,084 • 0,53% - Pool USDC \$5,432,110 • 8,3% - Algorithmic \$83,588,250 Source: https://app.frax.finance/ 30.03.2023
SUSD	Algorithmic / Crypto Backed	Synthetix Foundation, based in Australia.	<u>losiro</u> 18 August 2021	Ethereum, Optimism, Fantom	No collateralization data Backed by staked SNX from the Synthetix Protocol



INFORMATION TABLE

Name	Туре	lssuer	Code audits	Active Blockchains	Reserv
Liquity USD (LUSD)	Crypto backed	<u>Liquity protocol</u> , based in Switzerland	<u>QuoVadisB</u> October 13, 2021	Ethereum, Optimism, Arbitrum, Polygon	The LU increa LUSD
Celo Dollar (CUSD)	Algorithmic / Crypto Backed	<u>Celo Foundation</u> , San Francisco, USA.	<u>OpenZeppelin</u> January 2020	Celo, Near	Celo's which state o Capito 54, 5,8 5,3 5,3 5,3 18,0 16,2 0,0 cUSD Source
Mai (MAI)	Algorithmic / Crypto Backed	MAI Finance, DEFI	<u>Cloakwire</u> October 2021	Solana, Avalanche C-Chain, Fantom, Moonriver, Cronos, Metis Andromeda, Harmony, Arbitrum, Boba Network, BNB Smart Chain, Aurora, Celo, IoTex, Klaytn, Optimism, Moonbeam, Syscoin, Milkomeda, Kava, Ethereum, Polygon	MAI is OP, M collate
C Fei USD	Algorithmic	<u>Fei Labs</u> , DAO	<u>OpenZeppelin</u> February 5, 2021	Ethereum	Fully ba



erves

LUSD is over-collateralization is at 110% in ETH and can be eased to 150%

D in Stability pool: 62,7% 168m\$

o's stablecoins are backed by a basket of assets (CELO, BTC, ETH), ch are held by a trust company that is licensed and regulated in the ce of New York.

bitalization of all reserves (collateralization) data:

54,46% - Celo \$83,228,570 5,83% - BTC \$8,922,116 5,35% - ETH \$8,183,224 18,05% - DAI \$27,574,725 16,22% - USDC \$24,769,210 0,09% - cMCO2 \$133,460

SD capitalization: \$32,037,236

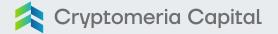
rce: https://reserve.mento.org/ 30.03.2023

I is overcollateralized at 130-150% by tokens like MATIC, FTM, ETH, METIS and others (source: <u>app.mai.finance</u>) No unified summary of ateral and insurance funds

backed up with DAI token

INFORMATION TABLE

Name	Туре	lssuer	Code audits	Active Blockchains	Reserv
Ampleforth (AMPL)	Algorithmic	Ampleforth Protocol, it's a decentralized finance (DeFi) project that is built on top of the Ethereum blockchain.	<u>Certik</u> February 12, 2021	Ethereum, Gnosis Chain, Solana, Meter	Ample mecho
Reflexer (RAI)	Algorithmic / Crypto Backed	Reflexer Labs, are not technically registered, they operate under Swiss law and are built on the Ethereum network.	No data	Ethereum, Gnosis Chain, Solana, Meter	Only E
Celo Euro (CEUR)	Algorithmic / Crypto Backed	<u>Celo Foundation</u> , San Francisco, USA.	<u>OpenZeppelin</u> January 2020	Celo	Celo's which state o Collat cEUR Source
Curve USD	Algorithmic / Crypto Backed	<u>Curve Finance</u> , Stablecoin Swap Protocol	No data	Ethereum	Backe



erves

pleforth is an algorithmic stablecoin that is working by its own rebase chanics

/ ETH is used as collateral

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lateral from one basket with cUSD and cREAL

IR capitalization: €18,268,453

rce: https://reserve.mento.org/ 30.03.2023

ked by ETH

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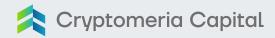
About Cryptomeria Capital

Cryptomeria Capital is an early-stage VC firm based in Dubai which has a presence in Singapore and Hong-Kong. The firm believes decentralized projects, cryptocurrencies, and Web 3.0 will dramatically reshape economic relations and focuses on ventures, tokens, and projects related to blockchain technology and crypto assets. Cryptomeria Capital supports transformation by providing early-stage financing for ambitious projects in a rapidly developing industry.

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With international presence and global reach, Axon has 2 different business units: alternative investment and strategic consulting that offer their services in more than 70 countries, with high exposure to the Americas, Europe, Middle East and Southeast Asia.







+100

Years of accumulated experience of the partners



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