ALGORITHM VS ASSET-BACKED STABLECOINS; TERRA CASE STUDY AND IMPLICATIONS TO INVESTORS

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HIGHLIGHTS

- Understanding stablecoins, use cases and implications
- Types of stablecoins, key differences and effects on decentralised-finance
- The Rise and Fall of Terra: risk associations, the death spiral and Terra 2.0
- The importance of asset-backed stablecoins
- Introduction to GOLD, SILV and XAUD and key propositions
- Institutional & retail investors: a critical mass of adoption

INTRODUCTION

A particular type of stablecoin recently lost its peg. In May, the collapse of Terra cost investors over US$60 billion as they pulled out in a panic that some have compared to a bank run. The current situation is getting more attention because of several unusual features: it happened in the midst of a wider macroeconomic downturn that has hurt crypto as well as more traditional markets, Terra had a relatively large market cap, and critically, the risks of algorithmic stablecoins are not well understood.

The lack of understanding within the market on the differences between stable coins has created a core problem whereby there is now a confidence crisis relating to the backing model of stablecoins generally; when in reality this is an inherent issue specifically in algorithmic stablecoins. As the market continues to mature, the collateralisation of stablecoins with independently verified valued assets will continue to become more common and appreciated. As regulatory consolidation continues, with innovations in a new industry, the market will continue to test and prove its value. This signifies a change in direction, not a full system meltdown.

UNDERSTANDING STABLECOINS

Stablecoins are inherently stable assets in a class of cryptocurrencies. Offering investors price stability either by being backed by specific assets or using algorithms to adjust their supply based on demand. Stablecoins are widely used in blockchain-based decentralised financial ("defi") services such as lending platforms and can be used as a medium of exchange, bridging the gap between fiat and cryptocurrencies. A space which has grown from USD10bn to USD50bn in 2 short years [1].

The value of most stablecoins is pegged to the value of either a specific fiat currency such as the United States dollar or a particular commodity such as gold. Being pegged means that their price is fixed, for instance, one xbullion GOLD token will always be pegged with one gram of institutional grade of physical gold.

How Stablecoins Remain Stable

There are five types of stablecoins which can be backed by a physical commodity such as gold, by algorithms, or by government-issued fiat currencies [2]

Fiat-backed stablecoins

Stablecoins backed by fiat currencies maintain reserves in fiat currencies like the U.S. dollar. For every token in circulation, fiat-backed stablecoins often have one dollar in reserve — either in cash or cash equivalents. Regular audit and work with regulators to ensure the stablecoin reserves remain compliant.

Cryptocurrency-backed stablecoins

A crypto-backed stablecoin can be issued to launch one asset on a different blockchain. For example, Wrapped Bitcoin (WBTC) is a stablecoin backed by Bitcoin issued on the Ethereum blockchain.

Commodity-backed stablecoins

Physical assets such as precious metals, oil and real estate are used to back commodity-backed stablecoins. Gold is the most commonly collateralised commodity. Stablecoins backed by commodities deliver significant efficiencies in accessing commodities markets and management solutions.

Algorithmic or hybrid stablecoins

Algorithmic or hybrid stablecoins are stablecoins that rely on complex algorithms to keep their prices stable, effectively balancing funds held on the blockchain via smart contracts with supply and demand to maintain price stability. Some algorithmic stablecoins are known for losing their peg during black swan or unexpected events because the market volatility shoots upwards due to a lack of over-collateralisation.

Non-collateralised or seigniorage-style stablecoins

Seigniorage-style stablecoins rely on complex processes meant (destroy and inflate) to adjust the circulating supply of their coins in response to supply and demand.

ASSET-BACKED STABLECOINS

Commodity and Fiat

- Value backed by reserve of an underlying asset; fiat, commodities
- Token supply issued by DAO or centralised entity, some more transparent & audited than others
- Product built upon a decentralised or centralised network
- Stability based on that of the underlying asset
- Volatility hedge at a **LOWER** risk

USDC; USDT; XAUD; GOLD; SILV

ALGORITHM STABLECOINS

Mixed-Collateralisation

- May or may not hold reserve assets to back value
- Stability pegged by auto-executed arbitrage between two tokens
- Unproven stability heavily reliant on market demand
- Automated nature leaves it vulnerable to attack
- Volatility hedge at a **HIGHER** risk

UST; DAI; Magic Internet Money; Frax; USDD

THE RISE AND FALL OF TERRA

Do Kwon and Daniel Shin launched the Terra network in January 2018 with plans to develop an e-commerce payments app with a price-stable cryptocurrency. TerraUSD (UST) and Terra Luna (LUNA) are two native tokens of the Terra network. UST is an algorithmic stablecoin pegged to the US dollar by using a complex seesawing mechanism with a related cryptocurrency LUNA [3]. In early 2022, Singapore-based Luna Foundation Guard (LFG) raised $1 billion with Jump Crypto and Three Arrows Capital being the lead investors, with the aim to be “mandated to build reserves supporting the $UST peg amid volatile market conditions”.

The mass adoption of Terra network quickly grasped investors attention when Anchor Protocol, a defi platform built on the Terra Blockchain offering 20% yield return on stablecoin UST, with lockup periods for deposits. In 2021, LUNA traded at $0.66 and hit all-time high of $104.58 on March 9, 2022, while UST has emerged to become the fourth-largest stablecoin behind tether (USDT), USD coin (USDC) and Binance USD (BUSD), surpassing $18.5 billion in market capitalisation [4].

Risks Associated with LUNA and UST

Algorithmic stablecoins are a relatively new way of pegging cryptocurrencies to any fiat currency, thus, they have not stood the test of time during major market stress or shocks. Algorithmic stablecoins do not have any collateral by design – the collateral is its governance token that can be minted or burned to stabilise the price. If the design turns out to be broken, the value of the coin can drop without a backstop. Many institutions have major concerns about the flaws in algorithmic stablecoins design, claiming they “are inherently fragile” and “are not stable at all but exist in a state of perpetual vulnerability”.

Titan, a defi project backed by prominent investor Mark Cuban ended in similar tragery with Terra. Iron is classified as an algorithmic stablecoins with a reserve consisting of a 75% backing of USDC and 25% titan. When investors began selling their titan stake as it hit its apex, the price for the stablecoin, iron, and the token, titan, spiraled downward in tandem [5].

The Death Spiral Begins

In March 2022, Anchor passed a resolution to replace the 20% rate with a variable rate, worried traders started heading for the exits by burning UST in exchange for LUNA. The supply of LUNA ballooned, causing the price to plummet. In a sense, LUNA was pushed off the seesaw.

In May, these questions were thrown into sharp relief as Terra's native stablecoin UST lost its dollar peg amid a wider crypto market crash. Between 7th to 11th of May, UST plummeted as low as $0.30, essentially wiping more than $11 billion from UST's market capitalisation. LFG could not deploy enough assets to soak up all the selling pressure to protect UST's $1 valuation, whilst UST's Rube Goldberg-like perpetual motion machine made it profitable to arbitrage this price imbalance in a way that widened it further. That led to a "death spiral" for UST and caused LUNA – its related "balancer token" – to hyperinflate, ultimately leaving few buyers for either [6].

The Aftermath and Birth of "Terra 2.0"

Kwon, the Terraform Labs CEO, has a controversial plan to revive the project to "fork" the Terra blockchain. The new blockchain would be created alongside a billion new LUNA tokens, which would be distributed among current LUNA and UST holders, as well as fund development of new Terra apps. At its height, the old LUNA — now known as "Luna Classic" or LUNC — had a circulating supply of over $40 billion. Now, LUNA has a new iteration, which investors are calling Terra 2.0. It is already trading on exchanges including Bybit, Kucoin, Huobi and Binance [7].

IMPORTANCE OF ASSET-BACKED STABLECOINS

The entire episode of Terra collapse, an estimated $60 billion of market value was wiped out the market. The huge fundamental flaw in algorithmic stablecoins has driven institutional and retail investors into more secured asset-backed stablecoins including fiat and commodity [8]. Fiat collateral remains in reserve with a central issuer or financial institution, and must remain proportional to the number of stablecoin tokens in circulation. Commodity collateral remains in bullion vaults in distributed locations, additionally the tokenisation of commodities assets continue to generate interest in a closely related macro-market segment.

The Terra fiasco, and to a lesser extent the algorithmic based stablecoins that's failures preceded it, have highlighted the value proposition of asset backed stablecoins. With investors now understanding the value proposition of audits, assets under management and the legal rights of token holders in relation to those underlying assets.

INTRODUCTION TO GOLD, SILV AND XAUD

Bullion Asset Management Services ("BAM") established in 2019 devoted to resolving the major problems such as ownership, storage, high cost in commodities, as well as volatility and trust issues in digital assets. Directly addresses the inherent vulnerabilities in algorithmic based stablecoins, and brings a much needed standard to the tokenisation of assets; providing proof of and legal ownership the underlying assets to tokenholders.

GOLD and SILV:
Commodity-backed Stablecoins

xbullion, a subsidiary of BAM introduce GOLD and SILV tokens solves the trade off between liquidity and security. Through creating an institutional grade bullion management solution and tokenising the ownership of the underlying asset xbullion has brought to market a superior bullion offering. Working with fortune 100 commodity trading house Stonex and LBMA member firms including Baird & Co, xbullion is able to offer deep liquid markets and maintain a 1-to-1 physical asset backing at all times.

To provide additional assurances and compatibility with institutional partners, xbullion has a foundational relationship with BDO who provide comprehensive audits on bullion assets under custody. Additional tools provide unparalleled transparency to the market enabling users to look up their assets through xbullion's tools to track where their assets are being held and in what form. xbullion also enables physical redemption of the underlying assets with the ability to send the physical metals via insured armored courier service to most major cities around the world.

Key Propositions:

➢ Accessible

Access Global Liquidity 24/7/365. Distributors are able to access institutional market depth and pricing through xbullion's APIs.

➢ Secure

The Asset registry is managed by a secure technology solution enabling instant global settlement.

➢ Economical

1 GOLD / SILV represents direct ownership in 1 gram of investment grade gold or silver held in custody with xbullion Holdings.

➢ Transparent

The Ethereum blockchain provides for a decentralised, immutable ledger of transactions publicly available for viewing in real-time. Comprehensive, regular, independent audits will be conducted to ensure the equivalent underlying value of the gold token on issue.

➢ Liquidity

With +/- 1% of 5 million depth of liquidity.

➢ Legal Ownership

xbullion tokens represents ownership of the underlying assets held by xbullion. Where xbullion is in effect a custodian acting on behalf of tokenholders.

XAUD: Fiat-backed Stablecoin

XAUD is an asset-backed token which is tethered to the value of the Australian Dollar (AUD). Built to bridge the gap between fiat currency and cryptocurrencies. XAUD addresses immediate problems in the Australian market with regard to offering additional value with respect to the AUD.

The XAUD token is issued, managed, and secured using xbullion asset management solutions and smart contract technology. The tokens are built to the Ethereum ERC-20 standard for ease of integration with existing industry platforms and applications, whilst harnessing the advantages of Blockchain such as speed, accessibility, and security of ownership and transparency.

Key Propositions:

- **Accessible**

Access Global Liquidity 24/7/365.

- **Secure**

The Asset registry is managed by a secure technology solution enabling instant global settlement.

- **Stable**

Provides an option to reduce exposure to risk with an asset representing AUD.

- **Economical**

Send money around the world in seconds.

- **Transparent**

The Ethereum Blockchain provides for a decentralised, immutable ledger of transactions publicly available for viewing in real-time. Comprehensive, regular, independent audits will be conducted to ensure the equivalent underlying value of the xaud token on issue.

CLOSING THOUGHTS

There are two implications for the future of stablecoins. First, in the short term, asset collateralisation as a stablecoin backing strategy will continue to increase in popularity as its core elements continue to be understood and appreciated. Even UST moved in this direction earlier in the month as the pressure became clear. This is reflected in the continued rise of high quality fiat and commodities-backed stablecoin projects which continue to deliver significant value adds to investors. xbullion is determined to scale continue to the reach global users and deliver to market secure, stable solutions, bringing significant efficiencies to the underlying assets it manages.

A second trend will be to increase regulatory attention. The US Treasury Secretary has already called for further regulation by the end of the year. xbullion is well placed under the guidance of BDO and many advisors has worked under a framework of being “institutional first” with respect to its standard and will continue to strictly follow the regulatory requirements and remain prepared to support future requirements, ensuring delivery of the true benefit of stablecoins to the market.

APPENDIX

[1] Defipuse
https://www.defipulse.com/

[2] What Are Stablecoins?
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[6] What the Terra Luna crash means for DeFi and CBDC
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[7] After crashing the crypto market, Terra returns with Luna 2.0. It's already tanking again.
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