BITFINEX Alpha

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INTRODUCTION

Bitfinex always aims to enrich our customers with information and education about the cryptocurrency industry. To achieve this goal, we look to the best quant traders and macro-economic experts for each issue of Bitfinex Alpha. For our second issue, we have worked diligently to consider all suggestions to continuously improve.

This week, we aim to provide unbiased and data-backed research to put investors' minds at ease given the down-trending crypto market and a bearish macro environment.

With a 75 basis points interest rate hike last week from the Federal Reserve - the highest since 1994 - we discuss the implications this has for the cryptocurrency, equity, commodities and the housing markets. Many economists have also been calling for a recession; in this issue, we discuss indicators like US treasury yields that have foreshadowed recessions historically.

Rumors regarding Celsius and Three Arrows Capital being on the brink of insolvency sent investors into panic and resulted in a domino effect. We cover what liquidation would mean for crypto's largest CeFi lending platform and possible bailouts while deafening the noise. Elon Musk and Tesla are sued for their involvement in dogecoin; we cover all the necessary details.

Liquidation fears for the larger crypto funds in trouble are discussed in our on-chain section. We present research on the most accurate levels possible regarding major liquidation prices on Bitcoin and Ethereum.

We hope to make this newsletter your go to reference for all things crypto related.
Thank you.

INDEX

MACRO ENVIRONMENT ANALYSIS

Consumer Sentiment – Lowest on Record

The Consumer Sentiment index fell sharply to 50.2 as of June 2022, the lowest on record. According to the University of Michigan, 46% of consumers say their economic views are attributed to high inflation rates, the most significant since the Great Recession between 2007 and 2009.

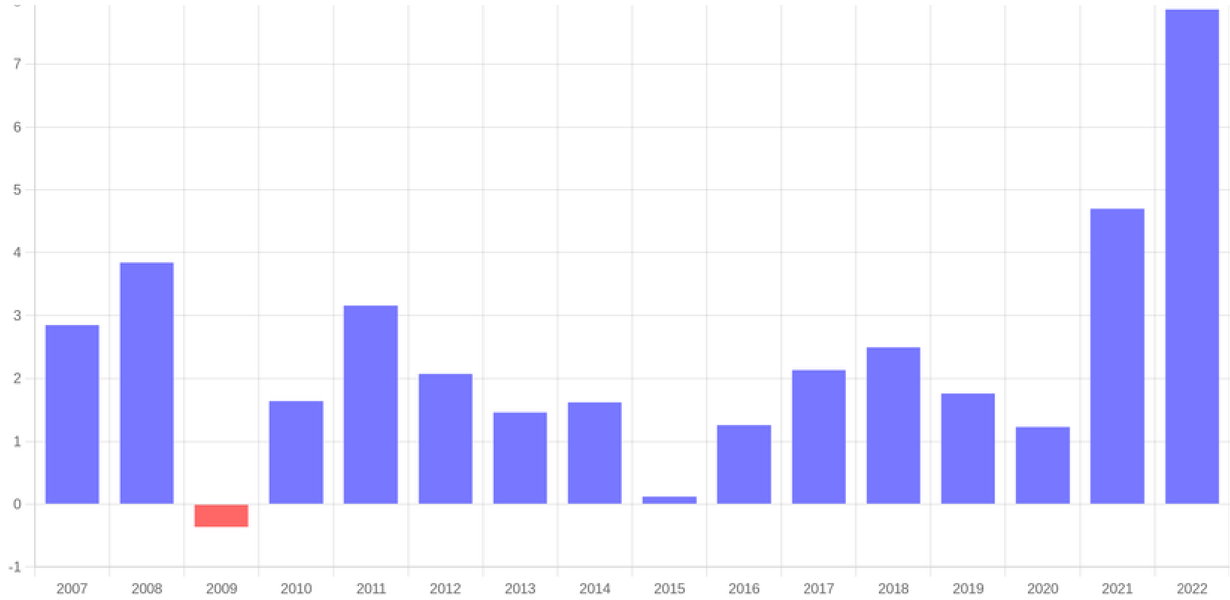


Figure 1. Annual Inflation Rate (source: Bureau of Labour Statistics CPI)

Inflation now sits at 8.6%, its most rapid increase since December 1981 based on the latest CPI report by the Bureau of Labor Statistics, refer to figure 1.

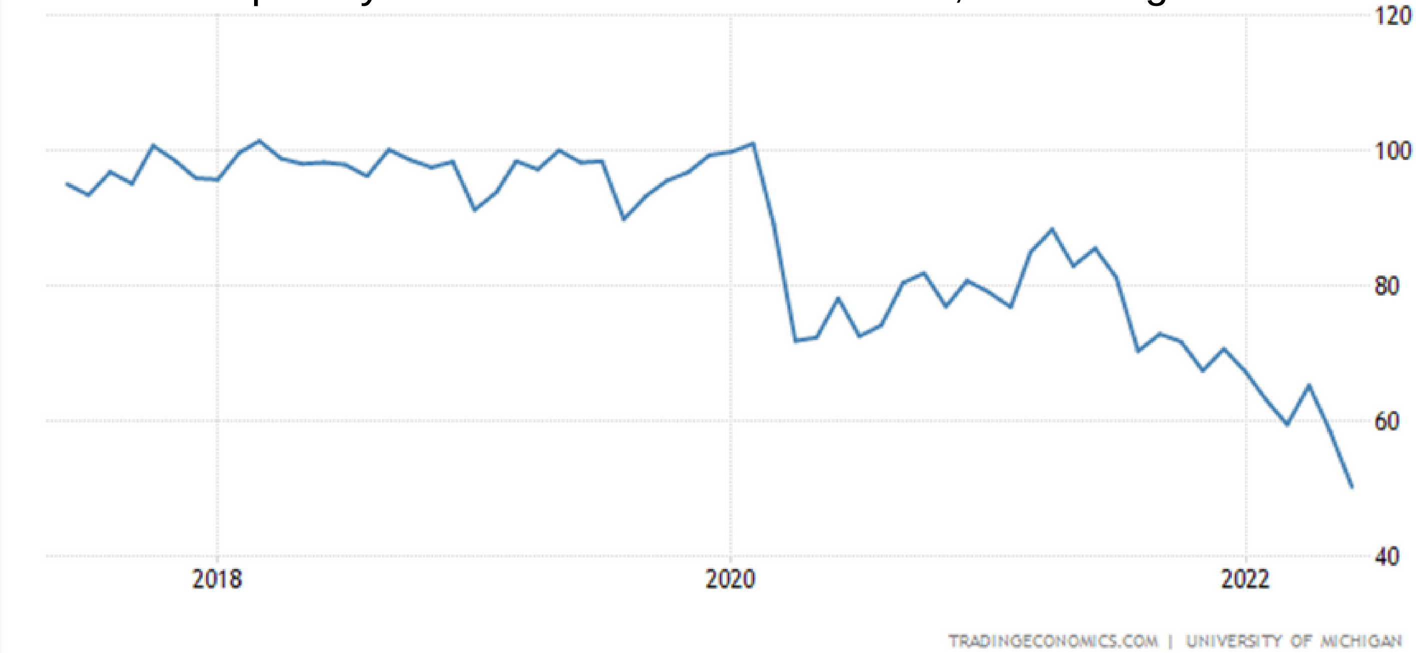


Figure 2. Consumer Sentiment Index (Source: Trading Economics | University of Michigan)

The plummeting sentiment is not causing just crypto market volatility generating “fear, uncertainty, and doubt,” nor is the problem single faceted to be blamed upon any single catalyst. Let us analyze the condition of various markets amidst this extraordinary fall in consumer sentiment.

Equities and Crypto Market

A company's profitability directly affects its stock's earnings per share; it also affects how investors perceive potential growth for the company and, as a by-product, the stock's valuation. In stock valuation, investors use interest rates to determine the future earnings on stock from the company's expected cash flows. When interest rates rise, with all else constant, the stock value drops.

The stock market has felt the impact of investors' economic outlook as stocks continue their downtrend following the consumer price report on June 10. S&P 500 dropped by 10.5% since the beginning of this month, while the Nasdaq index fell by 11.48%.

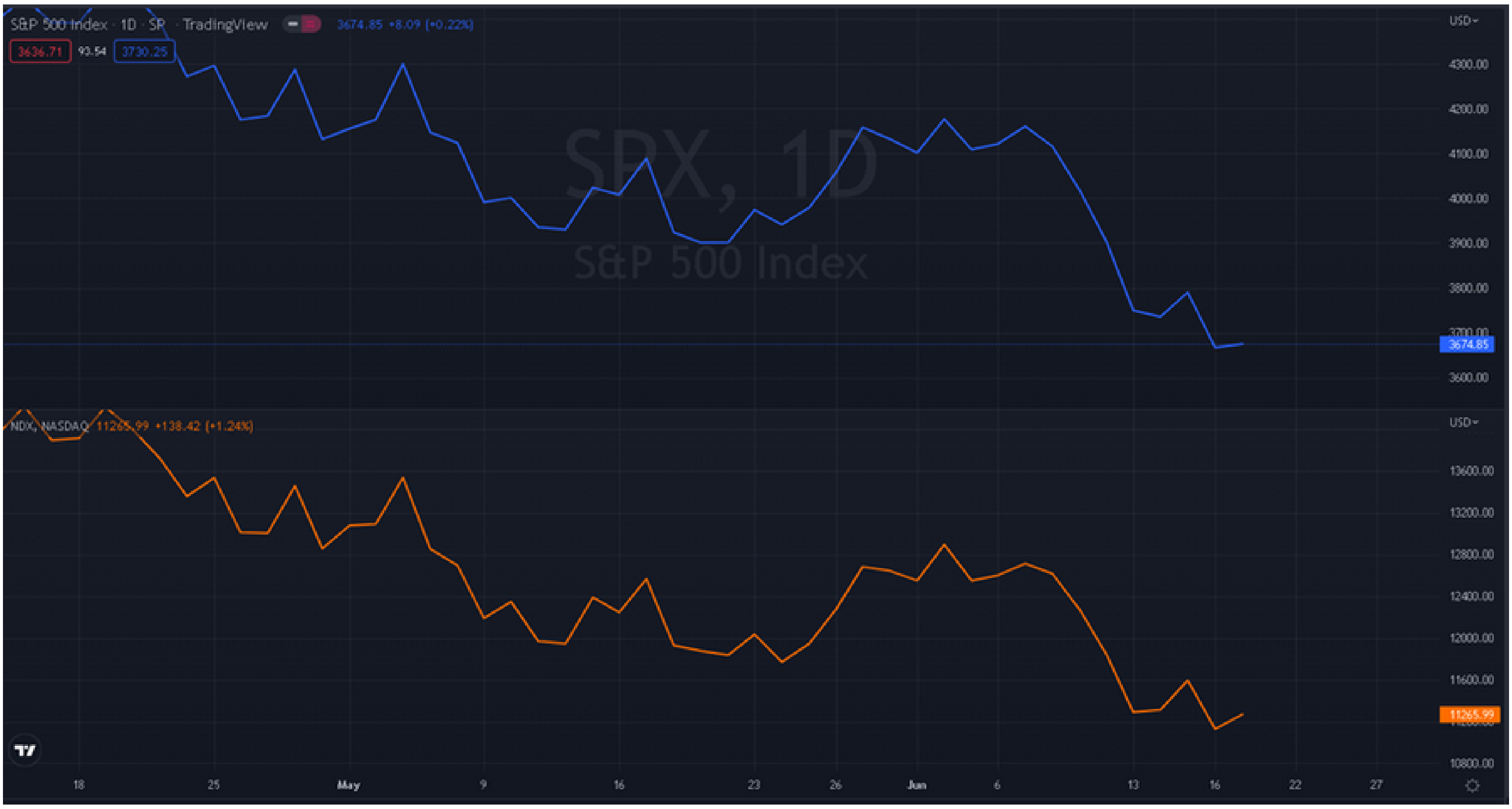


Figure 3. S&P 500 Index and NASDAQ 1Day chart comparison

Like many stocks, bitcoin is a high-risk asset. Hence, investors de-risking their portfolio would also mean a bitcoin sell-off. As bitcoin soared the highest in a bullish economic landscape, it can be expected to fall the hardest in bearish macro conditions.

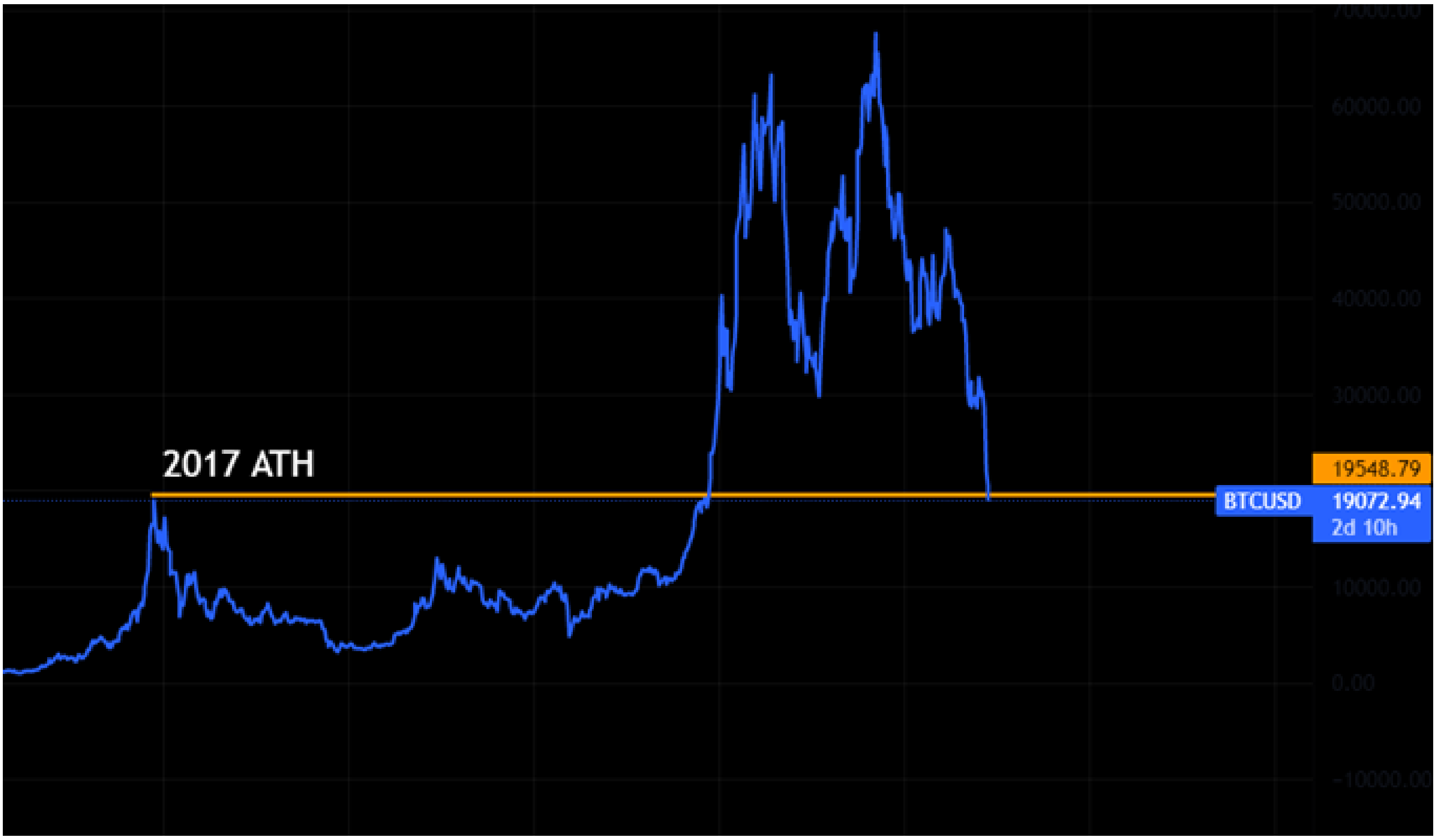


Figure 4. Bitcoin/USD chart (June 18th)

Noting the correlation, the Bitcoin price has broken down from a previous cycle's All-Time High for the first time in its history.

75 Basis Points Rate Hike

The record low consumer sentiment index and high inflation expectations are particularly concerning to the Federal Reserve. The Fed demonstrated its commitment to an aggressive fight against inflation by announcing a 75 Basis points rate hike on Wednesday, the highest increase since 1994. According to the Fed, they would like to end the year with a moderately restrictive rate of 3.5 to 3.75%.

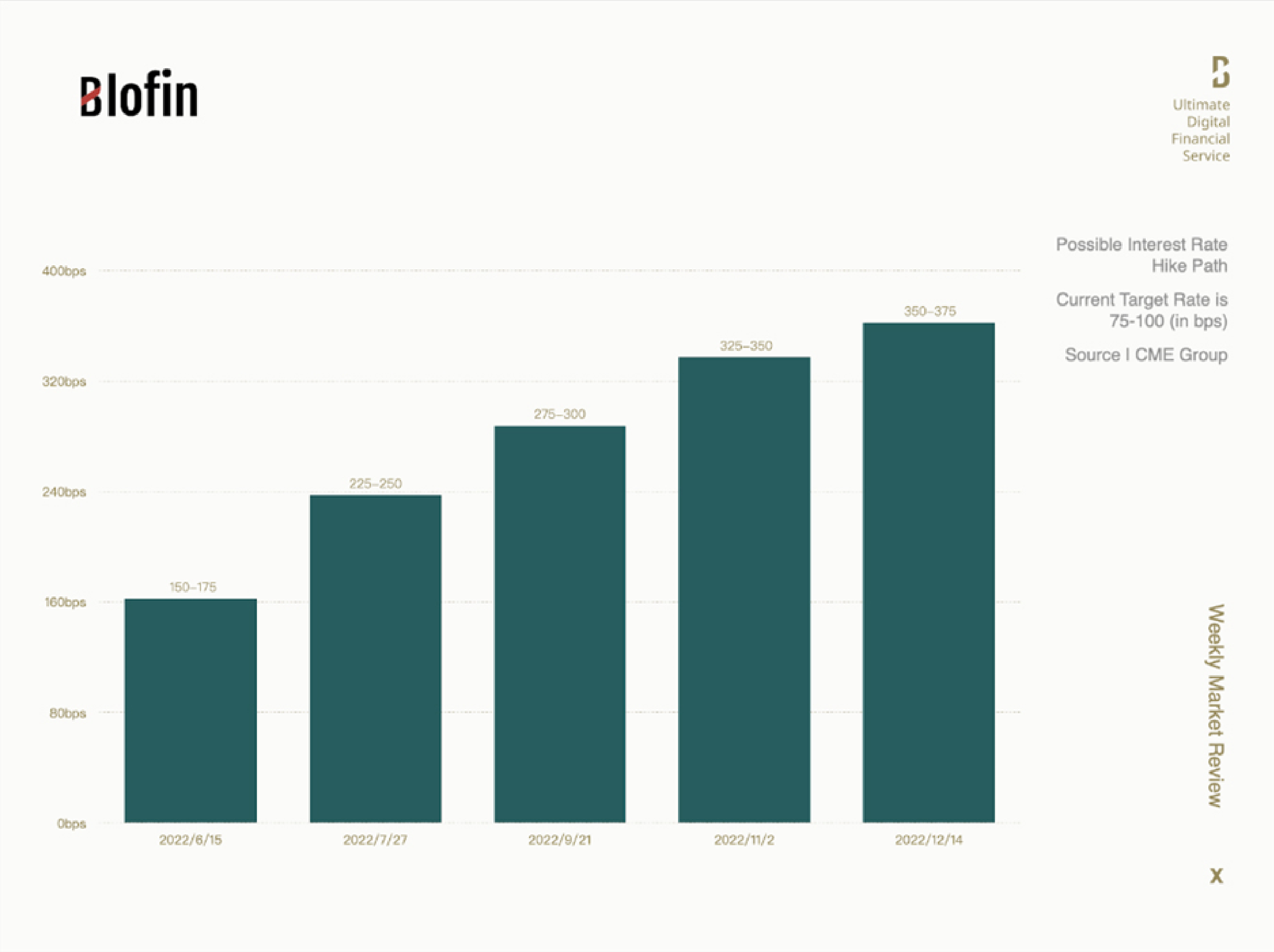


Figure 5. Past Interest Rate Hike path (Source: Deribit Insights)

As the Fed implements relentless interest rate hikes until it succeeds in curbing inflation, banks anticipate more hikes in the remaining FOMC meetings this year. Typically, yields for long-term bonds are higher than short-term bonds to compensate investors for interest rate risks. When there is an expectation for higher inflation and pessimism in the economy, short-term bond yields can rise higher than long-term bonds, commonly known as yield inversion. Historically, yield inversions are reliable recessionary signals.

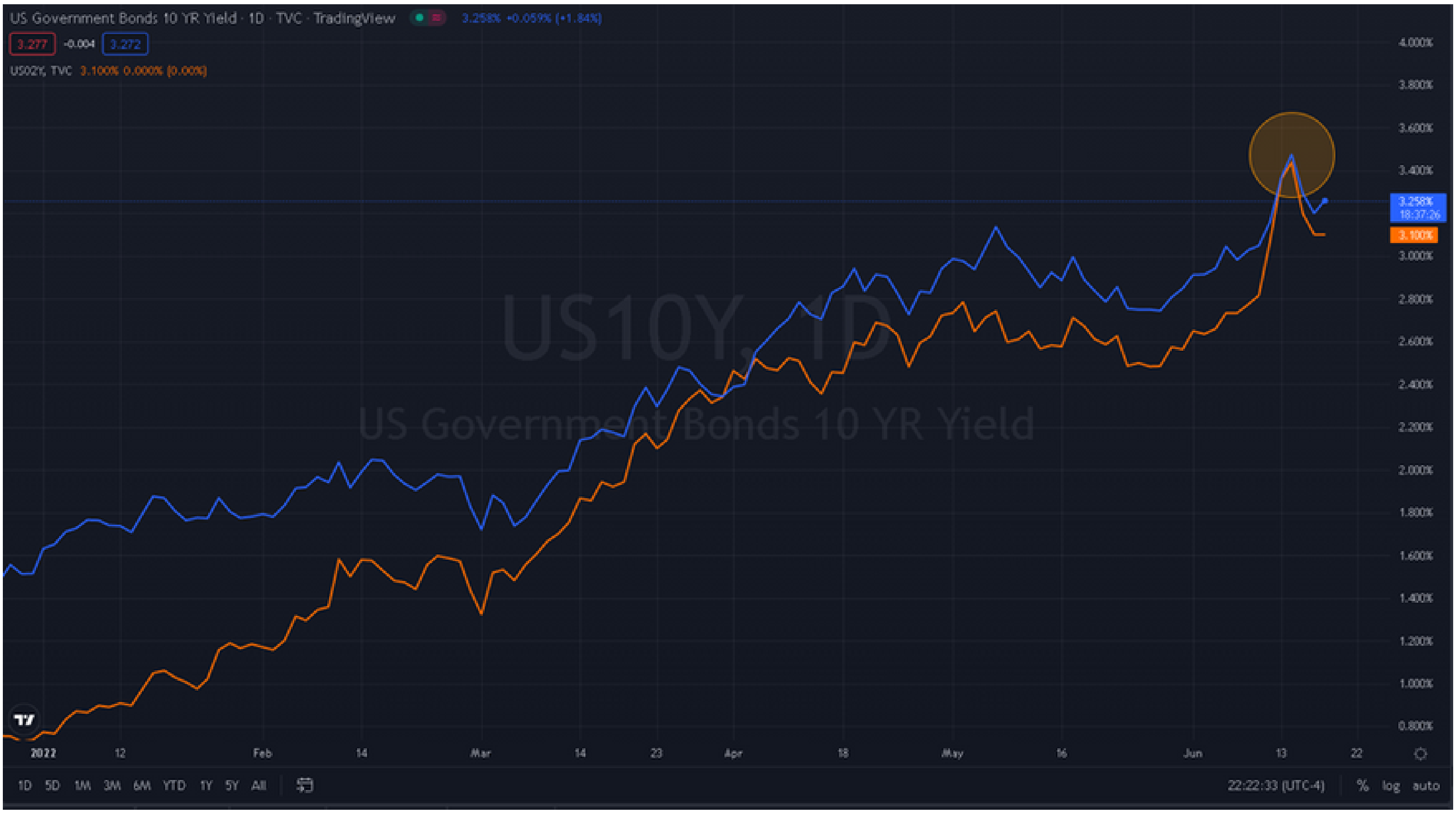


Figure 6. 10- and 2-Year US Treasury Bonds Yield

The 10-year Treasury bond yield has soared to 3.483% the day before the FOMC meeting, up from 2.84% at the end of May. Meanwhile, the 2-year bond yield climbed to 3.43% from 2.6% at the end of May. This sharp increase with the spread between 10-year and 2-year bond yields nearing zero increases the chance of a Fed-induced recession as viewed by investors.

Market observers, including officials at the Federal Reserve, view the relationship between the 3-month and 10-year Treasury yields as the more important one. Every recession in the past 60 years has been preceded by an inversion of the yield curve between the three-month and 10-year Treasury yield.

While that is yet to occur, the yield inversion between the 2 and 10-year yields is sufficient to serve as a warning bell for the possibility of a recession.

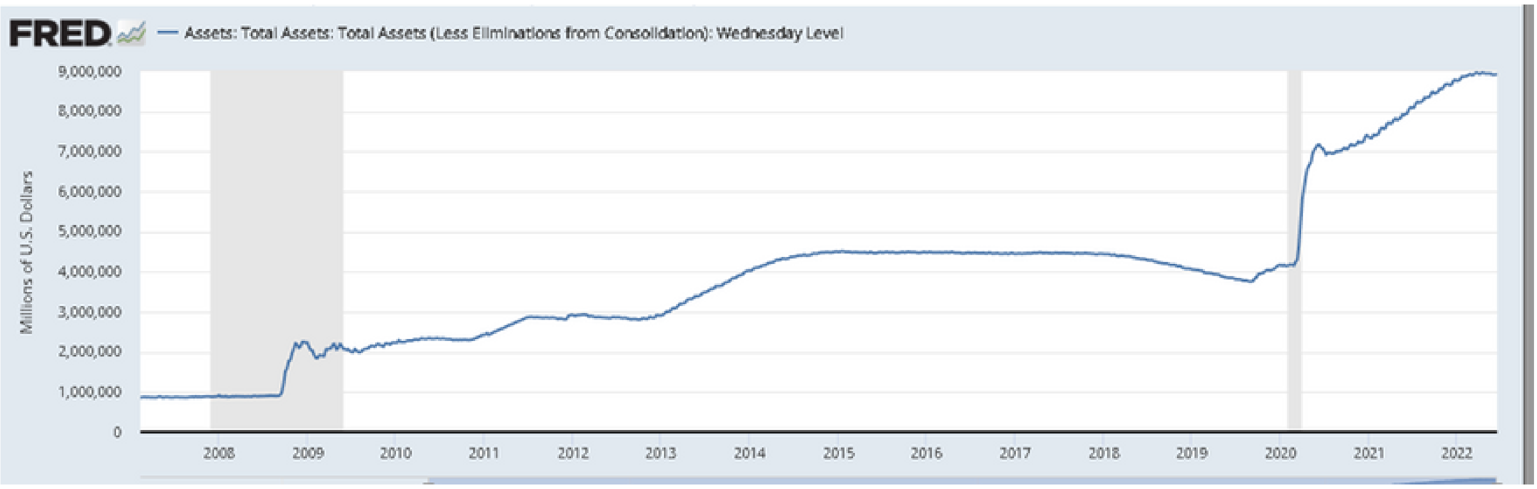


Figure 7. Total Assets by the Federal Reserve

Fed's Quantitative Tightening plans remain unchanged and are set to complement interest rate hikes. As of June 8, 2022, Federal Reserve assets are $8.97 trillion, refer to figure 7.

Since June, the Federal Reserve started shrinking its balance sheet with an initial cap of monthly purchases of $30 billion for Treasury Securities over the next three months. Fed will also reduce its holdings in mortgage-backed securities by 17.5 billion per month.

There are many reasons why we're seeing extremely high inflation. The main fault lies in the expansionary strategy of 2020-2022, which combined with 0% interest rates, aggressive QE, PPP loans, stimulus packages, and COVID relief packages. It is the consequences of these measures, which we are enduring now.

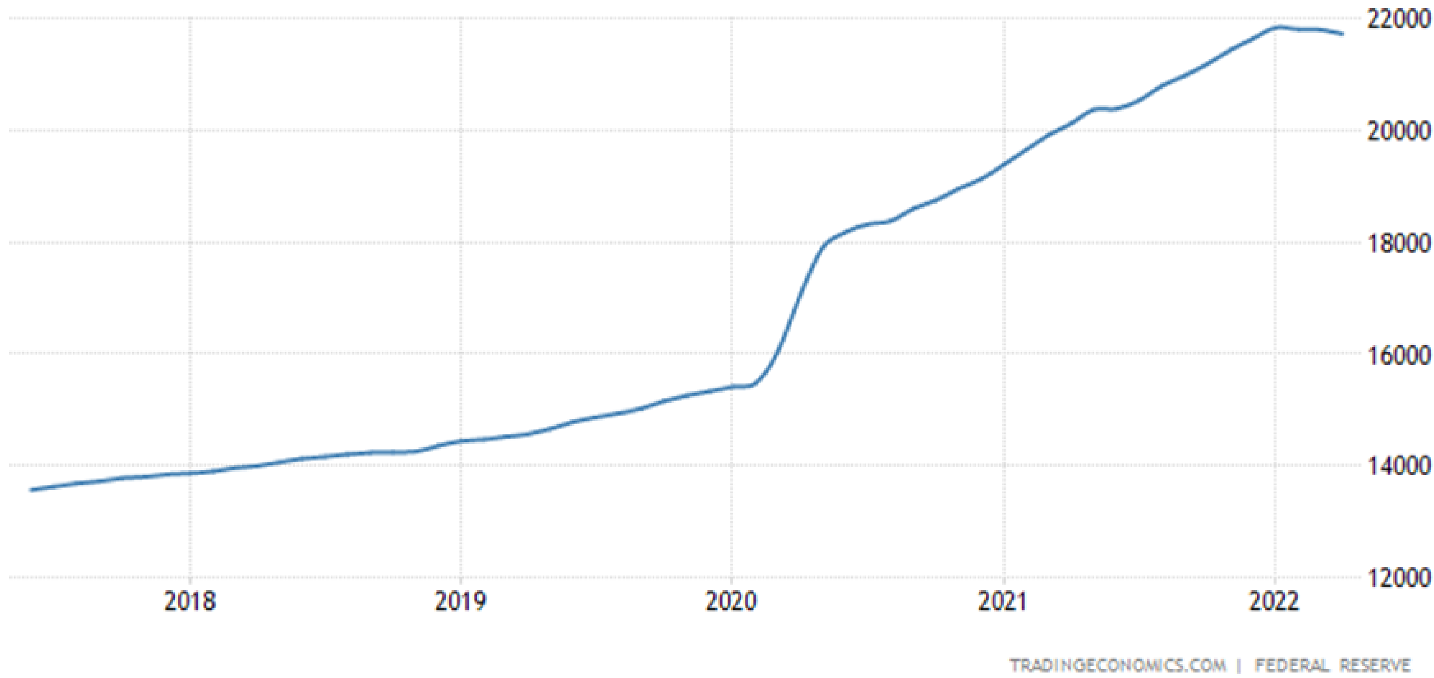


Figure 8. US's M2 Money Supply (Note the surge in 2020 when the Covid pandemic hit)

Figure 8 shows that the money supply expanded by 41.1% from February 2020 to March 2022. The result of this was an exponential growth in the amount of currency while the goods in circulation were stagnant. This perhaps was also a miscalculation by the US government to "print" so fiercely over the course of two years.

Rate Hike and QT: Its Effect on the Housing Market

The housing market is among the most vulnerable sectors being hit by inflation-curbing policies as it makes up 16% of the United States' economic activities.

When the FED started increasing interest rates earlier this year, the financial market responded almost immediately, with the 30-year fixed mortgage rate rising by 1.9% from December 2021 to April 2022.

Figure 9. US Mortgage Rate (Source: Mortgage News Daily)

On Friday, the rate climbed to 6.03% after the FED announcements. This is a 2.7% hike in mortgage rate in 5 months, the steepest increase since 1981.

The recent Fed announcement on quantitative tightening is expected to complement other inflation-curbing policies along with interest rate hikes. When the Fed implemented quantitative easing to stimulate the economy during the pandemic, it grew its balance sheet from 4 trillion to almost 9 trillion. One way this is enabled is by buying mortgage-backed securities (MBS), introducing more cash into the system, and inflating the US dollar.

Real estate prices went up as values of mortgage-backed securities increased when the Fed bought. Now, the Fed is reversing course by off-loading the MBSs from its balance sheet. When there is lower demand for mortgage bonds, the bond issuers will increase the yields to attract investors. This results in higher rates on the mortgages within those bonds.

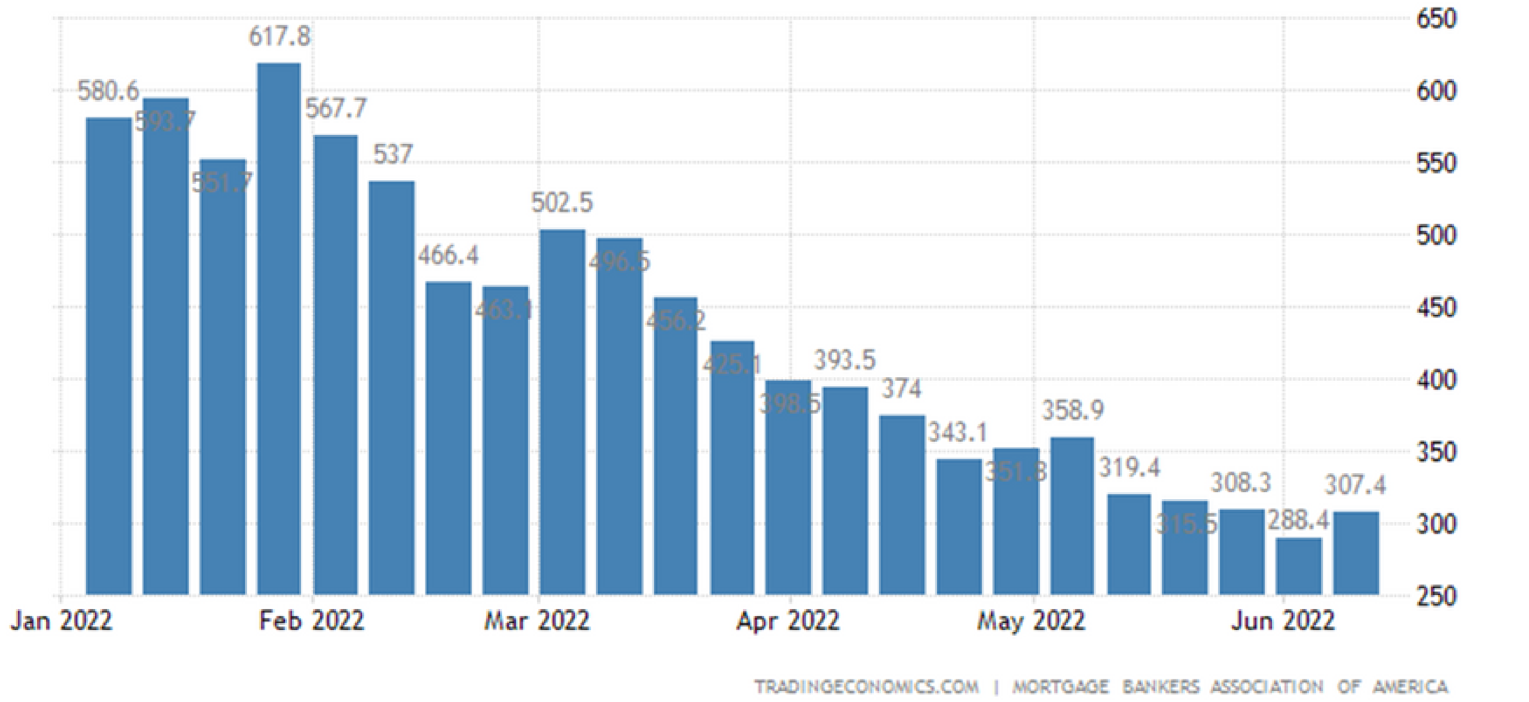


Figure 10. Mortgage Market Index (Source: Mortgage Bankers Association of America)

With rising mortgage rates, there was a decrease in mortgage application volumes, as seen on the MBA Mortgage Market Index. This reduced the demand in the housing market drastically as prospective home buyers are affected by the increase in house prices and high mortgage rates.

CRYPTO NEWS

CELSIUS: A Lending Firm In Debt

Background:

Crypto is a space where Banks were slowly becoming extinct because of the scalability that relatively small start-ups were able to achieve, and the wide range of opportunities for investors to generate attractive passive income as opposed to the negligible interest on offer from conventional bank deposits.

In bearish market conditions, investors prefer to have avenues to earn yield on stable coins. The idea is analogous to lending and borrowing markets in TradFi – Someone needs a loan, and you have idle assets to lend. An intermediary would carry out the transaction on your behalf with reassurance that your stables/assets won't be lost in the process. The result is you get higher interest rates than banks may offer.

Celsius worked on the same model; it was one of the largest cryptocurrency lending platforms that managed more than $26 Billion in assets, and is now threatened with insolvency with investors unlikely to bail it out.

It all started on Monday, 13th June, when the firm announced through a memo to clients, "Due to extreme market conditions, today we are announcing that Celsius is pausing all withdrawals, Swap, and transfers between accounts." Right after, market-wide panic ensued.

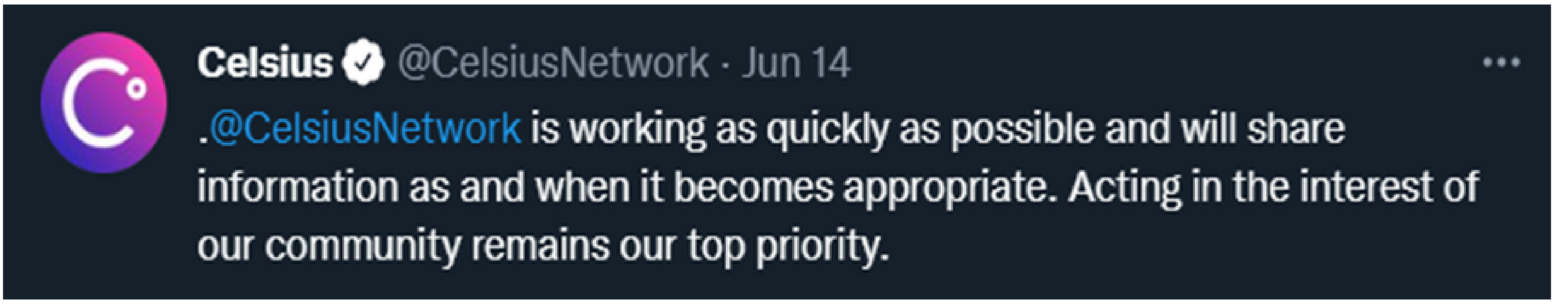
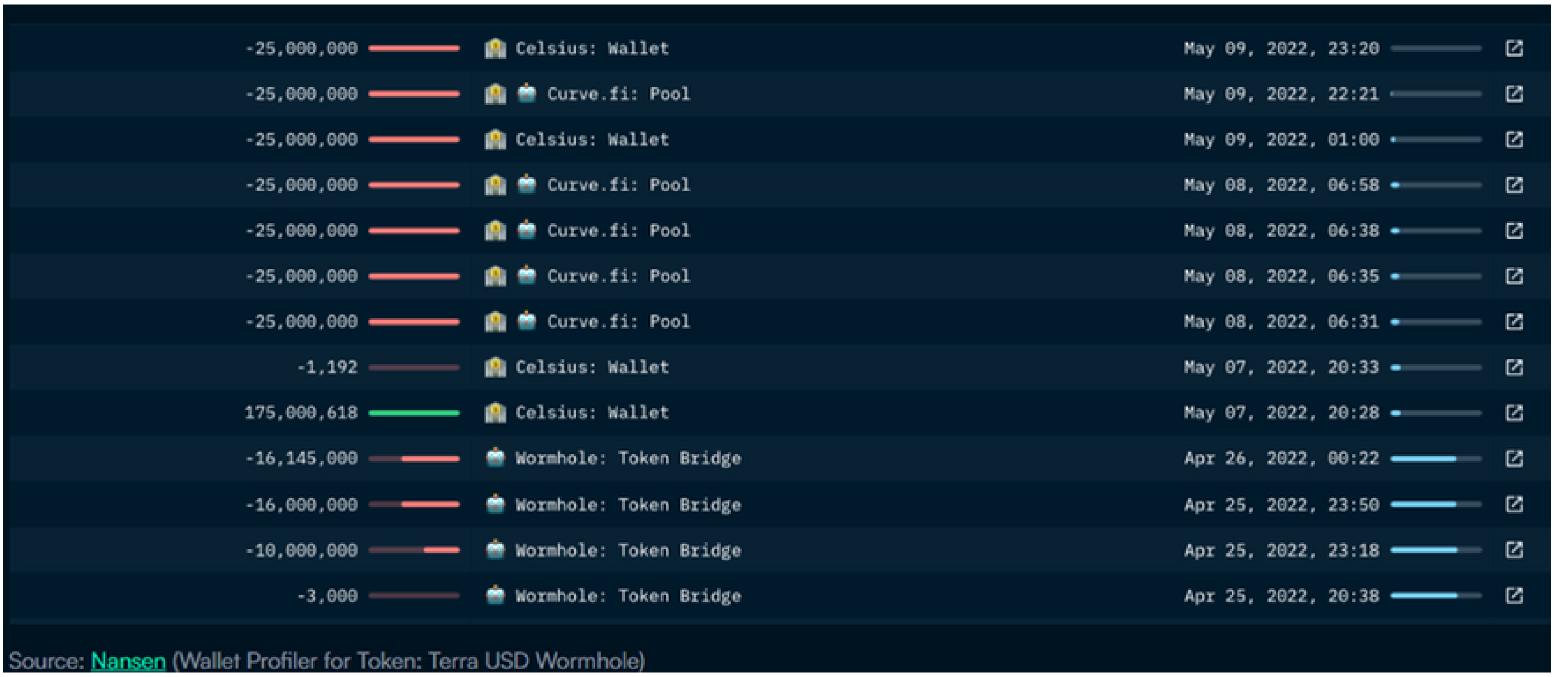


Figure 11. Celsius Twitter announcement to community members after pausing withdrawals

With the wounds of the LUNA collapse fresh in investors' memories, Nansen, a blockchain research organization, verified that Celsius was one of seven whale wallets involved in the UST depreciation. Its losses range from $500M to $600M.



-25,000,000	Celsius: Wallet	May 09, 2022, 23:20
-25,000,000	Curve.fi: Pool	May 09, 2022, 22:21
-25,000,000	Celsius: Wallet	May 09, 2022, 01:00
-25,000,000	Curve.fi: Pool	May 08, 2022, 06:58
-25,000,000	Curve.fi: Pool	May 08, 2022, 06:38
-25,000,000	Curve.fi: Pool	May 08, 2022, 06:35
-25,000,000	Curve.fi: Pool	May 08, 2022, 06:31
-1,192	Celsius: Wallet	May 07, 2022, 20:33
175,000,618	Celsius: Wallet	May 07, 2022, 20:28
-16,145,000	Wormhole: Token Bridge	Apr 26, 2022, 00:22
-16,000,000	Wormhole: Token Bridge	Apr 25, 2022, 23:50
-10,000,000	Wormhole: Token Bridge	Apr 25, 2022, 23:18
-3,000	Wormhole: Token Bridge	Apr 25, 2022, 20:38

Source: Nansen (Wallet Profiler for Token: Terra USD Wormhole)

Figure 12. Nansen's findings concerning Celsius UST holdings

Lido staked ETH: Celsius guarantees a 6-8% return on ETH deposits, with a large portion likely coming from staking rewards on the Proof-of-Stake Ethereum Beacon chain.

The main issue is that assets stored on the Ethereum Beacon chain are entirely locked up and cannot be unstaked for the time being.

Staked ETH issued by Lido is backed 1:1 with ETH staking deposits. The exchange rate between stETH: ETH does not reflect the underlying backing of your staked ETH but rather a fluctuating secondary market price. But Celsius counts on stETH holding its ratio at 1 to 1, because it needs to match liabilities.

In a bull market, that worked out.

But with a liquidity crisis, the $stETH/$ETH ratio began to slide.
Celsius had likely converted their USDC to UST and held ETH as stETH. In a market that is spiraling downwards, it was caught off guard and was unable to match deposits from its users with its assets on-chain.

There are a few ways Celsius can stop its customers from panicking. External Funding, whale fundraising, or selling the company to a solvent owner (Nexo has proposed a Celsius buyout).

Figure 13. Nexo offers to buyout rival lending platform Celsius

It is a genuine possibility that Celsius is completely solvent, but its assets are just illiquid. In that case, the fundraising idea to offload illiquid investments at a discount is most probable.

Liquidation fears:

Celsius has $1.5 billion of assets pledged against $750 million of stable coin debt, with $475m of the assets being entirely illiquid stETH. Celsius was hence forced to shut down withdrawals as they cannot sustain more liquid tokens being depleted.

The liquidation level for their wBTC secured loan vault is now at $14,000.

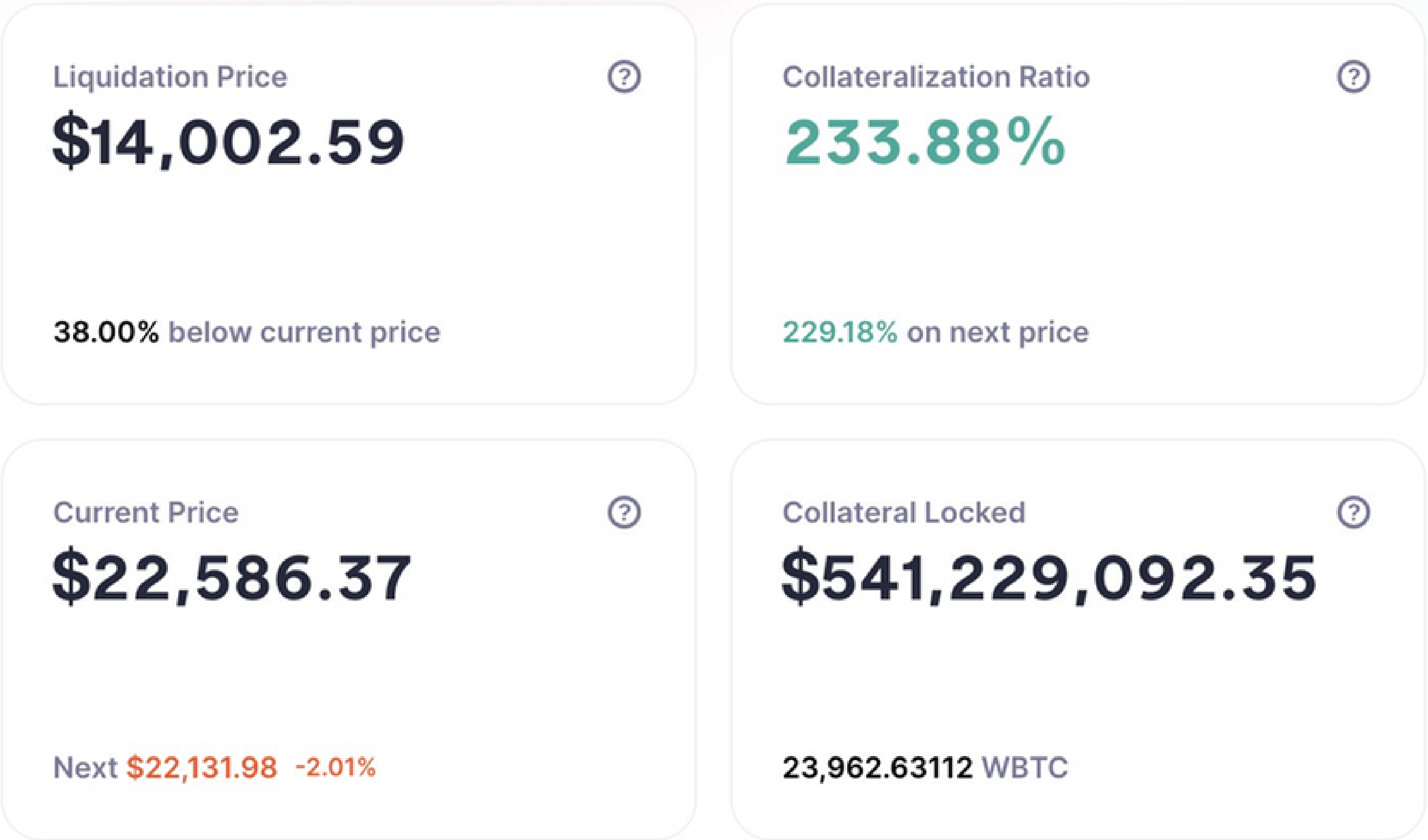


Figure 14. Celsius wBTC secured loan vault statistics (source:@DylanLeClair_)

Figure 14 shows that the liquidation level for their wBTC secured loan vault is now at $14,000, along with the total collateral locked that currently stands north of $541M. They are expected to use additional funds to lower their liquidation price by adding more collateral, as they have done over the past week.

3 Arrows Capital

Three Arrows Capital is one of the largest Crypto Venture Capital firms. They were one of the biggest backers behind AVAX, Terra Luna, Near, and countless others.

3AC is one of the most elite players of crypto. Their founders, Zhu Su and Kyle Davies are one of the most widely recognized faces in crypto. 3AC uses many strategies to diversify its assets under management and venture into different projects. Their past winning bets include early involvement with – AVAX, LUNA, Axie Infinity, Near, Aave, and many more. They are also an active shareholder of Deribit Exchange since February 2020.

Figure 15. Deribit public statement on Three Arrows Capital

The assets managed by 3AC are estimated to be between $16-18 billion dollars. Their influence inside the industry is monumental.

On Tuesday, it emerged that 3AC had begun selling off assets, including $40 million worth of its Lido Staked Ethereum (stETH). It's also widely believed, although still unconfirmed, that 3AC has been trying to keep a $264 million Aave loan and $35 million Compound loan from going into liquidation.

3AC also had heavy Terra exposure. When Do Kwon's Luna Foundation Guard (LFG) made another $1.5 billion Bitcoin purchase on May 5 to prop up Terra's stablecoin reserves, it was with the help of 3AC.

BitMEX on Friday confirmed that it liquidated Three Arrows Capital positions this week. (source: TheBlock)

A majority of their assets, like Celsius are also illiquid and locked for years. The problem with leveraging prominent positions by funds like 3AC and especially by CeFi lenders like Celsius is that it causes a ripple effect that sets the industry back by years.

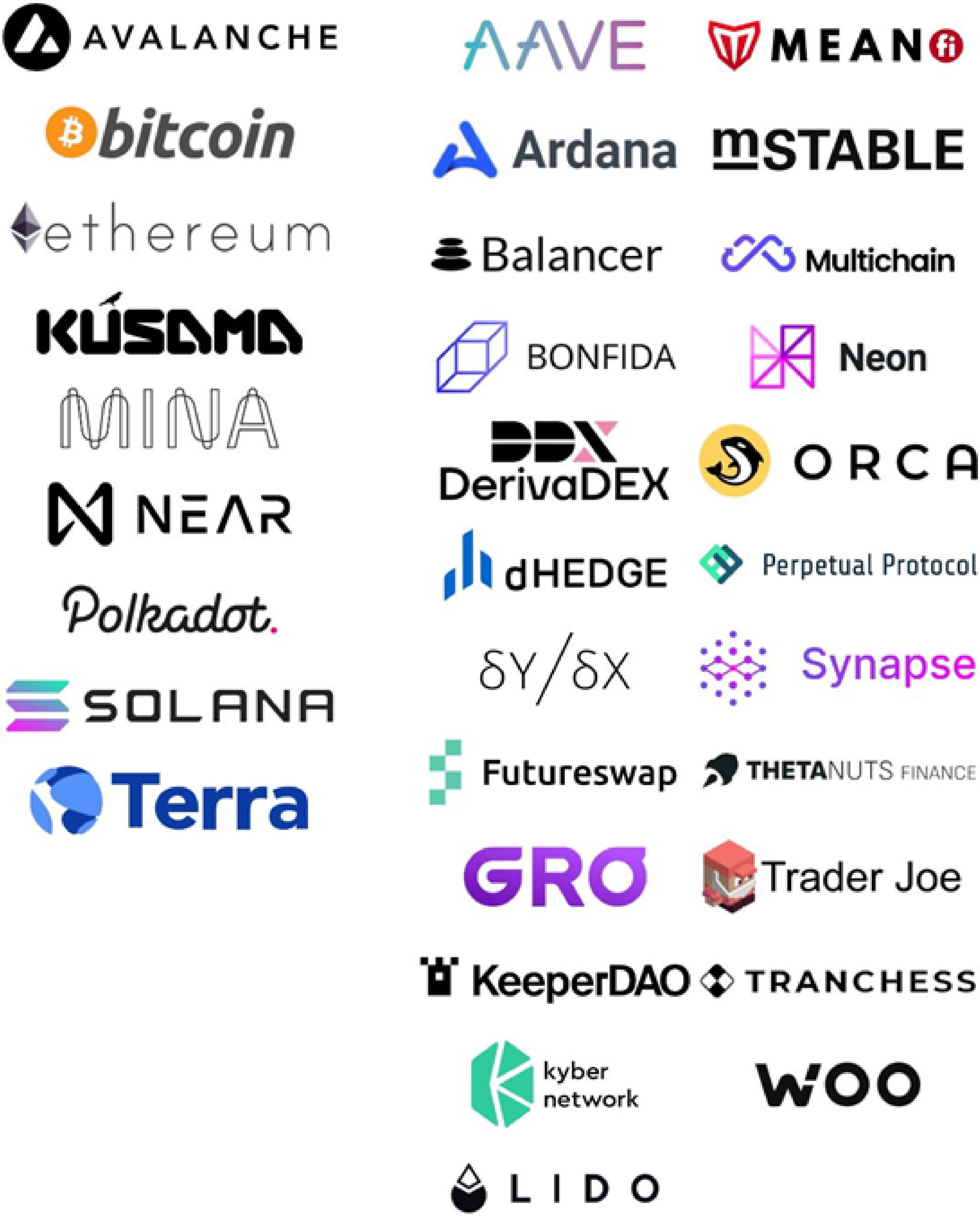


Figure 16. 3AC's primary holdings. These assets could potentially experience sharp falls on token unlocks as they sell tokens to cover outstanding loans.

Finblox imposes monthly withdrawal limit of $1500

The aforementioned ripple effect is at play already as staking platform Finblox, which counts Three Arrows as an investor, has reduced customer withdrawal limits.

Finblox
@finblox

IMPORTANT UPDATE FROM FINBLOX!

have decided to take the following actions while pursuing all available options to evaluate the effect of 3AC on the liquidity, and ensure fair treatment of all user assets in the system:

- Pause reward distributions on the Finblox platform for all users
- Change withdrawal limits (500 USD equivalent per day, up to a maximum of 1500 USD equivalent per month) for all levels of users
- Delay referral program and deposit rewards
- Disable creation of crypto addresses for newly registered users

This set of actions is a necessary move in such a highly volatile market and we believe should help us and our community to manage the effect.

Ultimately, Finblox will do everything in its power to protect our users' funds and reinstate our services in full. We will provide you with updates and inform you of any new developments as soon as possible, and do all that we can to avoid further impact on our users.

Thank you for your understanding.

The Finblox Team

Figure 17. Finblox statement to investors.

Finblox, a staking, and yield earning platform that promised "up to 90% APY" on customer deposits has "paused all reward distributions, updating withdrawal limits and disabled the creation of new crypto addresses until further notice," according to a statement on its website.

Users can withdraw up to $500 worth of their assets per day, with a monthly cap of $1,500. The company, which also shared its statement on Twitter, said it's been working with Three Arrows Capital and its other partners to "spread the risk as evenly as possible.

USDD Depegging Concerns

Algo stable coin has transitioned to a phrase that instills fear in the minds of investors.

Figure 18. Advertisement model for $USDD

Even after the UST collapse, the stable coin USDD backed by Justin Sun and the TRON DAO has continued to increase the amount of BTC reserves based on the same model used by UST.

"USDD is secured by the over-collateralization of multiple mainstream digital assets (e.g. TRX, BTC, and USDT). The total value of collateralized assets is significantly higher than that of USDD in circulation with the collateral ratio set at 130%, far exceeding the 120% required for DAI." – from the USDD website.

But now USDD is on the brink of facing the same issues as UST. Justin Sun explains the USDD stability mechanism as follows, "When USDD's price is lower than 1 USD, users and arbitrageurs can send 1 USDD to the system and receive 1 USD worth of TRX. When USDD's price exceeds 1 USD, users and arbitrageurs can send 1 USD worth of TRX to the decentralized system and receive 1 USDD."

The only difference in the TRX model is that the market cap to reserves ratio is exceptionally high. The Tron Dao Reserve has helped deploy more and more capital to try and restore the peg.

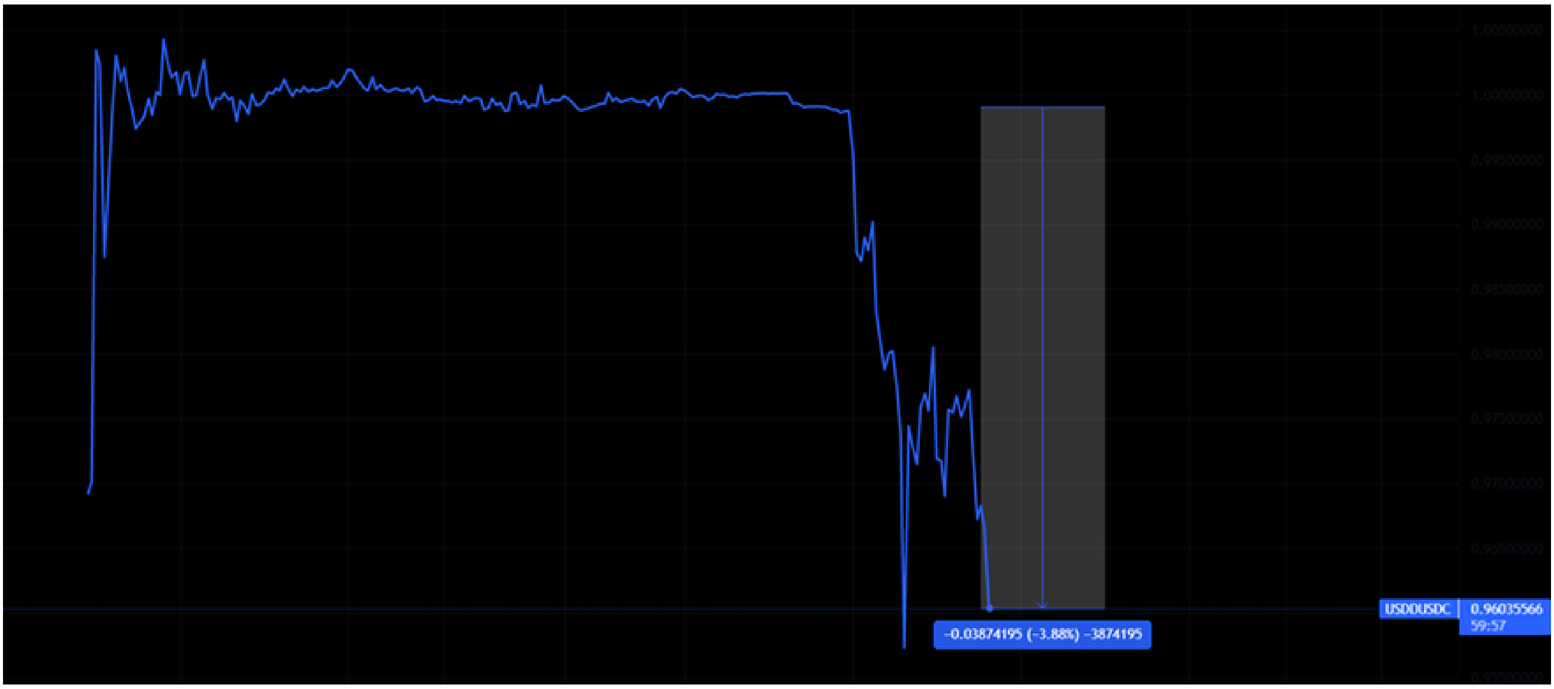


Figure 19. 18th June, 8 AM UTC, USDD/USDC is still below the peg.

Meanwhile, Justin Sun and Tron Dao's Official accounts have been aggressively injecting Stable coins like $USDC and removing TRX from exchanges in order to restore the peg. Tron also plans to add $2 billion to the reserve soon.

Another Domino effect in cooking?

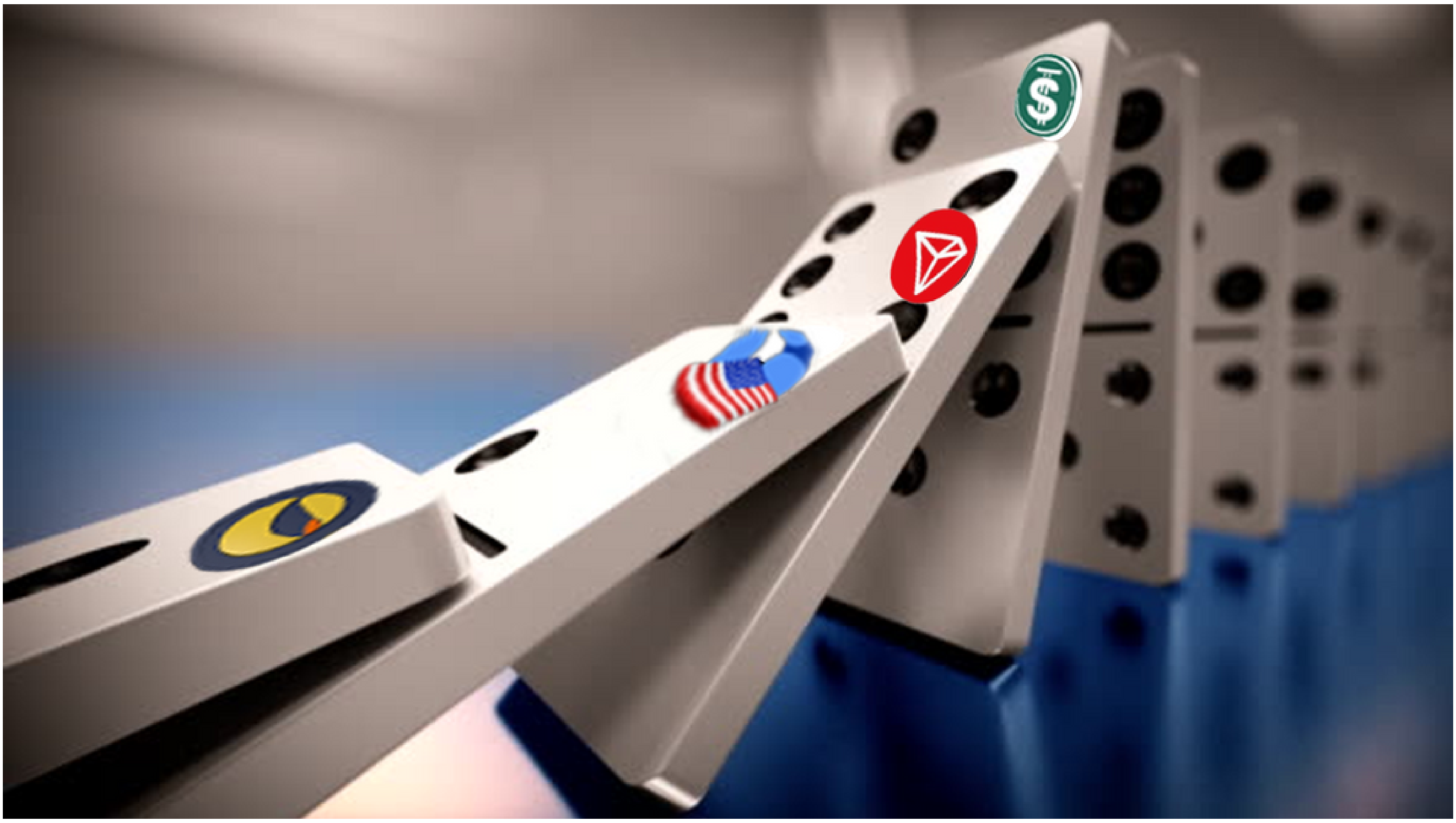


Figure 20.

Elon Musk, Tesla, and SpaceX are being sued for $258 billion for advocating Dogecoin.

Figure 21.

According to Bloomberg, Keith Johnson, an Investor in Dogecoin, filed a class-action case against Elon Musk and his firms Tesla and Spacex in a federal court in Manhattan on Thursday.

The lawsuit reads:
“Defendants Elon Musk, SpaceX, and Tesla Inc. are engaged in a crypto pyramid scheme (aka Ponzi scheme) by way of dogecoin cryptocurrency.”

Johnson is an American citizen who claims he was "defrauded out of money by defendants' dogecoin crypto pyramid scheme," according to the court statement. He alleged that Musk, Tesla, and SpaceX are involved in a criminal racketeering scheme to inflate the price of dogecoin artificially.

Johnson is attempting to represent a group of cryptocurrency investors who have lost money since April 2019 investing in dogecoin.

While Tesla already accepts Dogecoin for some of its merchandise. Musk also has spoken about allowing dogecoins as a means of payment for Twitter Services when he becomes the owner of the social media platform.

Relevant links:

Twitter potentially integrating doge payments: https://bit.ly/3xAZChj

Elon Musk after the lawsuit news went public: https://bit.ly/3HC0gQ3

JPMorgan Chase Wants to Bring Trillions in Tokenized Assets to DeFi:

Figure 22.

The bank's recent tokenization of money market funds with BlackRock aligns with the Monetary Authority of Singapore's institutional DeFi programme. JPMC is to provide custody and fund services for over $1 trillion of BlackRock's assets. This is one the largest custody deals ever.
Link: https://bit.ly/3OmaB4Y

Tyrone Lobban, JPMorgan's head of Onyx Digital Assets, detailed the bank's institutional-grade DeFi plans and highlighted how much value is waiting in the wings in tokenized assets.

“Over time, we think tokenizing U.S. Treasurys or money market fund shares, for example, means these could all potentially be used as collateral in DeFi pools,” Lobban said. “The overall goal is to bring these trillions of dollars of assets into DeFi, so that we can use these new mechanisms for trading, borrowing [and] lending, but with the scale of institutional assets.” (Source: Coindesk)

Tether Website DDOS Attack: Details And Post-Op

On 18 June, tether.to was a victim of a distributed denial of service (DDOS) attack. This is according to a tweet from Paolo Ardoino, Tether's Chief Technology Officer (CTO).

The attackers sent a ransom request and a large scale DDOS was triggered after the company refused to comply with any demands.

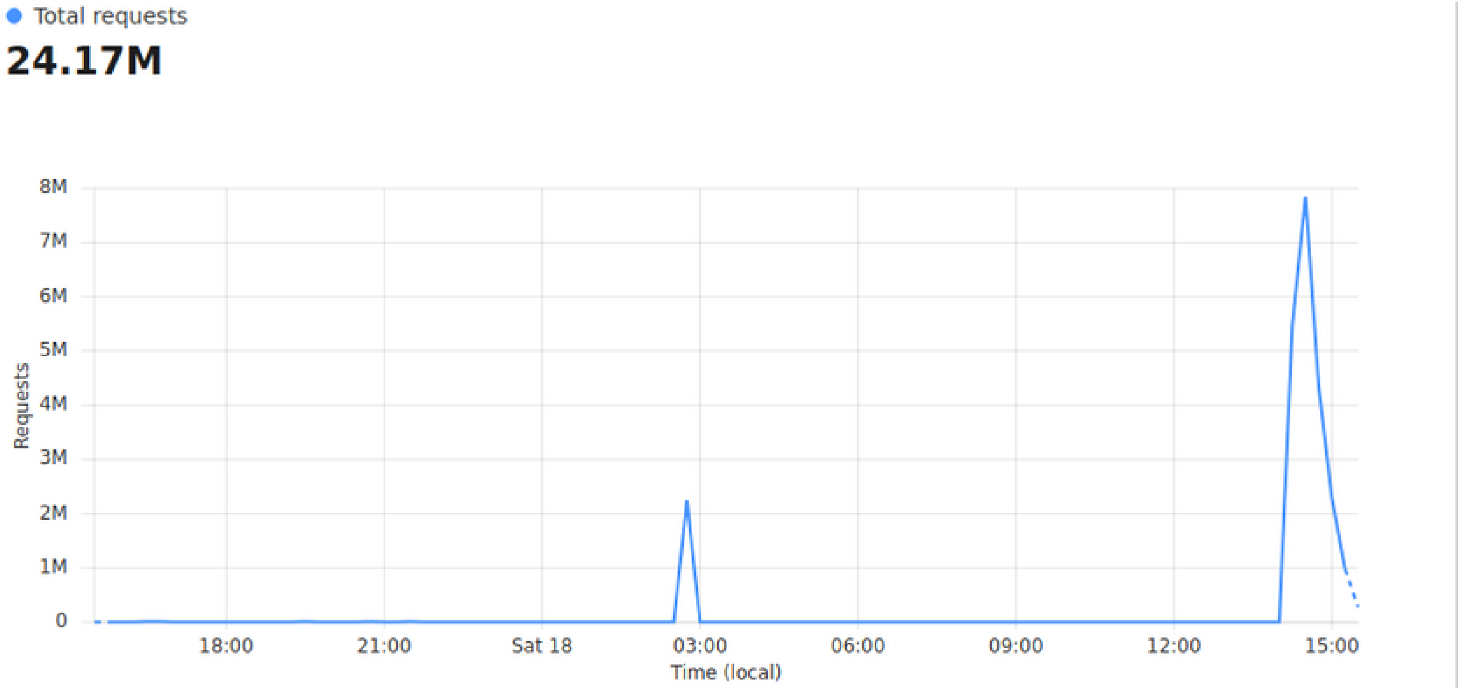


Figure 23. Number of Requests with respect to time. (source: @paoloardoino on twitter)

The Tether website often receives up to 2k requests per 5 minutes. The attack increased the demand to 8 million requests per 5 minutes as per the data shared in figure 23.

The attack was successfully mitigated. The main ASN that Cloudflare recognises is AS-CHOOPA, Ardoino continued, which made it possible for the attack to be mitigated. He also made it clear that Tether sustained no losses as a result of the attack.

The successful mitigation of the attack was important for crypto as USDt is the largest stable coin by market cap. Investors migrating off algorithmic stable coins was a consequence of the UST collapse. It is thus essential for the market that asset backed stable coins hold their peg and are perceived as safe by investors.

WHAT'S ON-CHAIN THIS WEEK?

A metric long utilized to propagate bullishness has been stable coins moved to exchanges and stable coins minted.

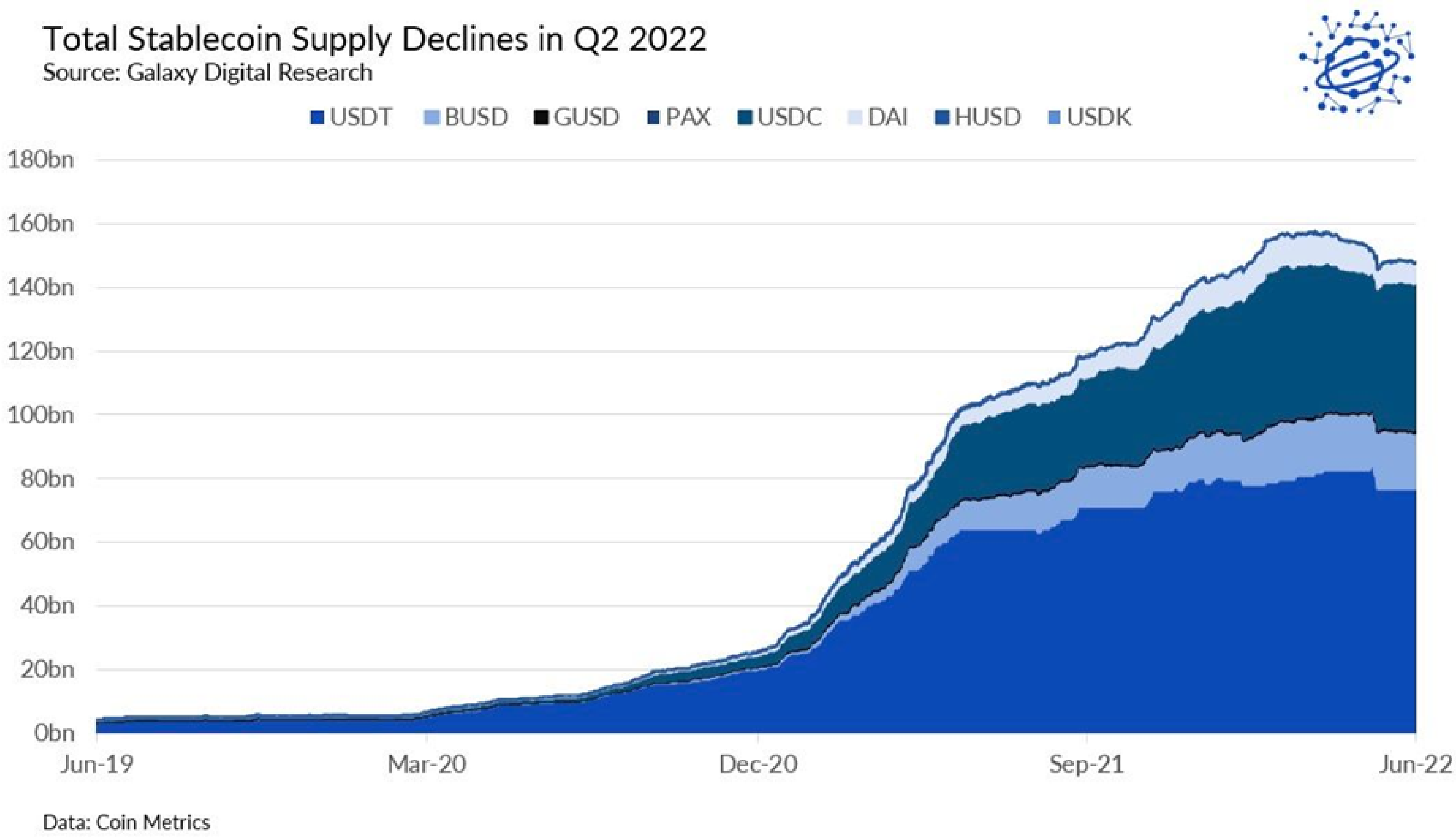


Figure 24. Stable coin supply declines in 2022. Stablecoin supply has shrunk by $13B across the board, with $10B being redeemed amongst major issuers and $3B having been retired from DAI alone.

The stable coin supply has been constantly decreasing since the beginning of the year. This has been in tandem with UST reaching a market cap of $20 billion USD and then collapsing.

Amongst stable coin supplies going down, there has also been a widespread decline in exchange trading volumes and open interest.

Bitcoin: Futures Open Interest [USD] - All Exchanges

glassnode

Figure 25. BTC futures open interest across all exchanges (source: Glassnode)

Futures open interest in USD has dropped to slightly over 10 billion, the lowest level since December 2020. This reflects recent liquidations on the move down to $20K, shorts closing at current levels, and a general lack of futures market speculation.

While there is a lack of enthusiasm to speculate on the futures markets currently, a major conversation point remains liquidation points for Celsius and 3AC. The beauty of crypto is that it might be the most transparent market on the planet but on-chain allowing public access to their liquidation prices leaves these companies extremely vulnerable.

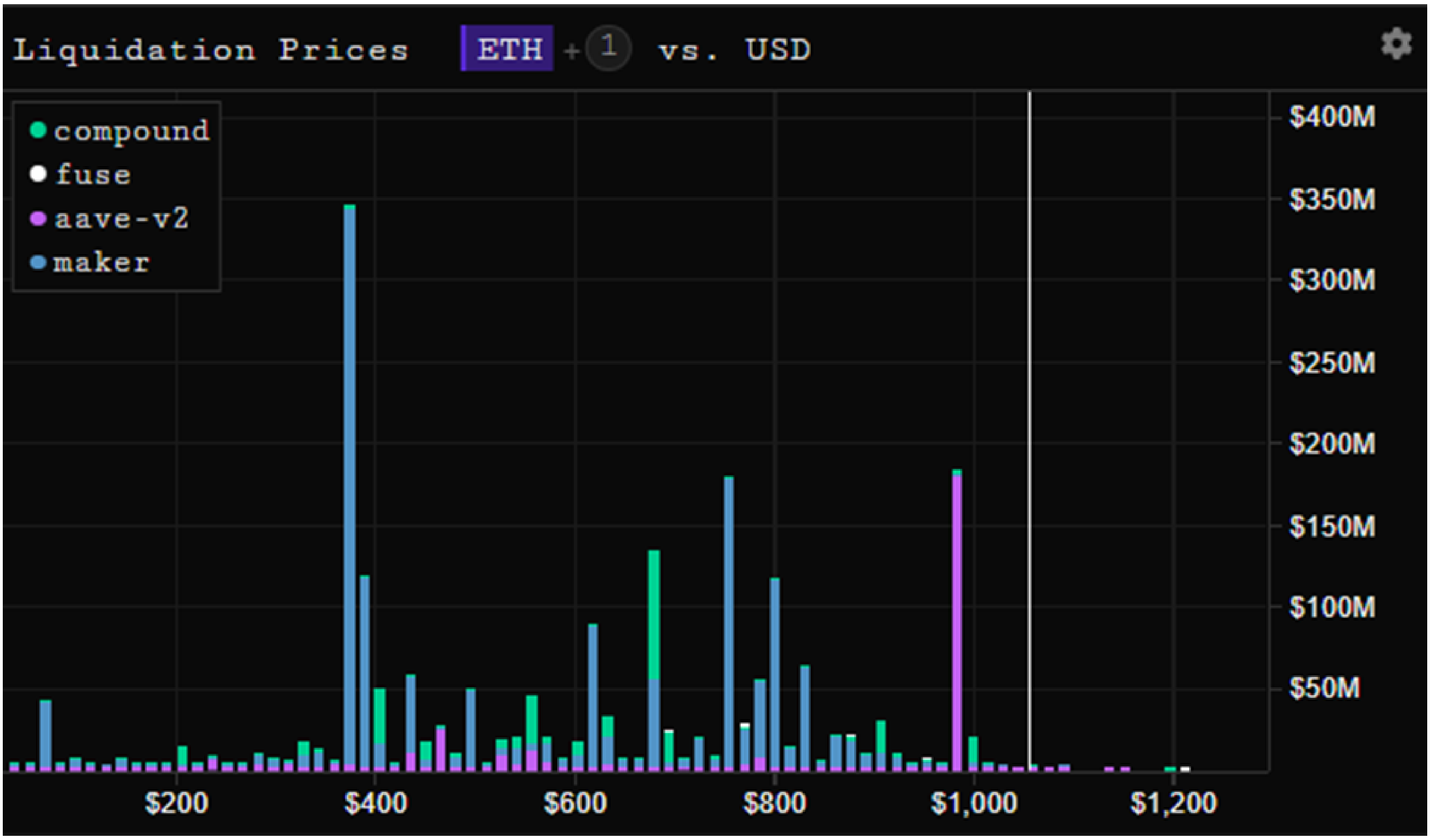


Figure 26. Major liquidations lying below $900 on Ethereum

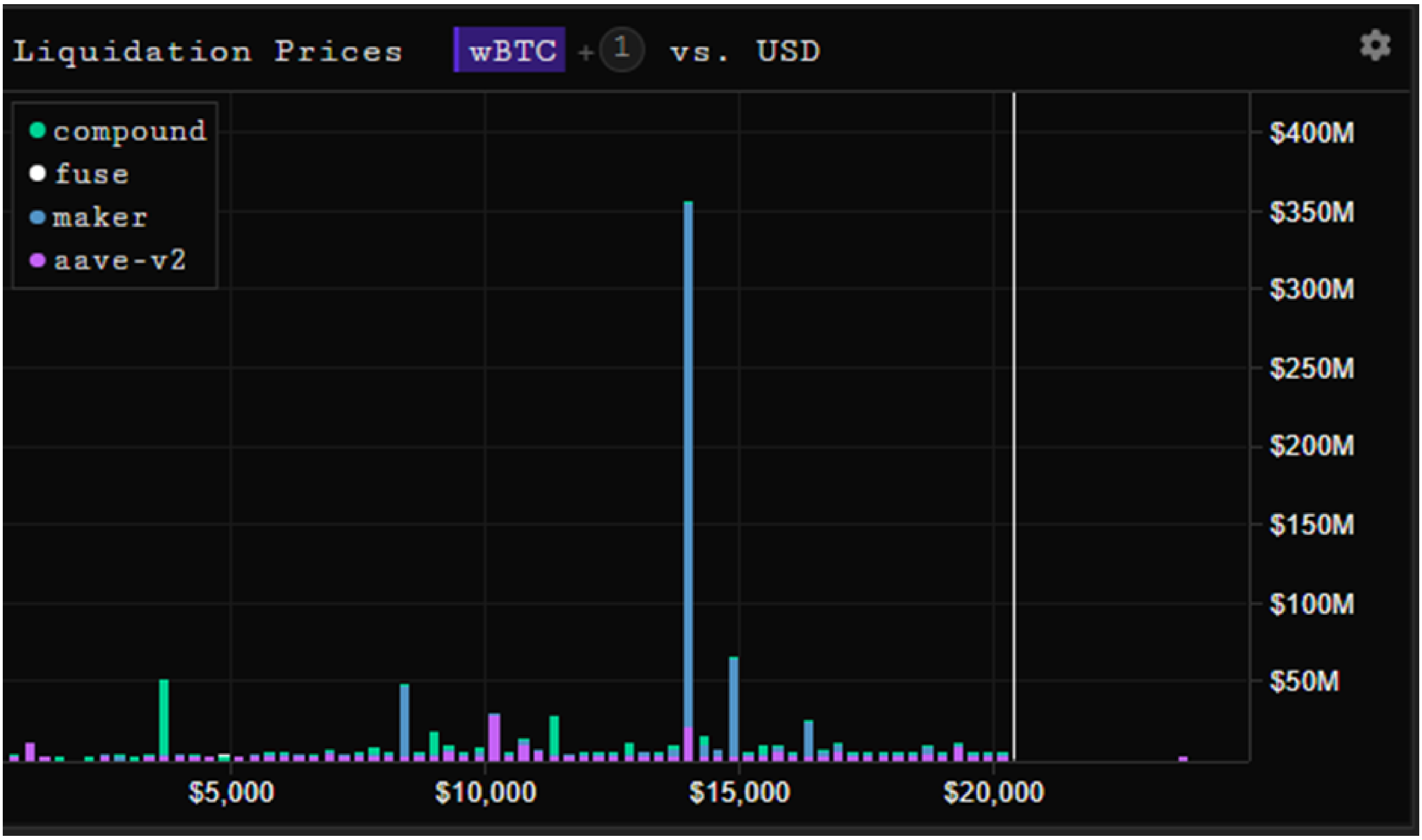


Figure 27. Liquidation prices for wBTC

As discussed with respect to Celsius, sub $14k wBTC could trigger significant liquidations and potentially cause billions more if they run out of capital to add to margin.

Celsius is not the only institution under pressure; the GBTC has also dropped to -33.7% discount to BTC, a new all-time low.

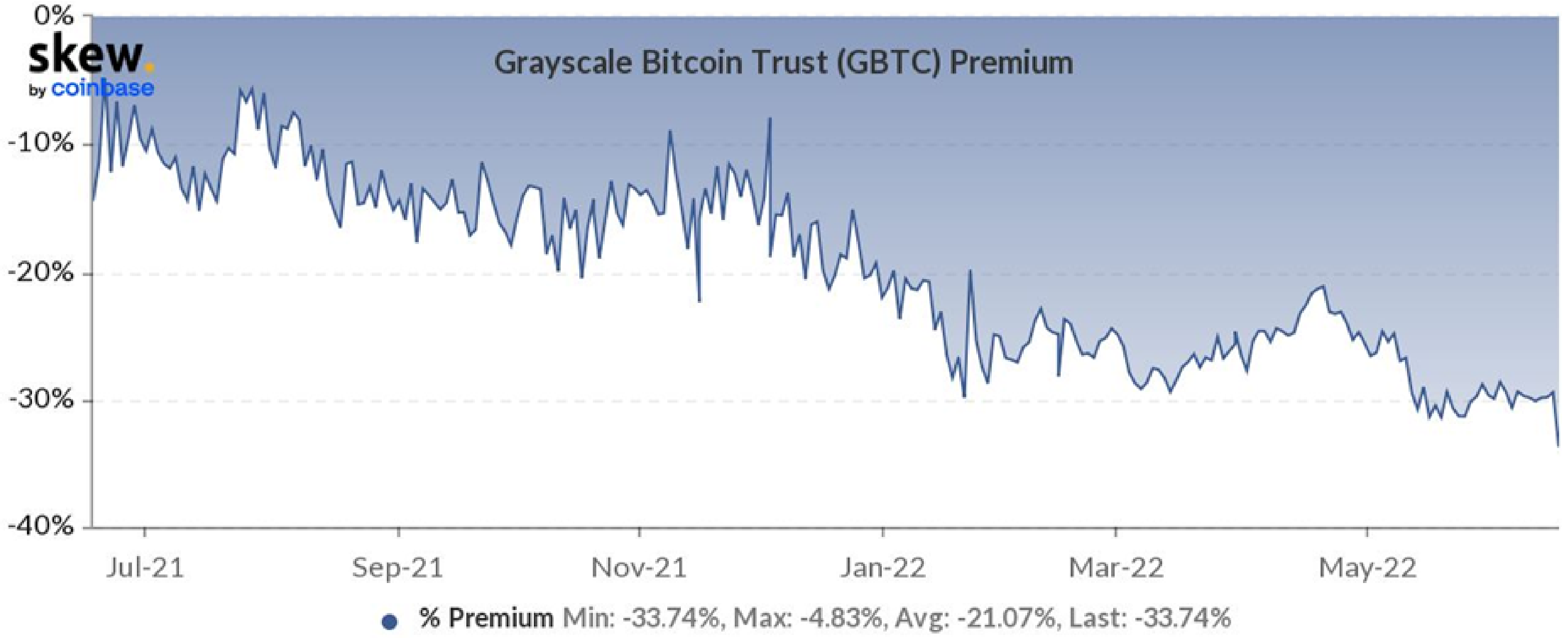


Figure 28. Grayscale Bitcoin Trust premium chart

In seeking to assess to probable scenarios for further market dislocation, we have to assume that if Celsius, 3AC and other multi-billion dollar crypto funds and services get completely wiped out due to forced liquidations, then insolvency is probable.

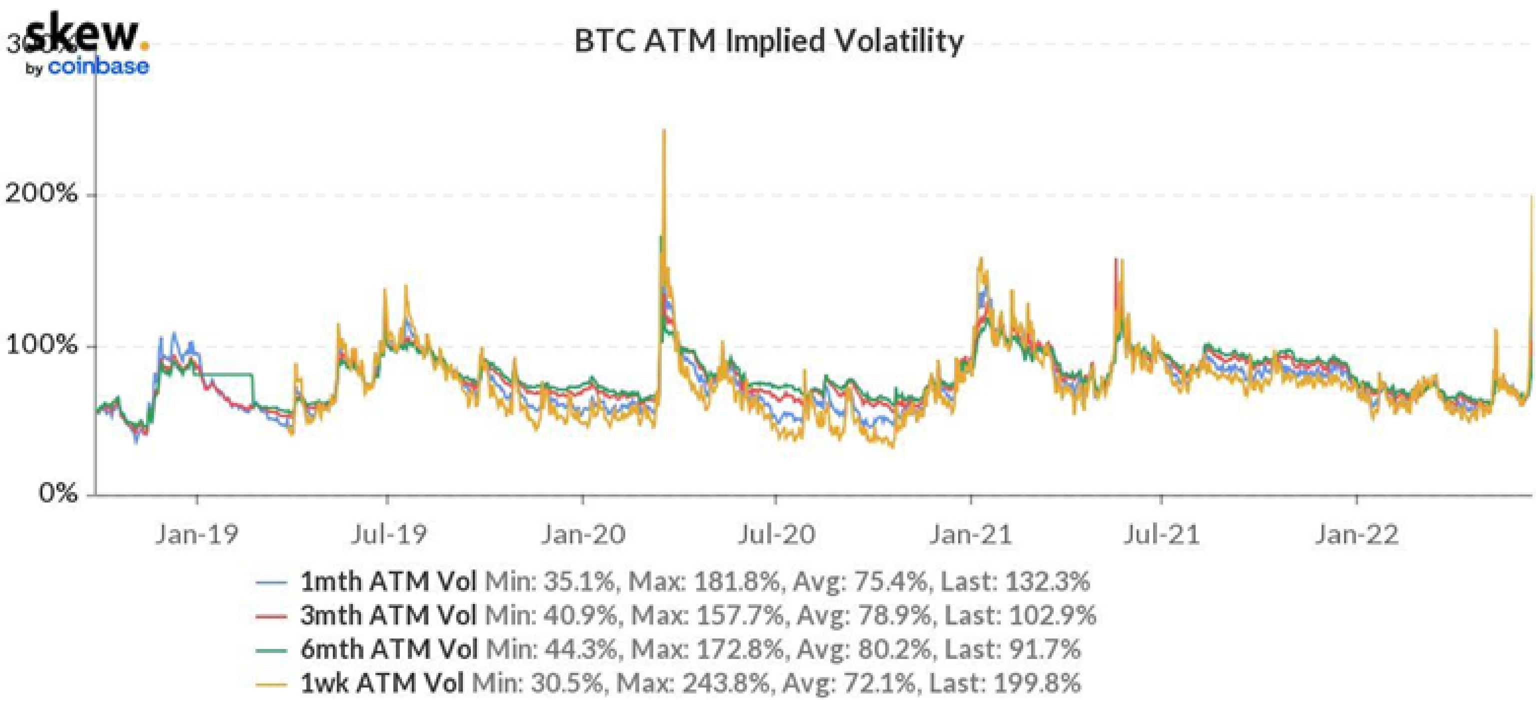


Figure 29. Implied Volatility on Bitcoin (source: skew)

Bitcoin implied volatility is the highest since the March 2020 Covid crash. Within such an environment, no amount of price fluctuation can be considered abnormal.

To date, upward rallies have been short-lived and sold off instantly. All global markets have been trader friendly, but have been a hostile environment for investors as long term holders realise losses worth 0.007% of market cap per day. The most severe this cycle.

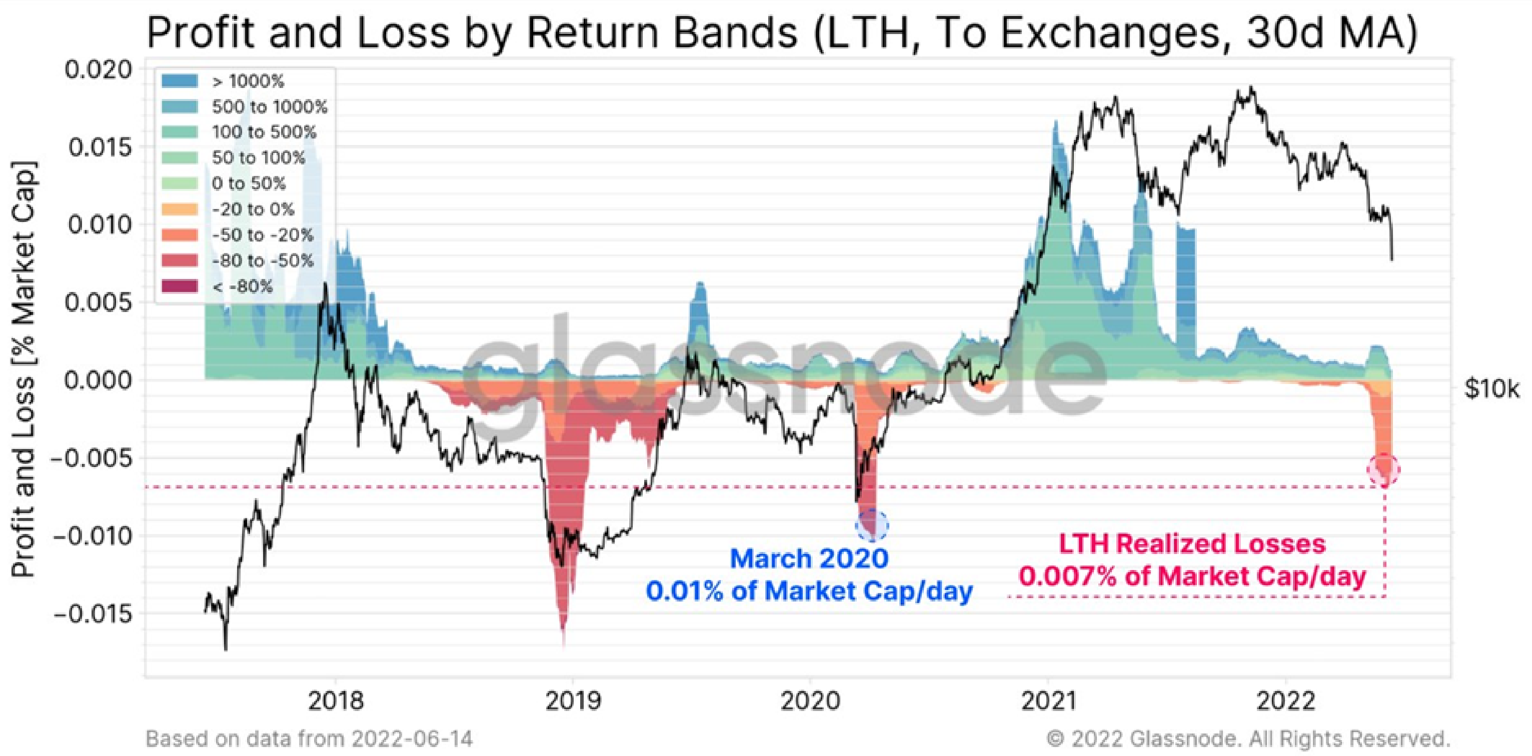
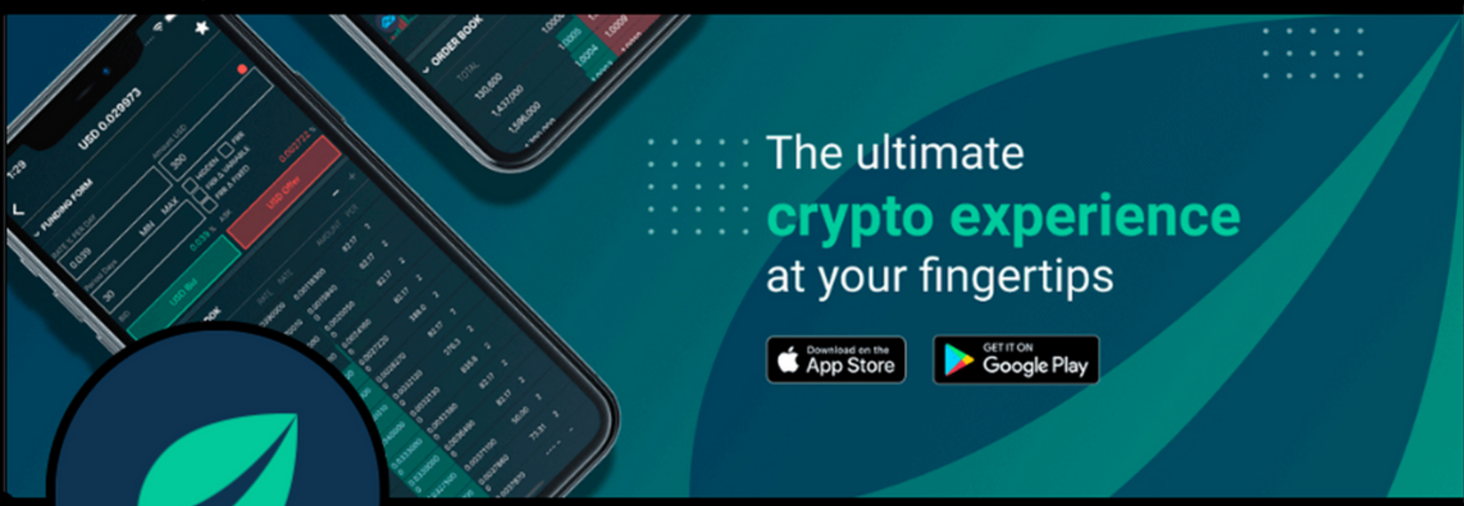


Figure 30. Profit and loss by Glassnode return bands



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