

# Digital Asset Markets Report

1H July 2022



The S2F Intelligence report examines network fundamentals using on-chain analysis, technical tools, and proprietary indicators. We aim to provide insight into how digital assets perform during these unprecedented times. By recognizing trends in both momentum and volatility, we seek to identify opportunities while properly navigating uncertain market conditions.



## Macro Overview

- The S&P 500 and DJIA indexes are positive so far for July, but remain -16.8% and -12.1% YTD, while the NASDAQ has declined 24.7% for the year. June CPI data exceeded economists' expectations of 8.8% with a 9.1% print, while core CPI rose to 5.9%. Housing and rents, which account for over a third of the CPI basket, saw a 5.8% increase in June, raising concerns over effective strategies to curb current inflation figures.
- As investors prepare for the earnings season, markets anticipate continued aggressive monetary policy decisions from the Federal Reserve in response to the current global inflation levels.
- Markets are now pricing in a 77% likelihood of 75 bps with a 23% chance of a 100 bps hike on July 27th.
- The CPI data release produced an initial selloff across all markets. Regardless, price action in digital assets saw a positive intraday pivot to the upside, bifurcating from the traditional market's downside momentum.



## Macro Performance

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- Deviation in monetary policy and global market demand for \$USD led the Euro to trade below parity for the first time in 20 years.
- U.S. crude oil saw a strong decline, reaching its Feb low of \$90.58 per barrel before recovering to \$96.62.
- Gold continues its slide into negative territory -5.29% YTD.
- Commodities experienced a slight correction -5.6% in July, but the GSCI commodity index remains +29.2% YTD.
- The inverted yield curve signal between the US2Y and US10Y continues to reinforce recession concerns.
- The national average for a 30-year fixed rate mortgage has risen to 5.6%; as a result, housing inventories have been on the rise.



## On-Chain Analysis

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- **Hash Ribbons:** Captures dynamics between the 30-day average hashrate and the 60-day network hashrate. When 30d crosses below the 60d, we observe miner capitulation. However, during conditions where we see the 30d cross above the 60d coupled with positive price momentum, we have seen historical buying opportunities - the avg duration for this signal is 56 days.
- **Miner Net Position + Mt. Gox:** The reduction in the supply of Bitcoin held by miners added to downside pressure into the Q2 close as treasuries distributed 7.9K BTC - in August, Mt. Gox plans to begin the refunding process for investors from the trustee account, which currently contains 137.9K BTC.



## Technical Levels

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- **Bitcoin:** Bitcoin appears to have found support above 2017 cycle ATH after it fell below it during the cascading liquidation events of early June.
- **Ethereum:** has remained rangebound since experiencing a local bottom on June 18th. With the merge on the horizon, if ETH can establish support above \$1.5k, it would be a positive sign that we are ready to continue the push higher. On the other hand, if this level is lost, price could revisit the previous support range of \$1.2k.



## Momentum & Sentiment

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- **pMV momentum model:** The model favors a heavier weighting to ETH and currently holds a small cash position.
- **Alt-season indicator:** The indicator is presently signaling markets remain in neutral territory.
- **Delta risk:** The indicator managed to get to the lowest risk level for both BTC and ETH - this signals that statistically, this is a good time to buy.



## Money Flows & Themes

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- **Mt. Gox Creditors:** The original Bitcoin exchange, which first launched in 2010, accounted for more than 70% of all Bitcoin network transactions by 2013 before declaring bankruptcy in 2014. The Tokyo-based exchange lost roughly 800,000 Bitcoin valued at roughly \$500 million at the time - to this day it remains the largest hack in digital asset history. The exchange was able to salvage over 100,000 BTC and is in the process of repaying creditors from its 137,890 BTC Trustee wallet.
- **Luna Foundation 80,000 BTC:** To defend and restore the \$18 billion market cap of the UST \$1.00 peg, the Luna Foundation Guard frantically unloaded more than 80,000 BTC in reserves in just ~2 days, from May 9th-10th. Despite these extreme selling conditions, the Bitcoin price fluctuated less than 6%.

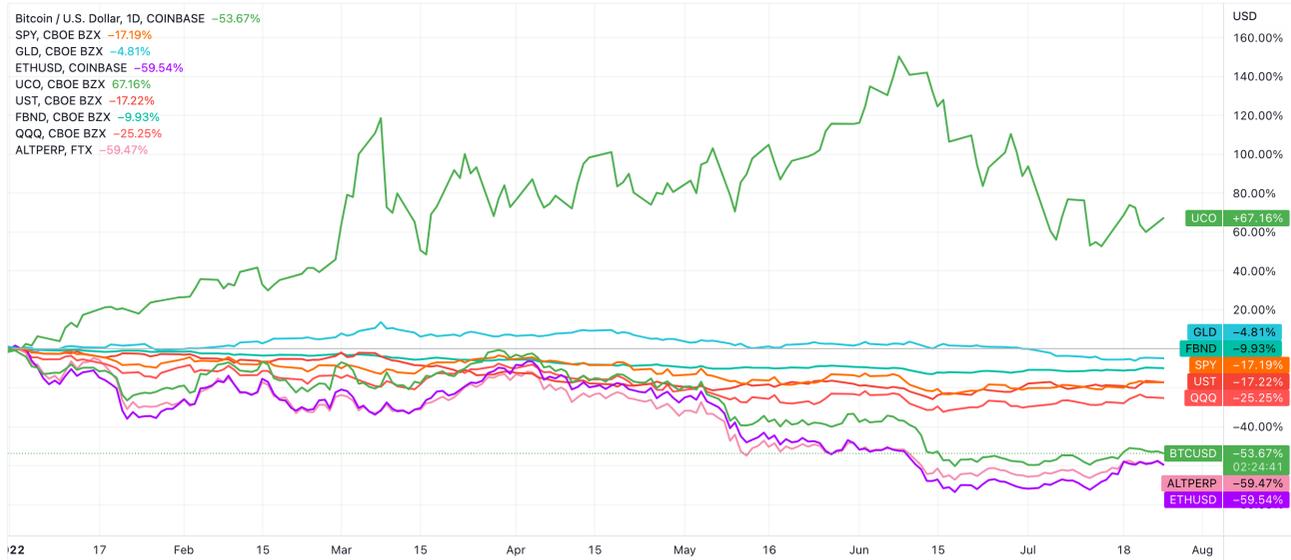


## Notable News

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- Bitcoin, Ethereum, Layer One, and Other Headlines.

2022 Asset Returns



Asset	MtD*	QtD	YtD	Volatility (annualized)*	Sharpe (annualized)*	Correlation (to Bitcoin)**
Bitcoin	17.1%	17.1%	-53.7%	69%	-1.53	1.0
Ethereum	50.6%	50.6%	-59.5%	89%	-1.34	0.98
Altcoin Index	23%	23%	-59.5%	82%	-1.53	0.98
SPY	3.8%	3.8%	-17.2%	25%	-1.27	0.88
QQQ	5.5%	5.5%	-25.3%	32%	-1.11	0.76
GLD	-4.8%	-4.8%	-4.8%	15%	-0.63	0.72
UCO	-13.8%	-13.8%	67.2%	84%	1.43	0.15
FBND	0.1%	0.1%	-9.9%	7%	-2.38	0.76
UST	1.7%	1.7%	-17.2%	19%	-1.75	0.34

Sources: Glassnode, AlphaVantage  
 Assets: SPY = S&P500, QQQ = NASDAQ, GLD = Gold, UCO = Crude Oil, FBND = Total Bond Market, UST = 7-10 YR Treasury, Alt-Perp (FTX) = Altcoin Index  
 \*as of July 25th, 2022  
 \*\*last 90 days

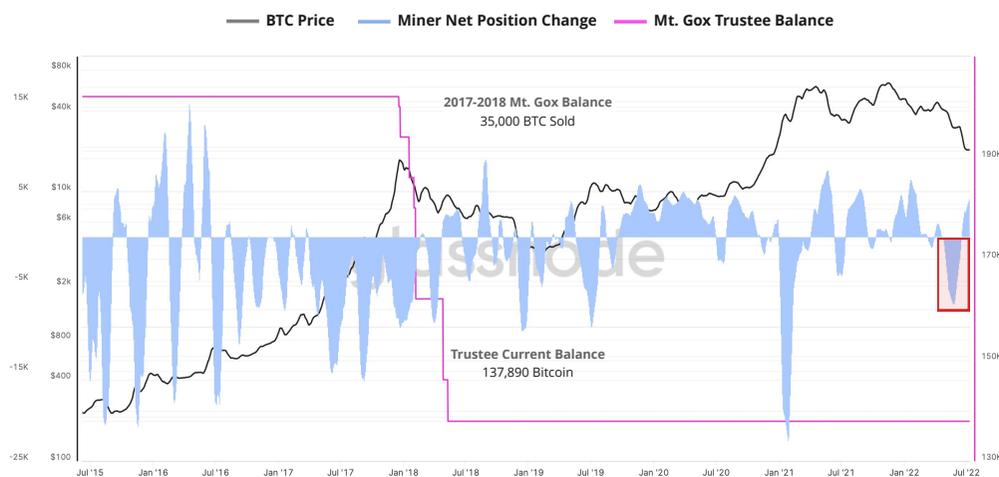
Bitcoin Hash Ribbons



Bitcoin security is measured by network hashrate. Miner Capitulation starts to occur (pink) when the cost to mine Bitcoin becomes too expensive relative to the asset's price. Capitulation occurs when the 30-day avg hashrate (green) crosses below the 60-day avg (blue).

When the 30-day average crosses back above the 60-day hashrate, we observe miner capitulation resolution (red). This signal in red, coupled with Bitcoin price momentum flipping from negative to positive, has offered potentially historical buying opportunities.

Mt. Gox + Miner Net Position Change



- Miner net position change (blue) created downside price pressure into Q2 close with nearly 8,000 BTC sold by miners in May/June. Miner accumulation has resumed since but, in August, markets could experience more significant sell-side from Mt. Gox's repayment plan.
- Mt. Gox, the largest Bitcoin exchange at the time, suffered an attack in 2011, which ballooned to user withdrawals being frozen in February of 2014 ~850,000 Bitcoin were lost (\$16.7 billion).
- A rehabilitation plan was finalized in November of 2021, and on July 6th, Mt. Gox Trustees notified investors they would begin repaying investors in August. Investors can receive Bitcoin or USD from the current BTC balance (pink), which contains roughly 137,890 Bitcoin.

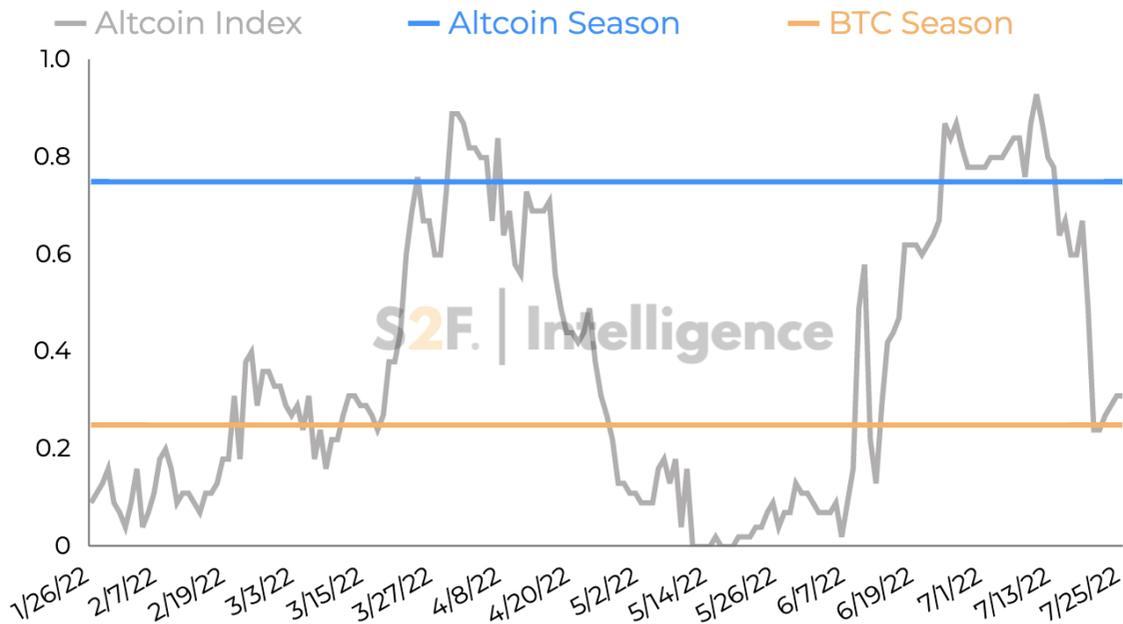
- **Bitcoin has rallied from monthly lows of \$18.5k to nearly closing its first month in the green since March.** Price recently rose above the 50d MA (blue) but has retraced with the imminent FOMC meeting and GDP report.
- Bitcoin is attempting to find support at the prior cycle's 2017 ATH after it fell below it during a liquidation cascade in mid-June.
- We would like to see \$20k become strong support as we wait for FED clarity and macroeconomic resolution.



- **Since hitting a local bottom on June 18th, Ethereum has ranged between \$1-1.2k before recently breaking above the \$1.5k level.**
- Following the largest quarterly price decline since the protocol's inception, ETH has remained at the mercy of BTC and equity markets.

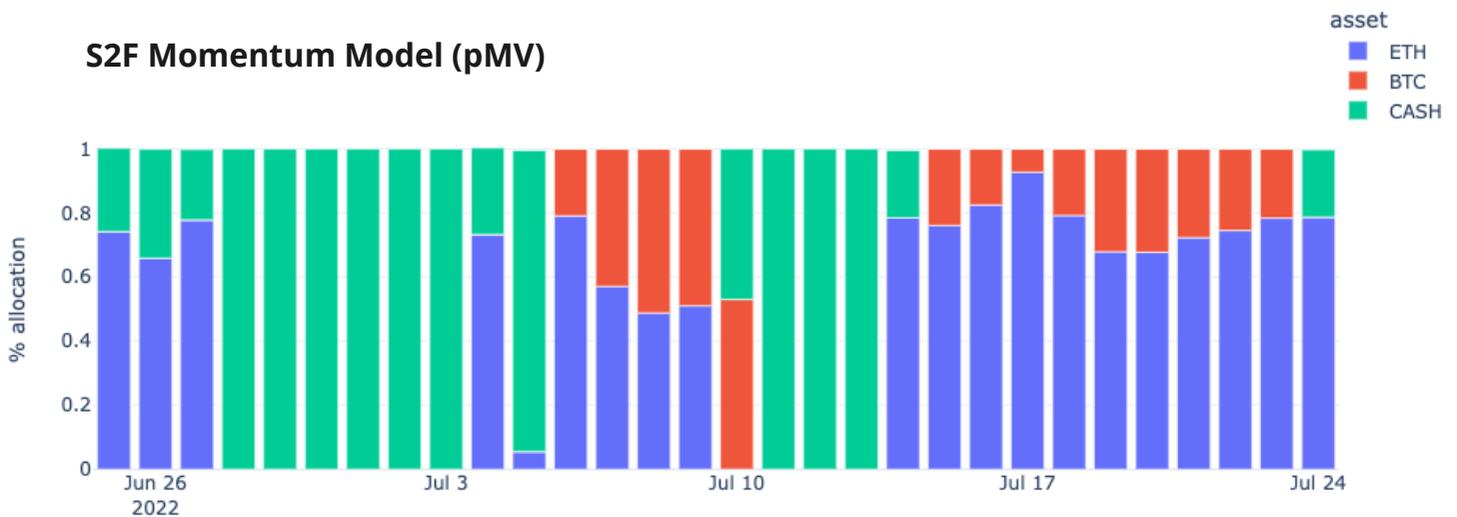


## S2F Alt-Season Indicator



The S2F Alt-Season Indicator is a proprietary model that measures the capital flows between Bitcoin and a basket of major Altcoins. This indicator is especially helpful in **identifying where strength resides** in the cycle and can **potentially indicate what may happen next**. When the Index line (gray) is below the orange line, it generally signals strong momentum favoring Bitcoin vs. Altcoins.

## S2F Momentum Model (pMV)

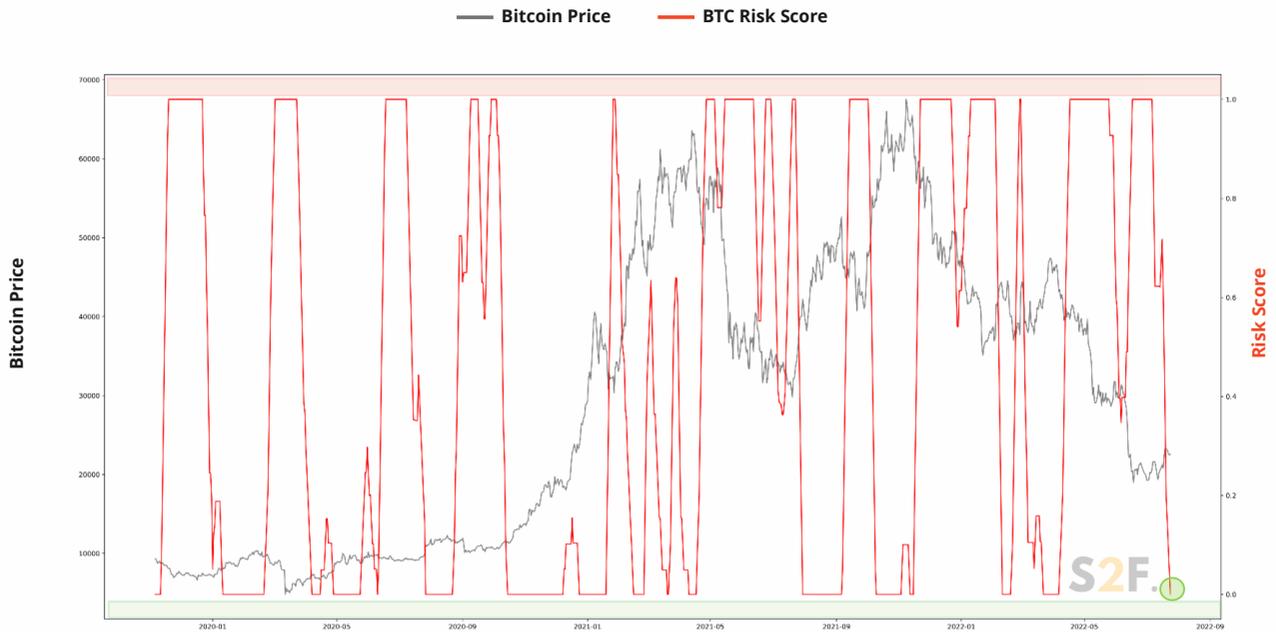


The S2F Momentum Model is a proprietary model that **compares the price momentum of BTC vs. ETH vs. USD** over a rolling window to suggest an optimal allocation of capital to each of these three assets. The entry and exit signals rely on two momentum indicators, one slow and one fast, to help determine portfolio over-or underweight-ness in each of the three assets. The chart above shows the suggested daily allocation over the last 30 days.

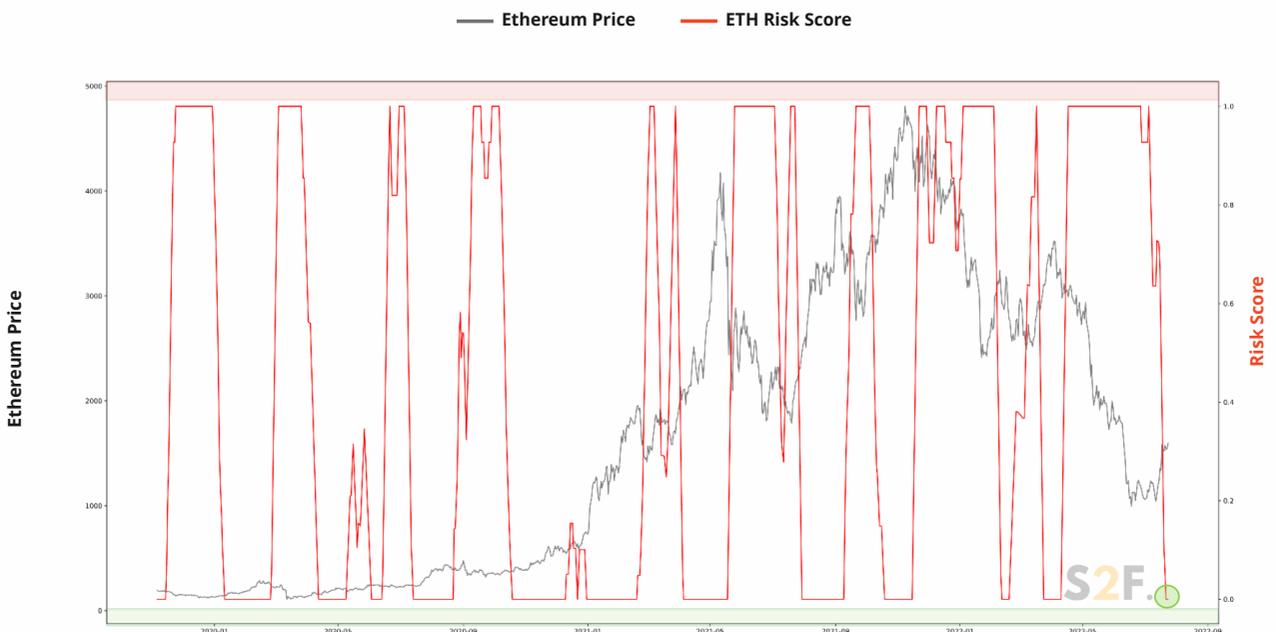
## Delta Risk Score

The Delta Risk Score is a proprietary model that **measures the probability of an imminent retracement in price**. The indicator's value (**red line**) oscillates between 0 and 1, with the former signaling low-risk while the latter determines high-risk conditions. The chart below shows both indicators and the underlying asset's price (**grey line**) since Q4 2019.

### Bitcoin



### Ethereum



## Mt. Gox History

This controversial crypto exchange launched in 2010 and accounted for more than 70% of all Bitcoin network transactions by 2013 before declaring bankruptcy in 2014. The Tokyo-based exchange lost roughly 800,000 Bitcoin, valued at roughly \$500 million. To this day, it remains the largest hack in digital asset history.

- Japanese courts appointed a rehabilitation trustee to oversee reconciliation for creditors - during the initial investigation, Mt. Gox recovered several 100,000 BTC.
- An Mt. Gox **repayment plan was approved last November**, and on July 6th, 2022, the appointed trustee notified creditors of their intent to begin "preparing to make repayments" to account holders.
- Creditors were asked to specify their desired payment preference - Bitcoin, Bitcoin Cash, cash, or a mix of all three.
- Creditors may choose from three reimbursement options: "an early lump sum payment," partial payment, or a final payment following the conclusion of legal compensation.
- The Mt. Gox Trustee wallet holds 137,890 Bitcoin, but it is estimated that Mt. Gox has a total of 141,686 Bitcoin still under custody.

## Mt. Gox Trustee Balance Stats & Details

While the possibility of further sell-side pressure following the insolvency and liquidation of major institutional players and miners sounds daunting, it is worth examining the potential impact this BTC repayment plan could have on the market.

- User withdrawals paused in February 2014 - the price of Bitcoin at the time was ~\$800.
- **At current prices, creditors are at a profit of more than 25x but saw > 85x at the 2021 cycle ATH - \$69K.**
- If 100% of creditors opt to receive cash, the selling pressure of 141,686 Bitcoin will represent 8.8% of the total daily exchange volume.
- 137,890 BTC in the trustee wallet would account for > 250% of the 30d sum of OTC inflow volume.
- Private equity fund Fortress and other investment firms purchased an undisclosed figure of Mt. Gox creditor's claims.

## Luna Foundation Guard - Sold 80,394 Bitcoin

Before the Terra blockchain collapsed in May of this year, the Luna Foundation Guard (LFG) held more than 80,000 BTC in reserves. To project the potential impact of the reimbursement to creditors from the Mt. Gox Trustee balance of 137,890 Bitcoin, let's explore the timeline and impact that the LFG selling had on the market.

Luna Foundation Guard Balance - Exchange Flow



- On May 7th, 2022, the LFG held a total of 80,394 Bitcoin in reserves. They made five total deposits to exchanges within 24 hours. (see chart)
- The first deposit of 22,189 Bitcoin was to the Gemini OTC desk on May 9th (16.09% of Mt. Gox Trustee balance) - the price of Bitcoin was \$32,500.
- The second deposit on May 9th was 30,000 BTC (21.75% of Mt. Gox Trustee balance) - the price of Bitcoin was \$30,600.
- The third, fourth, and fifth deposits took place on May 10th, which made up 28,205 BTC (20.45% of Mt. Gox Trustee balance) - the price of Bitcoin ranged between (\$30,600 - \$31,600).
- From the LFG's first deposit on May 9th to the final deposit on May 10th, Bitcoin's price fluctuated ~5.8%.
- The Luna Foundation Guard market sold 80,394 Bitcoin (58.30% of the total Mt. Gox Trustee balance) in a frantic effort to defend the algorithmic depeg of the ecosystem's native stablecoin UST. While 40%+ more Bitcoin would weigh heavily on OTC desks and central exchange order books, we believe the current market demand landscape should be able to absorb the new supply-side surplus. A recent private poll of the Mt. Gox creditors shows approximately 50% of those owed in the settlement plan to keep ~100% of their upcoming BTC distribution.

## Bitcoin

- The Mt. Gox bankruptcy trustee issues a public letter to creditors to begin legal repayment.
- Bitcoin miners recently released more than 1000 megawatts back to the Texas power grid (1% of the state grid) as rising energy costs and unfavorable heat conditions strain operational revenue.
- SEC delays decision on the ARK 21Shares ETF - the decision deadline has been extended 45 days to August 30th.
- Federal Reserve Bank of Cleveland published a research paper on the Bitcoin Lightning Network and how the layer two technological scaling solution could transform the payment network into a better functioning means of payment.
- Tesla announced during their Q2 earnings report the company sold 75% of its Bitcoin holdings.

## Ethereum

- Ethereum's Sepolia testnet merge was apparently successful.
- Leading lending protocol, MakerDAO recently approved the proposal (87% in favor) to extend \$100 million in a stablecoin loan vault to Huntingdon Valley Bank - 87% of delegated votes in favor. The loan generates a 3% yield on DAI for MakerDAO, and the DeFi protocol will allow HVB to provide real-world assets as collateral for the debt.
- Developers completed the 9th Ethereum mainnet shadow fork on July 14th with the 10th shadow fork planned for July 27th.
- Disney announced the Polygon (MATIC) network would be one of six companies joining their 2022 Disney Accelerator program - featuring augmented reality, non-fungible tokens, and artificial intelligence solutions.
- At the recent Consensus Layer call,<sup>1</sup> developers set a date for the final public merge on the ETH Goerli testnet between August 8-10th - assuming there are no issues, the official ETH mainnet PoS merge could take place the week of September 19th.

## Layer 1's

- Solana NFT marketplace Magic Eden announces launching a gaming venture arm - Magic Ventures will feature Web3 gaming and in-game storefronts.
- Umee, Cosmos' DeFi lending and borrowing platform, announced its plans to launch the first price oracle for Cosmos' inter-blockchain communication (IBC) protocol.
- Lead architect at Cardano (ADA) leaves IOHK to join the competing smart contract protocol Algorand (ALGO) foundation as CTO.
- Brave Browser announces support for Solana-based decentralized applications.

## Other Headlines

- The Biden Administration and the U.S. Department of Treasury extend an open invitation to citizens to comment on Executive Order 14067 - "Ensuring Responsible Development of Digital Assets" until August 8th.
- Following the resignation of the Argentine Economic Minister, exchanges saw an inflow of demand for USDT and DAI stablecoins - driving the peg of USDT 6% to the upside.
- Crypto exchange Blockchain.com announces it stands to lose \$270mm due to outstanding 3AC loan default.
- Lending platform Voyager files for bankruptcy days after freezing user funds on July 1st - under Chapter 11, the company seeks to reorganize rather than liquidate.
- Celsius prioritizes repayment of outstanding DeFi protocol loans for AAVE, Compound, and MakerDAO protocols before filing Chapter 11 bankruptcy.
- SEC cites 9 tokens as securities in recent insider trading case brought against a former product manager at Coinbase.

<sup>1</sup> Ethereum Foundation, Consensus-layer Call 91- 7/14/2022 ,14:00 UTC (<https://github.com/ethereum/pm/issues/566>)

**Bitcoin Halving:** Is the process of halving the rewards of mining Bitcoin blocks. This event occurs after each set of 210,000 blocks is mined (blocks are mined every 10 minutes, so around 4-years).

**Bitcoin Hashrate:** The network hashrate measures the total computational power of a proof-of-work cryptocurrency network to process transactions in a blockchain - the higher the hashrate, the greater the network security.

**Consensus:** A consensus mechanism is a method for validating entries into a distributed database and keeping the database secure.

**Delta Gradient:** Metric measures the difference between the gradient of both spot price and the realized price. Shows the relative change in momentum between speculative value and true organic capital inflows.

**Ethereum Validator:** A validator is an entity that participates in the consensus of the Ethereum protocol. Users stake 32 ETH to become a validator. Validators are chosen at random to create blocks and are responsible for checking and confirming the network ledger.

**Liquidity Pool:** A liquidity pool allows depositors who provide digital assets to earn money from transaction fees generated by other users who buy and sell assets from the pool. Those transaction fees go back into the liquidity pool to further increase the value of your tokens and aid in growing the pool.

**Miner Capitulation:** Conditions where miners' input costs exceed the underlying value of the bitcoins they earn, resulting in miners being forced offline and a decline in network hashrate. During extreme price drops, a miner capitulation scenario may also include miners selling BTC from their reserves.

**Shadow Fork:** A shadow fork uses data from a testnet or a network's mainnet to test sync assumptions for a network upgrade so that developers can test features before deploying the actual upgrade to the mainnet. A shadow fork is a test limited to a smaller timeframe - usually no more than a few weeks.

**TVL (Total Value Locked):** Representation of the total value of a crypto-asset that is "locked" in a DeFi (decentralized finance) application or smart contract. TVL can directly affect the yield and usability of these applications.

**Unspent Transaction (UTXO):** An unspent transaction output (UTXO) is the technical term for the amount of digital currency that remains after a cryptocurrency transaction. UTXOs define where each blockchain transaction starts and finishes.

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