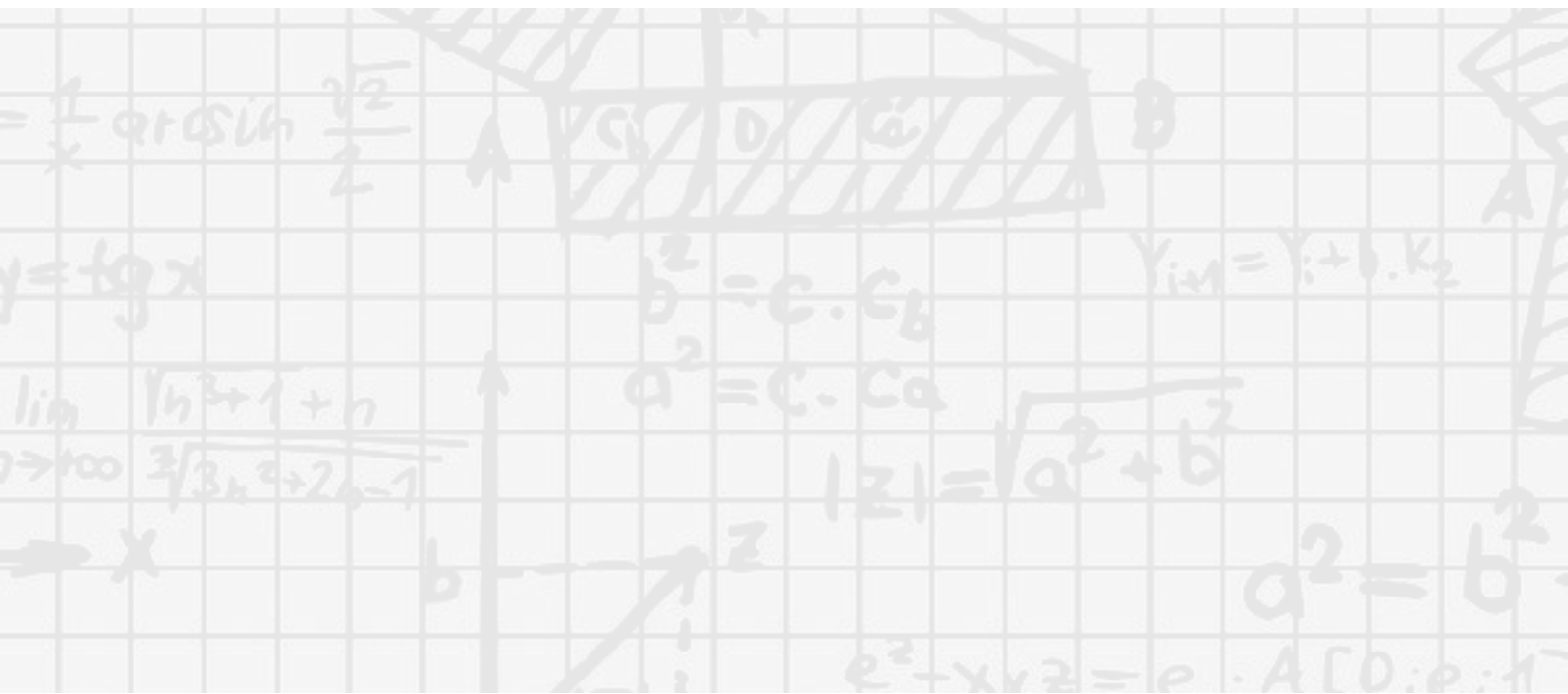


Digital Asset Markets Report

2H February 2022



The S2F Intelligence report examines digital asset networks using on-chain analysis, technical tools, and proprietary indicators. We aim to provide insight into what metrics we are currently watching and why we are focused on them. By extracting trends in both qualitative and quantitative manners, we can identify opportunities while properly navigating uncertain market conditions.



Macro Overview

- During the second half of February, Putin ordered his military to invade Ukraine. The U.S. and other nations responded by imposing sanctions and removing some Russian banks from the SWIFT system. As a result, major U.S. indices fell more than 3% during February and continue to extend those losses into March as investors remain worried about the Russia-Ukraine crisis, rising commodity prices, and uncertainty around the Fed's upcoming policy changes.
- Due to the recent global events, the market had been speculating a potential pause of the FED policy implementation. Powell stated that the fed is prepared to raise the FED rate by 0.25bps and monitor economic conditions to determine further action.
- Cryptocurrencies weren't immune to the initial market volatility from the recent geopolitical events. Bitcoin and Ethereum experienced a sell-off as investors went risk-off in their portfolios. The beginning of March has shown us that we are still amidst a ranging market, bouncing between lower support and upper resistance levels. In the short term, monetary policy speculation, war, and rising commodity prices continue to create headwinds for all risk-on assets, including digital assets.



Macro Performance

Page 1

- Commodity prices spiked, U.S. crude oil to top \$105 per barrel for the first time since 2014.
- Gold rallied to reclaim the \$1900/oz as the market participants panic-bought precious metals.
- The U.S. Dollar has had strong performance driven by investors fleeing risk-off assets and buying dollars.
- The yield on the 10Y Treasury closed out February at 1.836% and continued the trend down into March as investors have been buying treasuries as a safe haven.



On-Chain Analysis

Page 2

- From an on-chain perspective, technical indicators signal long-term investors maintain their conviction as the Bitcoin supply held for at least six months has reached a new all-time high of 76.9%.
- While price momentum into March hinted at a potential change in demand, our on-chain value days destroyed model signals market accumulation conditions.



Technical Levels

Page 3

- Bitcoin and Ethereum continue to weather the turbulence of bearish global market conditions.
- Bitcoin price action continues to outperform Ethereum.
- Both assets experienced strong rallies at the end of February, and we wait to see if "higher low" price structures are established.



Momentum & Sentiment

Pages 4-5

- **Alt-Season Indicator:** favoring Bitcoin currently but slowly starting to move towards Altcoins.
- **pMV Model:** our momentum model has flipped long on ETH and BTC multiple times in February but is back to cash currently.
- **Delta Momentum:** indicated relative positive momentum in February for certain Gaming platforms.
- **On-Chain Buying Oscillator:** currently showing retail are the predominant buyers of BTC.



Money Flows & Themes

Page 6

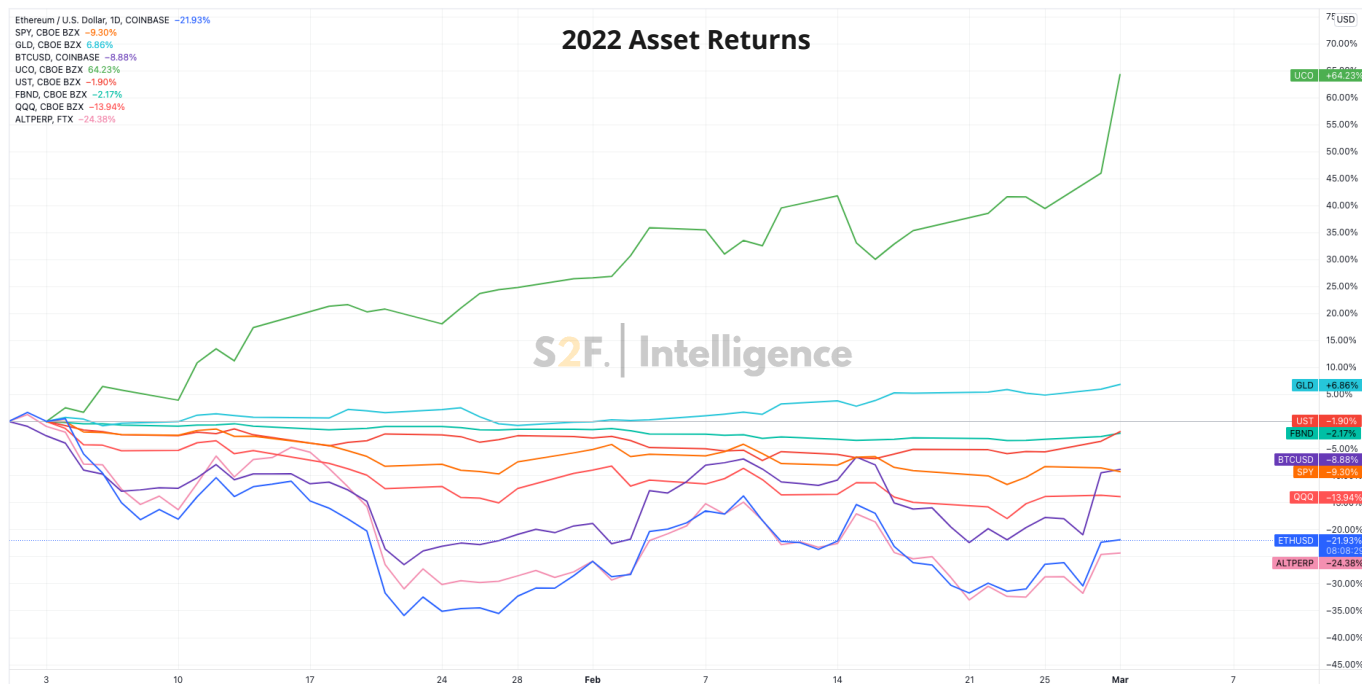
- Economic sanctions brought about by Ukraine and Russia conflict led to the Russian Ruble experiencing more than a 30% decline vs. the \$US dollar.
- Bitcoin is now the 14th largest currency by market cap, surpassing the Ruble.
- As global demand for United States dollars continues, we see explosive growth in the stablecoin market cap. The total stablecoin market cap surpassed \$160 billion last year, and we expect a growing percentage of circulating coin supply will find its way into smart contracts in DeFi.



Notable News

Page 7

- Bitcoin, Ethereum, Layer 1s, and other digital asset headlines.



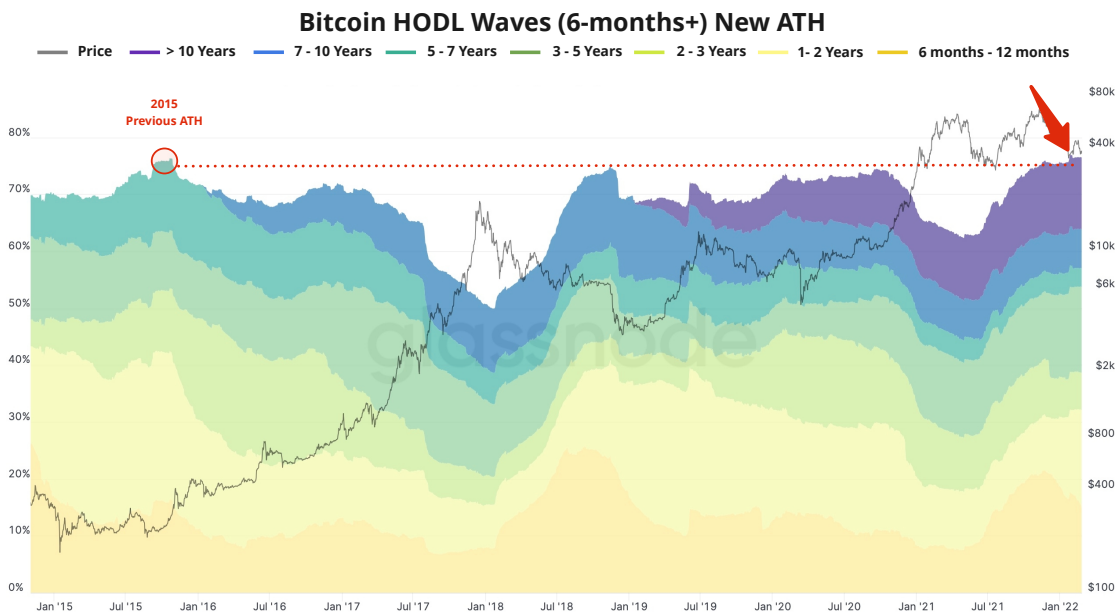
Asset	MtD*	QtD	YtD	Volatility (annualized)*	Sharpe (annualized)*	Correlation (to Bitcoin)**
Bitcoin	11.4%	-8.8%	-8.8%	71.01%	-0.57	1.00
Ethereum	4.3%	-21.9%	-21.9%	86.85%	-1.33	0.96
Altcoin Index	1.7%	-24.4%	-24.4%	80.33%	-1.91	0.96
SPY	-3.6%	-9.3%	-9.3%	20.23%	-2.85	0.58
QQQ	-3.8%	-13.9%	-13.9%	27.94%	-2.85	0.82
GLD	6.0%	6.8%	6.8%	12.01%	3.17	-0.54
UCO	15.3%	64.1%	64.1%	41.86%	6.19	-0.79
FBND	-1.3%	-2.2%	-2.2%	4.60%	-4.28	0.69
UST	-0.6%	-1.9%	-1.9%	14.22%	-1.74	0.74

Sources: Glassnode, AlphaVantage

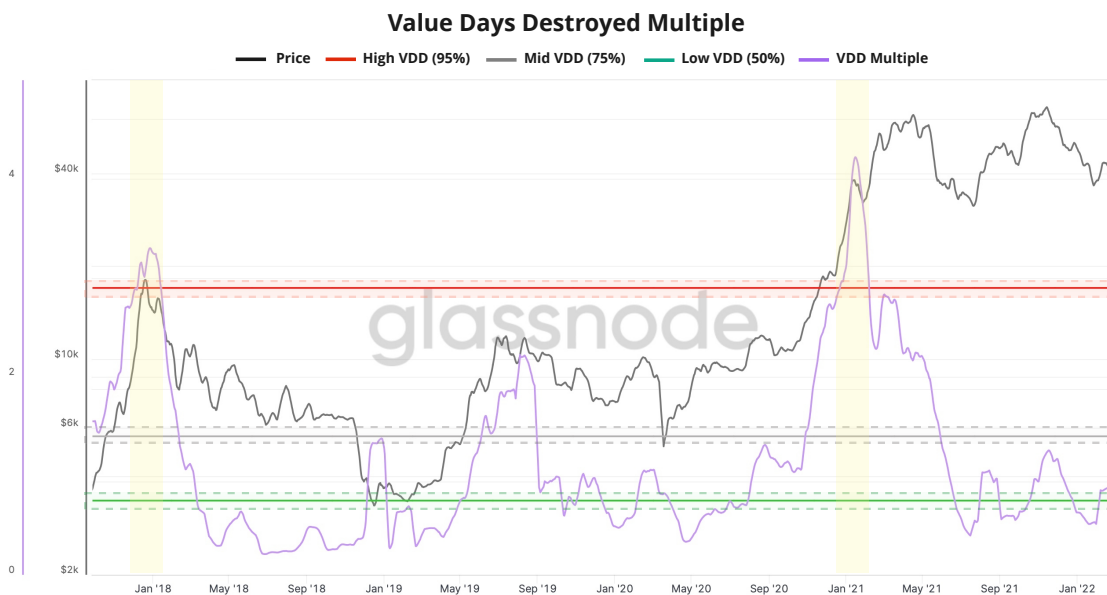
Assets: SPY = S&P500, QQQ = NASDAQ, GLD = Gold, UCO = Crude Oil, FBND = Total Bond Market, UST = 7-10 YR Treasury, Alt-Perp (FTX) = Altcoin Index

*as of February 28, 2022

**last 90 days



- Bitcoin HODL waves illustrate the % of Bitcoin last moved within certain **age bands**. This chart excludes coins held for short-term periods of 6-months or less. Glassnode recognizes 155-days as the threshold required for a coin to be considered "long-term".
- The Bitcoin supply held for **at least six months has reached a new all-time high of 76.9%**. The previous all-time was set in October 2015. That is roughly 14.6 million coins out of the total 18.9 million Bitcoin in circulation.
- As network and user adoption continues to grow amidst macroeconomic uncertainty, the HODL waves signal that an increasing number of investors recognize Bitcoin's utility as a long-term store of value.



- The Value Days Destroyed Multiple (**purple**) identifies when market conditions are overheated or undervalued by comparing short-term spending behavior to the yearly average. As the **rate of older coins being spent accelerates**, it eventually overpowers market demand.
- The Value Days Destroyed metric declines as older coins remain dormant or unspent for more extended periods. A high VDD above 1.4 (**grey**) signals **higher spending activity than the yearly average as the market heats up**. Above 2.9 (**red**) can identify cycle tops when the highest volume of coins is exchanged.
- A low VDD below 0.75 (**green**) occurs in bear markets during coin maturation and accumulation conditions. As uncertainty surrounding geopolitical conflicts continue to create headwinds for digital assets, we see long-term investor selling pressure subside and broader patterns of accumulation resume.

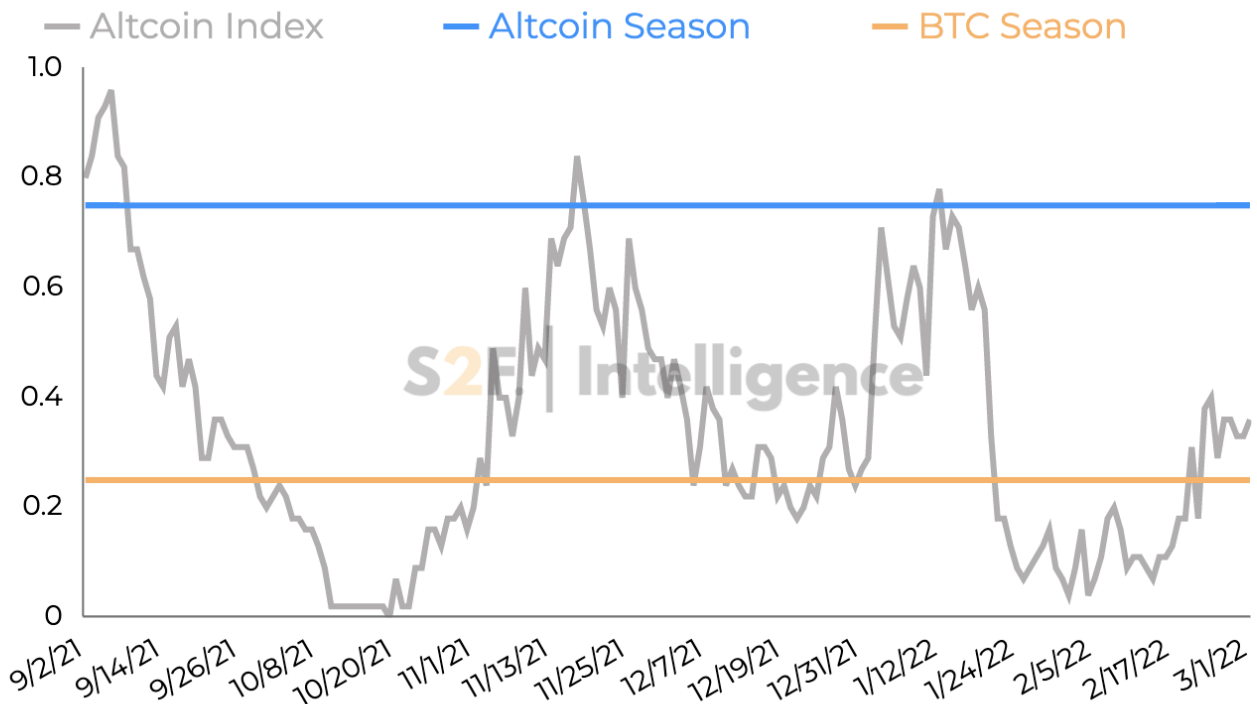
The last week of February saw Bitcoin surge from 34k to 44k. While BTC has faced low conviction for several months as the price declined, we recently saw a positive trend emerge. Bitcoin has been putting in "higher lows" from late January until now and has weathered the macro turbulence well. While it is good to see relative strength in these market conditions, BTC ranges between the lower support and upper resistance levels (solid black lines). Once again, geopolitical and regulatory uncertainty are two key factors that affect the short-term price of Bitcoin. Without a clear bullish catalyst, BTC will likely test some of the lower levels of support in the short term as markets navigate both war and monetary policy.



In the last report, we said that Ethereum had potentially **found its local bottom in mid-January**, and since then, we have seen it test upper resistance levels in the same way that Bitcoin has. ETH remains tightly correlated with BTC's price action as it also showed strength during the final week of February. While the markets remain volatile, we do not expect a significant breakout for ETH without the same happening for BTC. However, Ethereum has continued to perform well, and current prices are almost 3x higher than in March of last year.

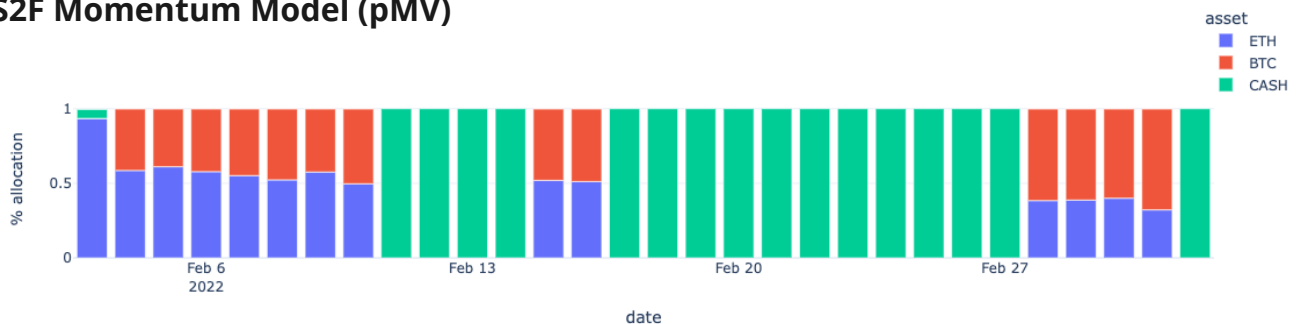


S2F Alt-Season Indicator



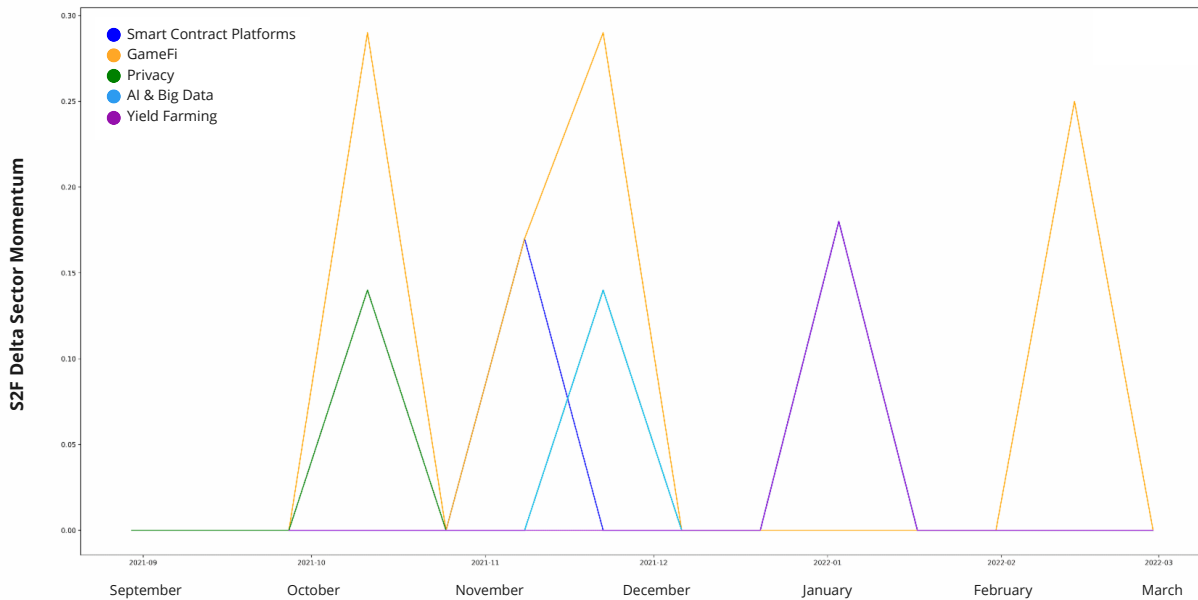
The S2F Alt-Season Indicator is a proprietary model that measures the capital flows between Bitcoin and a basket of major Altcoins. This indicator is especially helpful in **identifying where strength resides** in the cycle and can **indicate what may happen next**. When the Index line (gray) is below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

S2F Momentum Model (pMV)



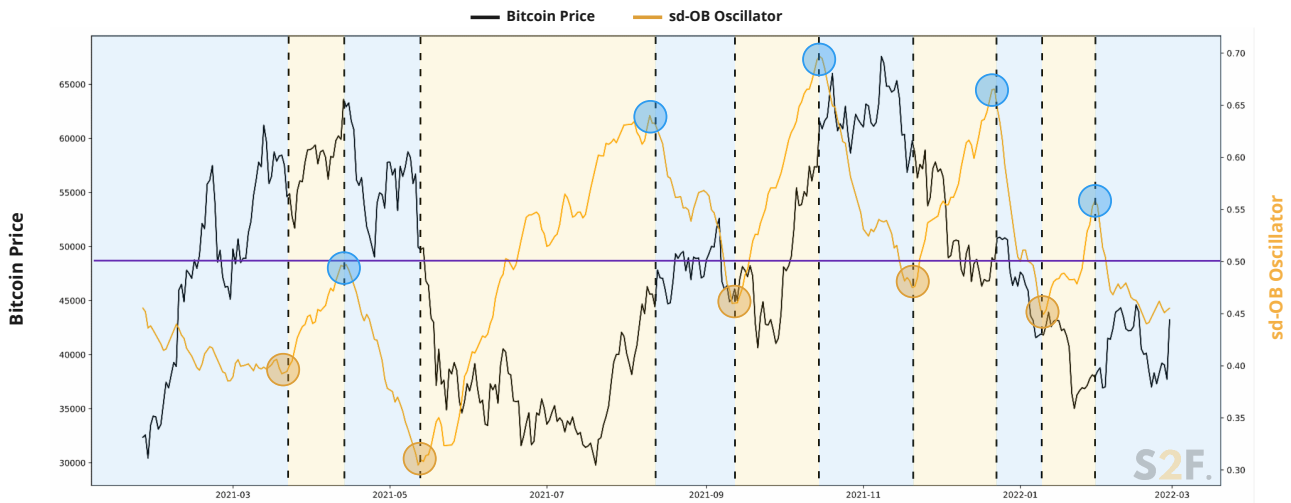
- The S2F Momentum Model is a proprietary model that **compares the relative price momentum of BTC vs. ETH vs. USD** over a rolling window to suggest an optimal allocation of capital to each of these three assets.
- The entry and exit signals rely on two momentum indicators, one slow and one fast, to 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.

S2F Delta Sector Momentum



The S2F Delta Sector Momentum Indicator is a proprietary sector rotation index. This tool measures which sectors across the digital asset space show the highest likelihood of price appreciation. The indicator tracks these sectors over a rolling 2-weeks period to capture an overarching picture of current and past momentum trends in crypto. Shown above is a snapshot of the past 180-day period. **A high reading on the indicator means an increased likelihood of an exponential sector-wide price move.**

S2F Delta On-Chain Buying Oscillator



The S2F Delta On-Chain Buying Oscillator is a proprietary model that helps **identify who is currently buying Bitcoin on-chain**. A **higher reading** of the indicator means that **whales and retail are accumulating** coins, while a **lower value** means that **retail is predominantly buying**.

The chart above shows where most whales start buying (**orange circles**) and slow down or sell (**blue circles**). When they slow down their buys, the indicator declines until they resume their accumulation. Smart money tends to stop accumulating before price peaks (**black line**), and retail FOMO provides them with their exit liquidity. **A reading above 0.5 indicates that whales might have returned** or that we may have experienced a possible bottom.

Russian Ruble (₽) Collapse

RUB/USD (2008 - 2022)



BTC/RUB (YTD)



- The Russian Ruble plunged almost 30% vs. USD during the last week amid global turmoil. Despite the Russian central bank manipulating trading hours, the value of their currency is still evaporating relative to USD, BTC, and other international currencies and assets.
- The currency's instability began in the early 1990s after the fall of the Soviet Union, which led to government intervention in 1997 when three zeroes were removed from Ruble notes (you read that right!).
- Since 1993, the Ruble has lost more than 99% of its value vs. the US dollar.
- **Bitcoin volume traded in the Russian Ruble** recently **spiked to a 9-month high** this past weekend. Bitcoin is now the 14th largest currency by market cap, **surpassing the Ruble**.

Stablecoin Market Cap Growth

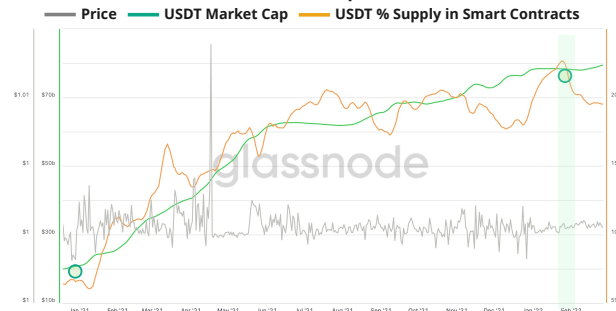
- Global market demand for \$USD-denominated stablecoins exploded in 2021, with the market cap surpassing \$160 billion. Stablecoin demand is fueled by their ease of use in DeFi, growing composability across different blockchains, and their 1:1 peg to \$USD.



USDT Tether

- USDT Tether is a stablecoin pegged to the \$US dollar. Tether's current market cap of almost \$80 billion makes it the third-largest cryptocurrency in the ecosystem behind Bitcoin and Ethereum.
- Tether began 2020 with a market cap below \$5 billion, and just over 2% of the total supply was held in smart contracts.
- As the DeFi ecosystem continues to expand, we've seen USDT percent supply held in smart contracts surpass 20% in 2022.

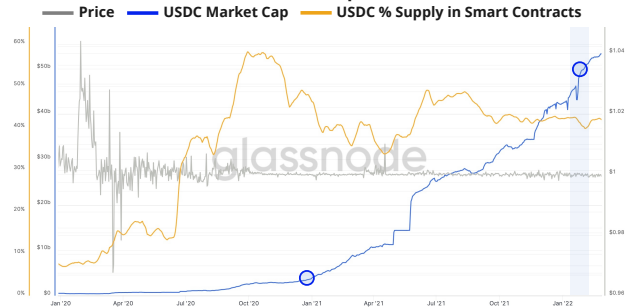
USDT Market Cap Growth



USDC Stablecoin

- In January 2021, the USDC stablecoin market cap was \$3.5 billion, and in February of 2022, the market cap exploded to \$53 billion. More than \$1.8 trillion USDC is settled on-chain, and we expect this number to only increase.
- Since 2020, the percent of USDC deposited in smart contracts is almost 40% of the total supply in circulation.

USDC Market Cap Growth



DAI Stablecoin

- The Maker protocol allows users to mint the \$DAI stablecoin by depositing collateral in smart contracts. Using ETH or wBTC ("wrapped" BTC on Ethereum), investors can trustlessly borrow against their assets to earn yield in DeFi without needing to sell their crypto for liquidity.
- In January 2021, the DAI stablecoin market cap was \$1.1 billion, and in February of 2022, the market cap eclipsed \$10 billion.

DAI Market Cap Growth



Bitcoin

- Bitcoin surpasses the Russian Ruble and Thai Baht, making it the 14th largest global currency by market cap; number 13 is the Swiss Franc.
- More than \$1 million in Bitcoin donations were received by Kyiev-based non-profit, Come Back Alive. The charitable foundation says funds will be used to help protect Ukrainian soldiers.
- Senator Kamlager introduces a new Senate Bill recognizing Bitcoin as legal tender in California.
- The Ontario Superior Court of Justice orders crypto wallet provider Nunchuk to freeze and disclose information about digital assets involved in the recent Freedom Convoy 2022 movement. The company advised the court of justice to "please look up how self-custody and private keys work."

Ethereum

- The Ethereum network surpasses \$10 billion in total revenue generated in 6.5 years; this achievement was accomplished half the time it took Amazon.
- Decentralized staking protocol, Rocket Pool now accounts for 1% of the total validators on ETH 2.0. They have surpassed 100,000 ETH staked as total ETH 2.0 validators exceed 300,000.
- Matter Labs releases the first-ever EVM-compatible ZK rollup on testnet. This breakthrough in ETH L2 scaling expands functionality for application developers in a low-fee ecosystem cryptographically.
- Web browser Opera becomes the first mobile browser with an Ethereum Layer 2 wallet. Integrating with DiversiFi, Android mobile users can access instant transactions with 100x cheaper fees than L1.
- Ethereum hashrate reaches a new all-time high of 1,137 TH/s.

Layer 1's

- Jump Crypto and Three Arrows Capital lead a \$1 billion round from the LUNA Foundation Guard (LFG). Proceeds from the raise will establish a Bitcoin-denominated Forex reserve for \$UST.
- The highly anticipated AMM protocol Solidly surpasses \$2 billion in TVL on the Fantom blockchain.
- NBA Hall of Famer, Shaquille O'Neal, switched his Twitter profile from SHAQ.ETH to SHAQ.SOL. With 15.6 million followers, he also held a Twitter Spaces with Solana's leading NFT marketplace, Magic Eden.
- Digital payment platform Wirex announces support for the Avalanche blockchain. The platform currently supports more than 4.5 million users and will allow Avalanche investors to spend their \$AVAX at more than 61 million locations worldwide.

Other

- European Union removed Russian banks from the Society for Worldwide Interbank Financial Telecommunication messaging system (SWIFT). This led to Russian Ruble falling 30% vs. \$USD.
- Ukraine accepts Bitcoin, Ethereum, and USDT (Tether) donations to help support civilians and troops. The Vice Prime Minister of Ukraine, Mykhailo Fedorov, shared three crypto addresses on Twitter.
- The Ukrainian address received more than 99,000 donations worth over \$47.7 million in BTC, DOT, and ERC-20 tokens.
- Popular hardware wallet manufacturer Ledger introduced a debit card called the Crypto Life card. Users will be able to open a line of credit using their assets as collateral.
- Coinbase's Q4 earnings reported monthly transacting users grew from 2.8 million in Q4 2020 to 11.4 million in Q4 2021. Trading volumes also rose from \$89 billion in Q4 2020 to \$547 billion for Q4 2021.
- CEO of popular eCommerce platform eBay looks to crypto payments as an option for users.

Hashrate: A measure of the computational power per second used when mining Bitcoin or other proof of work cryptocurrencies. More simply, it is the speed of mining. It is measured in units of hash/second, meaning how many calculations per second can be performed.

Alt-Season Indicator: This indicator is based on a proprietary model that helps us identify the current market phase and adjust the allocation accordingly.

Relative Liquidity: In financial markets, the degree of liquidity measures how quickly an asset can be sold without negatively impacting the price of an investment.

Supply Staked: Measures the amount of the digital assets locked up with network "validators" or miners that process the protocol transactions. "Stakers," aka investors that stake, can earn coins as rewards in exchange for securing the network.

Supply on exchange: Historically, the growth of the exchange supply has been a proxy for negative sentiment since a larger supply is available to be sold on the market. The opposite holds; when supply is being moved off exchanges, investors are shifting the investment horizon towards the long-term, and there is less supply available to be sold.

DEX (Decentralized Exchange): This **user-to-user marketplace** connects cryptocurrency buyers and sellers. Decentralized platforms are non-custodial, meaning users remain in control of their private keys when trading on a DEX platform.

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.

Ethereum Validator: Ethereum validators represent long-term token holders who provide security to the network and, in exchange, receive a share of the block rewards on the Beacon chain. A validator must deposit 32 ETH to the Ethereum staking contract and be responsible for storing data, processing transactions, and adding new blocks to the Beacon chain.

Rollups: A scaling solution that performs transaction execution outside the layer one Ethereum chain but posts transaction data to layer one. Rollups maintain the security of Ethereum layer one but offer faster execution and cheaper transaction fees.

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