

Key Takeaways

- In regards to hikes, markets continue to be more optimistic than reality
- Probabilities for the year-end terminal rate stands at 4.50-4.75%
- Strains in the Forex markets rise as the dollar continues to strengthen

Traditional Market Commentary

Seems like the Fed has hit the repeat button every time a meeting comes up, and investors don't like it. Markets were range bound last week prior to the Fed's decision Wednesday, expecting a 75 bp hike and more of the same hawkish comments conveyed. Fed did go with 75 bps, and Fed Chairman Powell reiterated the anticipated somber comments during the post-decision press conference. As the labor market remains relatively strong and the general economy seems to absorb the recent rate hikes well, the same strategy of higher rates to cool inflation will be here to stay. Futures traders priced in another 75 bp hike at the FOMC's next meeting early November, followed by 50 bp at the mid-December meeting. This brings the year-end terminal rate range to 4.25% to 4.50%, a range higher than the 4% level priced in just last week. After one more hike of 25 bp at the beginning of February, the terminal rate will be at 4.50-4.75% for the rest of 2023. Seems like bad news is good news these days with investors finally accepting that a soft landing might be firming up with some turbulence ahead.

Equities turned lower following the Fed decision with the S&P 500 index dropping about 200 points to the 3650 level, a revisit to last June, then back to December 2020 before that. Goldman Sachs lowered their year end S&P 500 index target to 3600 from 4300. Volatility hit interest rates hard with the 10 year rising almost 40 bps to the 3.9% level through the weekend, a first since early 2010. Week to week yield curve 80.00 change saw a minimum 40 bp rise from the 2 year through the 10 year points of the curve. The 2 year treasury yield mirrored short term rate sentiment reaching beyond the 4.3% level, an occurrence last seen in September 2007. The 20 and 30 year points of the curve rose around 20 bps. The 2 and 10 year treasury yield spread revisited historic lows below -50 bp.

Forex is also being strained as the dollar strengthened following last week's news. Euro has well crossed parity at 96 cents, while the Pound reached historic lows now at the \$1.05 level. Oil futures might find some support as winter approaches and many uncertainties lay ahead, especially for Europe. Brent oil futures currently at \$84 per barrel, back to January levels.

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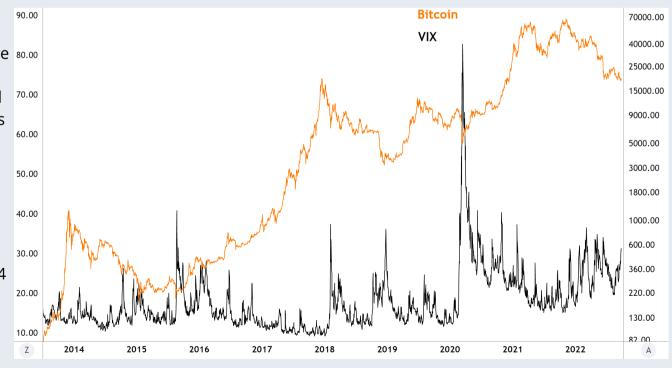
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Returns (%) **YTD Indices Ticker** Price (\$) 1 week 1 month 3 month 1 year **S&P 500** SPX 3693 -4.65 -8.98 -5.59 -22.51 -17.11 -6.56 Nasdaq 100 NDX 11311 -4.64 -10.27 -30.69 -26.21 -11.59 -4.88 -25.20 -25.29 Russell 2000 **RUT** 1679 -6.60 -18.57 DJI 29590 -4.00 -8.34 -6.06 -14.97 Dow Jones Ind. **Commodities** -18.64 4.57 4.63 **Crude Oil** CL1 78.87 -7.57 -28.16 **Brent Crude** BRN00 85.04 -7.29 -17.40 -23.49 9.17 8.22 **Natural Gas** NG00 6.81 -13.45 -26.46 6.59 89.80 16.29 **Unleaded Gas** 2.30 -15.20 3.89 6.45 **RB00** -6.61 -38.63 Gold 1654.80 -9.27 -9.59 -5.42 GC00 -1.79 -5.41 Silver SI00 18.84 -3.70 1.67 -10.91 -19.31 -16.74 -7.77 -25.50 3.23 -5.76 -11.45 -22.36 Copper HG00 13.59 C00 673.00 -0.74 -1.46 3.14 24.80 Corn Wheat W00 873.50 5.34 3.71 -4.93 13.40 20.82 **Bloomberg** Commodity **BCOM** 111.83 -4.21 -10.25 -7.82 12.77 12.99 Index 19054.09 1.90 -4.43 -7.54 -58.54 -55.62 **Bitcoin**



Source: TradingView

News Review

- Nasdag is Preparing to Launch an Institutional Crypto **Custody Service**
- CFTC Penalizes Blockchain Protocol \$250K, Files Action **Against Successor DAO**
- Saylor's MicroStrategy Buys \$6M More Bitcoin, Now Holds 130.000 Total
- Coinbase CEO: Crypto is Up there with Chips and 5G as a Matter of 'National Security'
- Colorado Becomes First US State to Accept Bitcoin as Payment for Taxes
- US House Stablecoin Bill Would Put Two-Year Ban on Terra-Like Algorithmic Coins
- Binance Completes the Integration of BUSD on the Avalanche & Polygon Networks
- Stablecoin Issuer Tether Ordered to Produce Documents
 Showing Backing of USDT by USD. Showing Backing of USDT by US Judge in New York
- Visa and ConsenSys Back Fraud Detection Platform
 Sardine's \$52 Million Bairs Sardine's \$52 Million Raise
- Nova Labs Inks Agreement With T-Mobile to Cover 5G Dead
 Spots in Helium Natural Spots in Helium Network
- Zilliqa Blockchain Network to Launch Web3 Games
 Console In Farly 2022 Console In Early 2023
- Alameda to Repay \$200 Million in Crypto to Bankrupt
 Crypto Lander Voyages Crypto Lender Voyager
- Crypto Market Maker Wintermute Hacked for \$160M, OTC Services Unaffected
- Coinflex Plans to Give 65% of Company to Creditors as Part of Restructuring Proposal



Returns (%)

Key Takeaways

- Bitcoin is set to close flat on the quarter with strong Ethereum outperformance
- As Ethereum has shifted away from Proof-of-Work, Bitcoin's hash rate pushes ATH
- Digital assets hold their current ranges, raising the likelihood of mean reversion

On-Chain Commentary

As Q3 comes to a close, Bitcoin and Ethereum hold a quarterly performance of -1.0% and +22%, respectively. Despite a flat quarter, Bitcoin's hash rate has continued to push new all-time highs over the past few weeks as miners continue to build out previously planned and paid for infrastructure.

Merge-related speculation has fueled strong outperformance in Ethereum throughout the quarter. Since 2013, Q2 and Q4 have historically been the best performing quarters for Bitcoin, on average. Aside from this year, Ethereum has historically performed best in Q1 and Q2. Much like Bitcoin post-halving, Ethereum's post-Merge annual supply reduction from 4.0% to 0.0% may take weeks or months to have an effect on price.

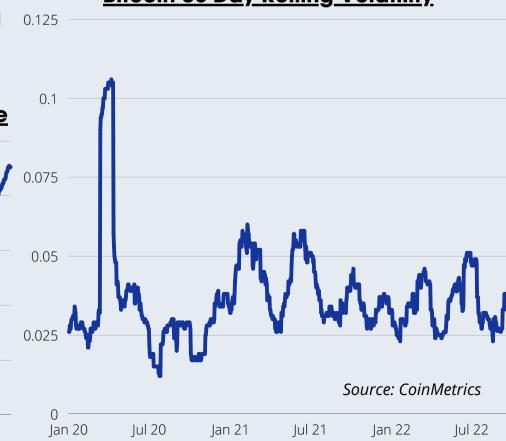
Despite the extreme forex volatility recently, both Bitcoin and Ethereum continue to hold near historic levels of price accumulation in prior bear markets. The 200-week moving average, previous all-time high, and realized price, or aggregate average price of all coins moved on-chain sit within this range for Bitcoin and Ethereum. Throughout Q4, so long as no lower price lows beyond the June and July lows are achieved, the likelihood of a mean reversion attempt to the 200-day moving average for many digital assets continues to increase. Alternatively, Fibonacci extensions for lower lows on Bitcoin and Ethereum point to the \$13,000 to \$15,000 and \$850 to \$1,050 ranges, respectively.

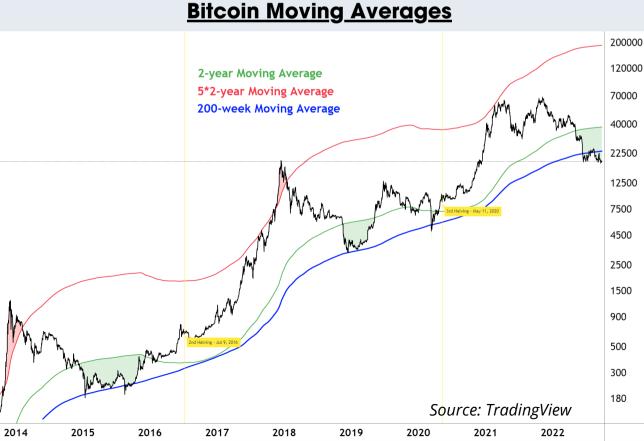
0EH/s

Bitcoin Fear and (Greed Index	Bitcoin Month
Multifactorial Market Ser	ntiment Analysis	250EH/s
21		200EH/s
		150EH/s
B		100EH/s
Last Week: 21 Las	st Month: 28	50EH/s









Annualized

Please see important disclosures on last page.

Source: Alternative.me

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Key Takeaways

- Institutional lender Maple Finance has issued almost \$2b in on-chain loans since inception
- With permissioned lending pools, Maple has attempted to bridge the old world and the new
- Of all crypto lenders, Maple Finance successfully weathered the liquidity crisis earlier this year

Decentralized Finance (DeFi) Commentary

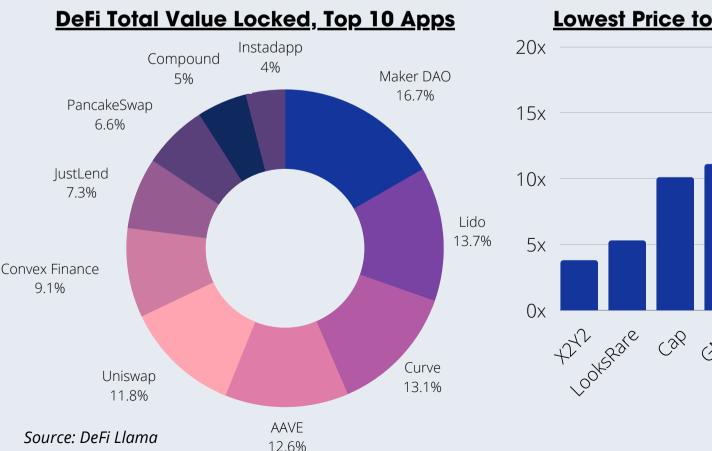
Institutional on-chain crypto lending protocol Maple Finance has facilitated almost \$2 billion worth of loans since launch in May 2021 and currently holds \$345 million in deposits. The decentralized lending platform was founded in 2019 and has launched permissioned liquidity pools requiring KYC/AML. This approach bridges similar vehicles in financial markets to the DeFi ecosystem. Along with implementations on Ethereum, the protocol acquired Avari in January 2022 to also eventually launch on the Solana blockchain.

Earlier this month, Maple Finance announced its partnership with Icebreaker Finance, launching \$300 million of secured debt financing to public and private Bitcoin mining farms. Additional documentation and transparency is required for non-publicly traded companies. This partnership attempts to offer 20% APY loans to miners and deliver returns in the low teen percentages. The loans secured to physical and intellectual assets owned by the borrower. For miners, this means Bitcoin mining equipment like ASICs.

Maple Finance is one of the few crypto lenders that has survived through the high strain environment earlier this year after the blow up and contagion of algorithmic stablecoin TerraUSD, Three Arrows Capital, and Celsius. On June 20th, Maple did announce an increased lag time in repayment to borrowers but was able to successfully weather the liquidity crisis.









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Stablecoin Origins & Purpose

Stablecoins are a sector of cryptocurrencies which attempt to peg value to \$1, typically using an external reference, such as USD or EUR. The main types of stablecoins include; fiat-backed, \$200b crypto-backed, algorithmic, or hybrid collateralization.

Tether (USDT) was initially created in 2014 to act as a potential hedge against market volatility, as well as increasing the transferability and convertibility of fiat currencies to cryptocurrencies. Tether's usage and supply grew substantially throughout the 2017 Bitcoin bull run, which significantly increased adoption of USDT trading pairs on crypto exchanges. As scrutiny increased over Tether's reserves, competing projects like Circle's USD Coin (USDC) arose with a focus on increased transparency. Today, most fiat-backed stablecoins, including Tether, release monthly reserve attestations.

Fiat-Backed

The two largest stablecoins by circulating supply, USDT and USDC, are both backed by USD reserves and/or USD equivalents held in third-party financial institutions. Issuing these types of stablecoins directly from the servicer also requires KYC/AML compliance and minimum capital requirements.

Crypto-Backed

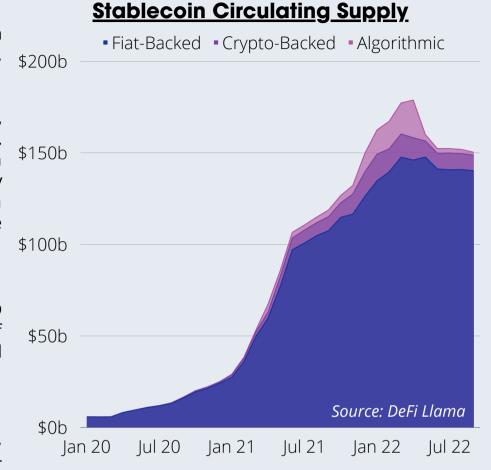
Crypto-collateralized stablecoins require on-chain management with the use of smart contracts, which also allows for 100% transparency of reserves and collateralization levels. Most crypto-backed stablecoins do not have KYC/AML or minimum capital requirements for initialization but do require overcollaterization of loans to buffer against market volatility. If these loans fall below the required collaterization level, they are liquidated.

<u>Algorithmic</u>

Of all stablecoin types, algorithmic or seigniorage-style stablecoins have had the most difficulty maintaining a \$1 peg, historically. This stablecoin type does not require collateral and are managed on-chain via smart contracts. Algorithmic stablecoins *will* increase or decrease the circulating supply to maintain stablecoin value.

Tether Redemptions & Reserves

Tether has now experienced about \$19 billion in redemptions, approximately 20% from the peak, since the Terra and UST algorithmic stablecoin implosion in mid-May. Earlier this year, Tether saw increasing scrutiny regarding the components of it's reserve holdings, including a nearly 25% slice of commercial paper. Going forward, Tether will be replacing the MHA Cayman accounting firm with BDO Italia and will publish monthly attestations of stablecoin reserves. According to the latest attestation of reserves, commercial paper holdings have declined to 12% of the total reserves. Tether has said they plan to reduce these holdings to zero by the end of the year, as well as plans for a full audit through BDO Italia.





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Fiat-Backed	Ticker	Supply (\$, bn)	Launch	Chain
Tether	USDT	67.95	Sept '14	Multi
S) Circle	USDC	48.75	Sept '18	Multi
Binance	BUSD	21.05	Sept '19	Multi
TrueUSD	TUSD	1.01	Jan '18	Multi
Paxos	USDP	0.97	Sept '18	ETH, BSC
Gemini	GUSD	0.31	Sept '18	ETH
Huobi	HUSD	0.16	Nov '18	ETH, SOL
Crypto-Backed	_			
MakerDAO	DAI	6.46	Dec '17	Multi
Abracadabra	MIM	1.81	May '21	Multi
Siquity	LUSD	0.17	Apr '21	ETH
\$ Synthetix	sUSD	0.14	Dec '18	ETH, FTM
\$ mStable	mUSD	0.05	May '20	ETH
Algorithmic				

Algorithmic

Frax	FRAX	1.35	Dec '20	Multi
Neutrino Neutrino	USDN	0.12	Oct '19	Multi
Fei USD	FEI	0.06	Dec '20	ETH
TerraUSD	UST	0.00*	Sept '20	Multi



On-Chain Commentary, Decentralized Finance (DeFi) Commentary, Traditional Market Commentary: Source: Valkyrie Investments, Inc.

Coin Prices, Market Capitalizations, and Returns: Source: Valkyrie Investments, Inc., TradingView, Messari. All returns represent total return for stated period. Coin Logos: Source: cryptologos.cc

Annualized Issuance, Staking Yield, Volatility, and Sharpe Ratio: Source: Valkyrie Investments, Inc., Messari, StakingRewards.com. ETH staking rewards values are representative of the network post-Proof-of-Stake transition.

Bitcoin Fear and Greed Index Source: Valkyrie Investments, Inc., alternative.me and represents a multifactorial sentiment analysis index of volatility, market momentum and volume, social media, bitcoin market cap dominance, and Google trends

Bitcoin Monthly Average Hashrate, Bitcoin 30-Day Rolling Volatility: Source: Valkyrie Investments, Inc., CoinMetrics

Bitcoin Weekly Moving Averages: Source: Valkyrie Investments, Inc., TradingView - INDEX:BTCUSD

Stablecoin Origins & Purpose, Fiat-Backed, Crypto-Backed, Algorithmic, Tether Redemptions & Reserves: Valkyrie Investments, Inc., Tether Operations, CoinMetrics, Circle, and Paxos

Stablecoin Circulating Supply: Source: Valkyrie Investments, DeFi Llama - list and examples shown are non-exhaustive, intended for illustrative purposes only.

Stablecoin Net Exchange Flow: Source: Valkyrie Investments, Inc., Nansen and represent wallet inflows and outflows of Tether, USD Coin, Binance USD, PAX, and Huobi USD through crypto exchanges, including but not limited to; Binance, Curve.fi, AnySwap, Crypto.com, Uniswap, Hop Protocol, OKEx, Kucoin, dYdX, Coinbase, Kraken, Huobi, FTX, Gemini, FTX US, CoinList, SushiSwap, Gate.io, Balancer, BitMEX, Bitfinex, Binance US, Bitstamp, BlockFi, Paxos, Celsius, Alameda OTC, Poloniex, HitBTC, Bancor, Kyber, and ShibaSwap.

List and examples shown in the Stablecoin table are non-exhaustive, intended for illustrative purposes only. Chain data sourced from CoinMarketCap. "Multi" description can include Ethereum, Solana, Binance Smart Chain, Algorand, Tron, Fantom, Polygon, Avalanche, Arbitrum, Secret, Terra, Moonriver, Velas, and Harmony. Coin Logos: Source: cryptologos.cc

DeFi Total Value Locked, Top 10 Chains, DeFi Total Value Locked: Source: Valkyrie Investments, DeFi Llama - list and examples shown are non-exhaustive, intended for illustrative purposes only.

Top Protocol Revenue, Past Week, Lowest Price to Earnings Ratio, Past Week: Source: Valkyrie Investments, Token Terminal - list and examples shown are non-exhaustive, intended for illustrative purposes only.

Decentralized Exchange (DEX) Volume: Source: Valkyrie Investments, Dune Analytics - Defined as total reported volume for the specified DEX in the specified time period. "Other" category includes the following DEXs: airswap, Bancor Network, clipper, DDEX, DefiPlaza, DFX Finance, DODO, dYdX, Gnosis Protocol, IDEX, Indexed Finance, Kyber, LINKSWAP, Loopring, mStable, Oasis, PowerIndex, Shell, xSigma

"Indicies" prices and returns: Source: Valkyrie Investments, Inc., MarketWatch. "S&P 500" provided by Standard & Poor's and is a stock market index tracking the performance of 500 large companies listed on stock exchanges in the United States, "Nasdaq 100" provided by NASDAQ OMX Group and includes 100 of the largest domestic and international non-financial companies listed on the Nasdaq Stock Market based on market capitalization. "Russell 2000" provided by FTSE Russell and is a small-cap stock market index that makes up the smallest 2,000 stocks in the Russell 3000 Index. "Dow Jones Ind." provided by S&P Dow Jones Indices and is a price-weighted measurement stock market index of 30 prominent companies listed on stock exchanges in the United States. "Gold" provided by NYMEX - CME Group and is a continuous futures product. All returns represent total return for stated period.

"Commodities" prices and returns: Source: Valkyrie Investments, Inc., Wall Street Journal. Bloomberg Commodity Index provided by Bloomberg and tracks prices of futures contracts on physical commodities on the commodity markets. All returns represent total return for stated period.

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