

RWM WisdomTree Crypto Index Update

As of 9/30/22

This has not been a good year for digital assets.

Quite frankly, it has been a challenging year for all asset classes as we have seen market turmoil and drawdown fueled by inflation, tightening monetary policy, war, supply chain issues, as well as political unrest – each with its differing levels of impact depending on where you are on the globe.

In crypto, we've seen the selloff exacerbated by 'contagion' from insolvent crypto institutions earlier in the year, revealing unbeknownst counterparty risk within the ecosystem.

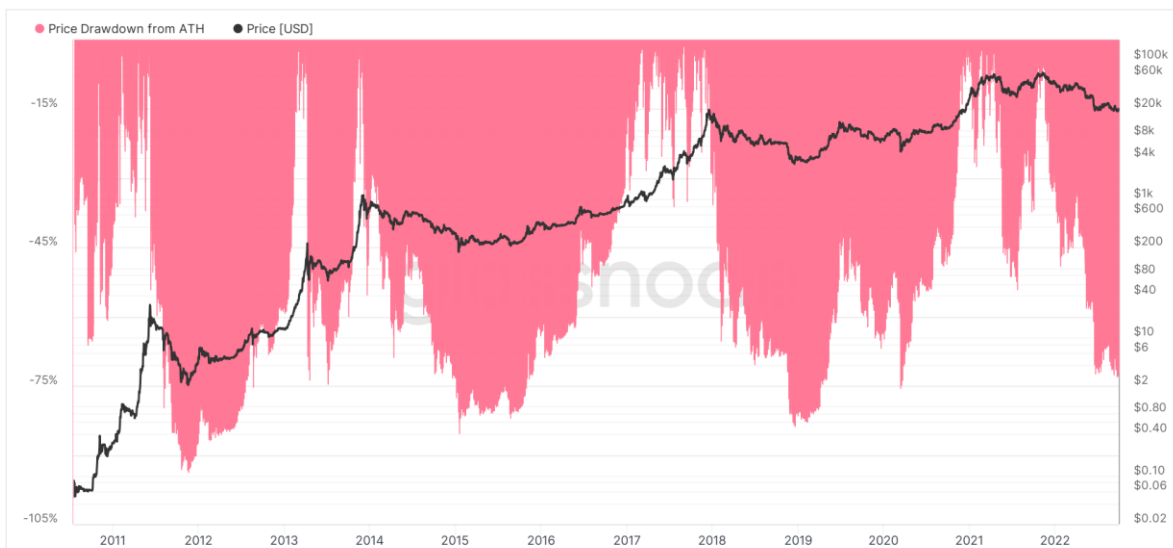
In late June and early July, we saw a rally from the bottoms as the market became optimistic for a 'Fed Pivot'. This optimism dissipated more recently as global central bank commentary (and action) remained hawkish, emphasizing the need to stamp out inflation, even at the risk of leading the economy into recession. As global monetary policy has been a key driver for asset-pricing this year, crypto has traded in line with other high duration risk assets.

Keeping things in perspective, we must be reminded that a 'crypto winter' isn't anything new for the crypto market. In the past decade, there have been multiple instances of drawdowns exceeding 80% before entering another bull run. At the time of writing, the broad crypto market is roughly down 70% from the all-time-high of over \$3 trillion USD, to now around \$950 billion.

These trying times of crypto blowups and contractionary periods are a great reminder for the reasons we diversify within our crypto allocation, structuring positions intelligently in projects with innovative, long-term use-cases.

The natural selection currently taking place is revealing the use cases and business models that are unsustainable and poorly capitalized. Survivors will likely be primed for the next bull run, digging their roots deeper, forming the foundation of the crypto ecosystem as it continues to evolve.

Bitcoin: Price Drawdown from ATH



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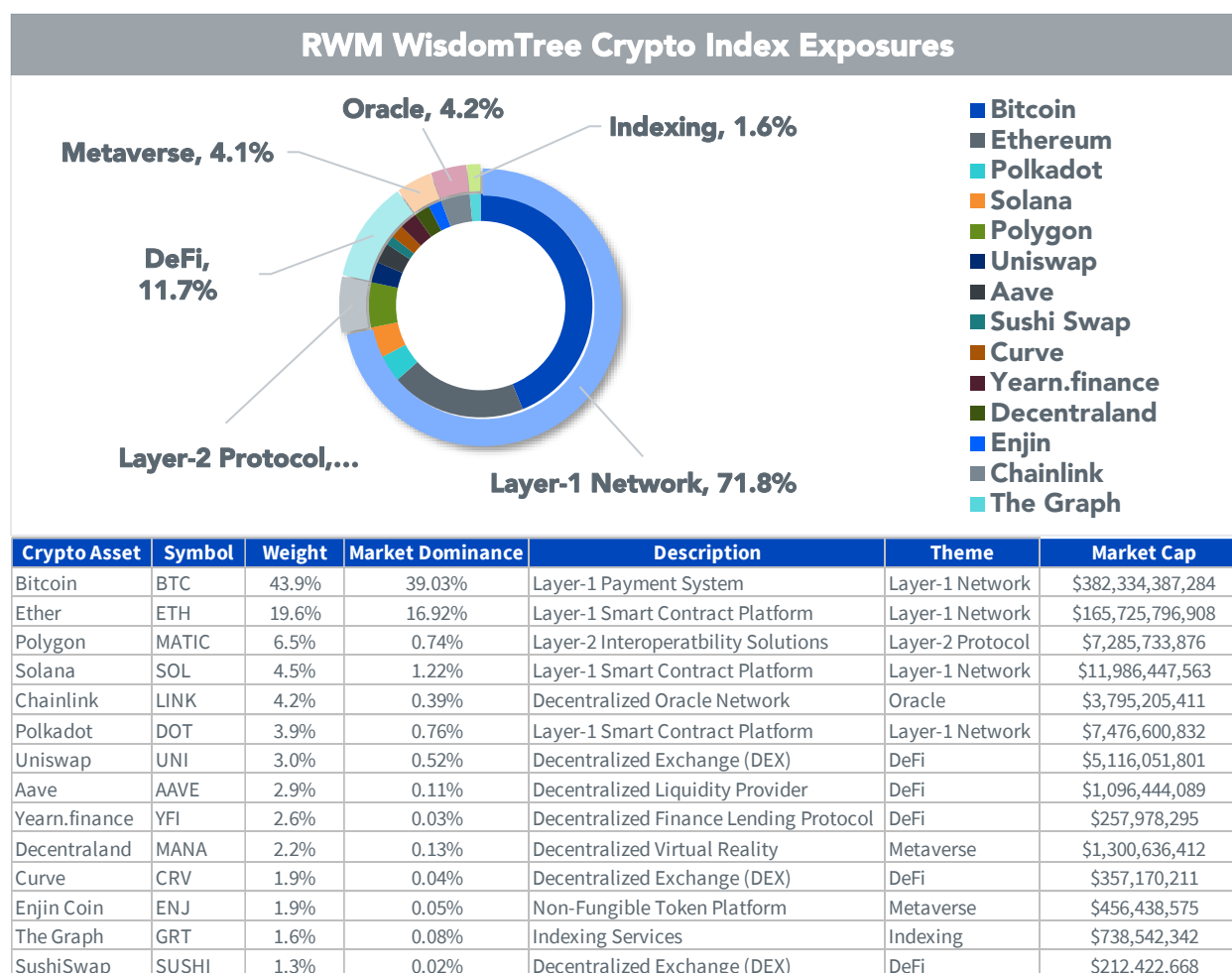
Source: Glassnode, as of 9/27/2022.

RWM WisdomTree Crypto Index

The RWM WisdomTree Crypto Index (RTREE) seeks to provide broad and diversified exposure to crypto assets (sometimes referred to as cryptocurrencies or crypto)¹, spanning the use cases we believe have true value and form the true foundation of the crypto ecosystem.

These include layer-1 networks (e.g. payment systems, smart contract platforms), layer-2 protocols (for interoperability and scaling), oracle networks, crypto indexing services, decentralized finance (DeFi), as well as the metaverse.

The Index includes crypto asset constituents through a methodology and process that considers use cases and importance to the crypto ecosystem. Each crypto asset either plays, or has the potential to play, an essential role within the crypto ecosystem and/or supplies necessary services for the crypto ecosystem to flourish. The current index exposures, performance, and changes to the index follow.



Source: WisdomTree, Messari, as of 10/3/2022. The Index was rebalanced on 9/30/2022. Weightings are subject to change.

¹ Crypto assets are complex, generally exhibit extreme price volatility and unpredictability, and should be viewed as highly speculative assets. Diversification does not eliminate the risk of experiencing investment losses. **Please see the Important Information at the end of this document.**

Index Changes

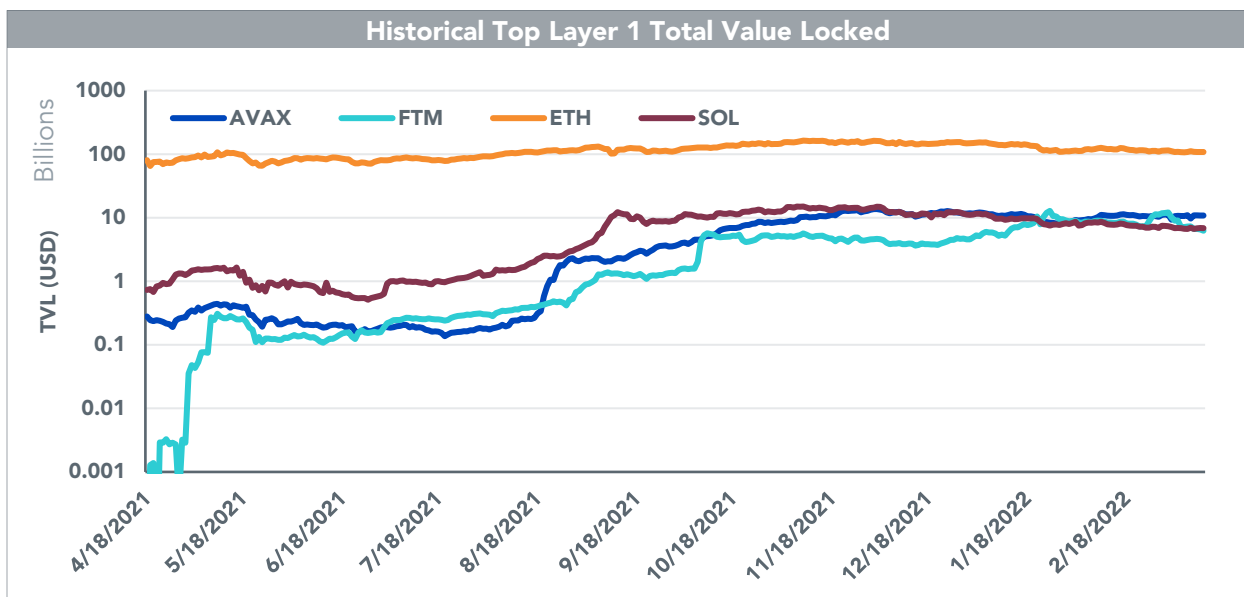
At inception, the index was allocated 36% to bitcoin, 20% ether, and 4% to the remaining ‘altcoins’.

There has been a broad market contraction since inception, with altcoins having suffered the most as they tend to have a high beta to bitcoin and ether. As a function of bitcoin contracting the least, its weight has increased significantly since inception.

Even with such large fluctuations, the index has remained well diversified, and even the altcoins have generally retained proper allocations. Reviewing the basket in our monthly committee meetings, we further diversified the basket by making two additions in March – Solana and Curve.

Solana is a layer-1 smart contract platform for decentralized applications featuring high throughput and low transaction costs. It serves as a competitor to Ethereum and other Layer-1 smart contract platforms, with its fast transactions speeds at low cost being its major advantage.

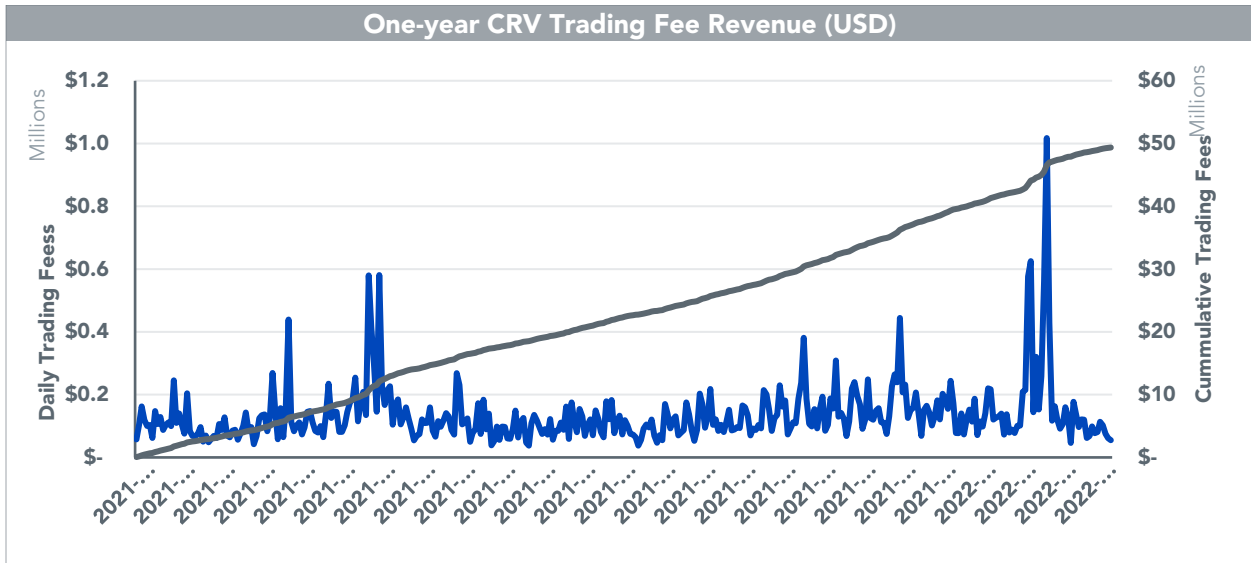
Furthermore, by tracking on-chain metrics such as overall transaction volume on the blockchain, as well as the amount of assets ‘locked’ into smart contracts, we observed strong indications of user growth and platform maturity.



Source: WisdomTree, DefiLlama, as of March 2022.

The second addition, Curve, is a decentralized exchange, more specifically an automated market maker (AMM). It offers an efficient way to exchange tokens while maintaining low fees and low slippage by only accommodating liquidity pools made up of similarly behaving assets. Integrating with many external DeFi protocols, it has become a popular source of liquidity in the crypto ecosystem, especially for stablecoins. At the time, Curve had the largest ‘Total Value Locked’ in the defi ecosystem, and remains in the top three as of writing with over 6B USD in its liquidity pools.

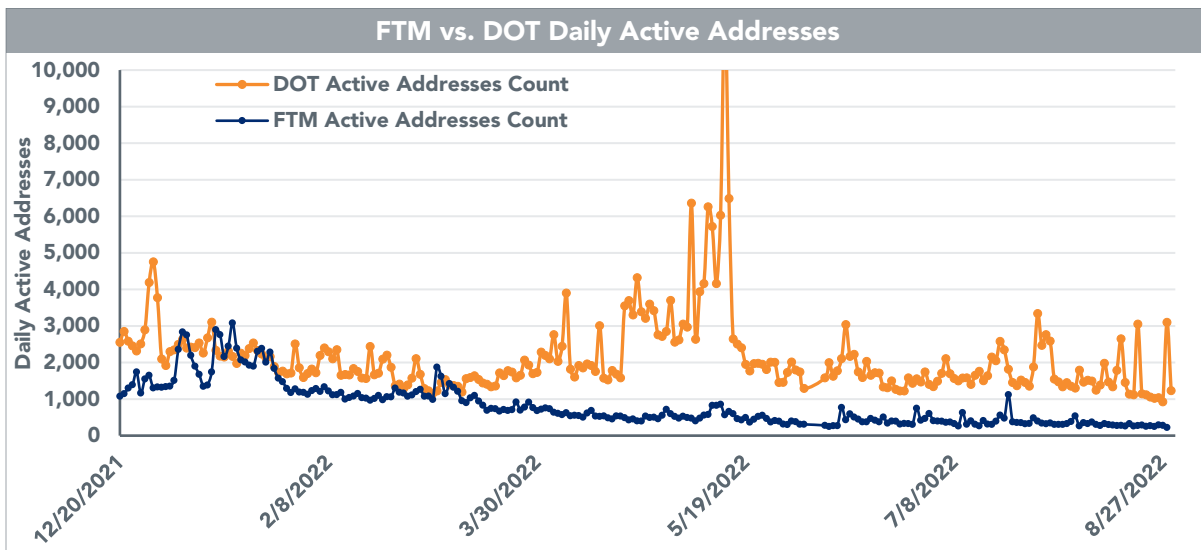
Curve not only serves an essential function in the defi ecosystem, but also has a unique incentive structure to reduce the circulating supply, as well as pay trading fees generated on the platform to those who are involved in governance.



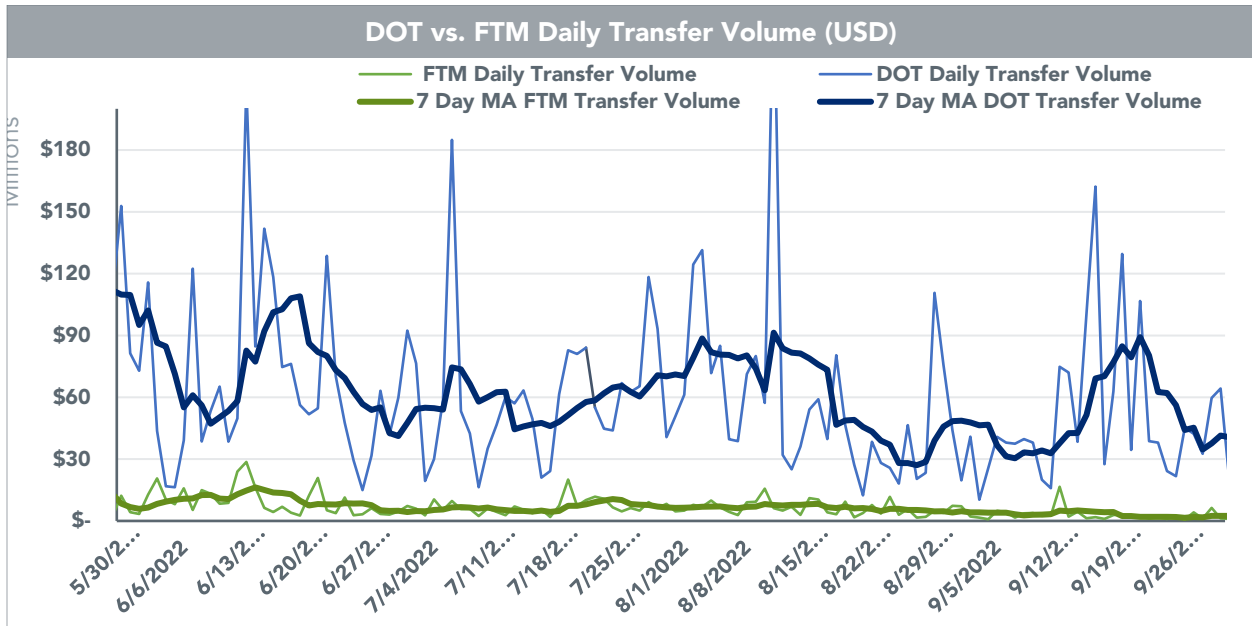
Source: WisdomTree, Dune Analytics, as of February 2022.

The latest change to the index has been more recent, this September, as more assets became available for custody. The committee approved a proposal to remove Fantom (FTM) and replace with Polkadot (DOT), reallocating weight from the overweight DeFi sector to add DOT at a weight of 4%. Both Fantom and Polkadot are Layer-1 Smart Contract platforms, but DOT has a market cap 10X to that of FTM, offering exposure to a market leader in the sector. The weight changes results in a 3% increase in exposure to Layer 1 Networks, and a 3% reduction in DeFi exposure, which is more closely aligned with the broad crypto market, reducing the active weight of the index.

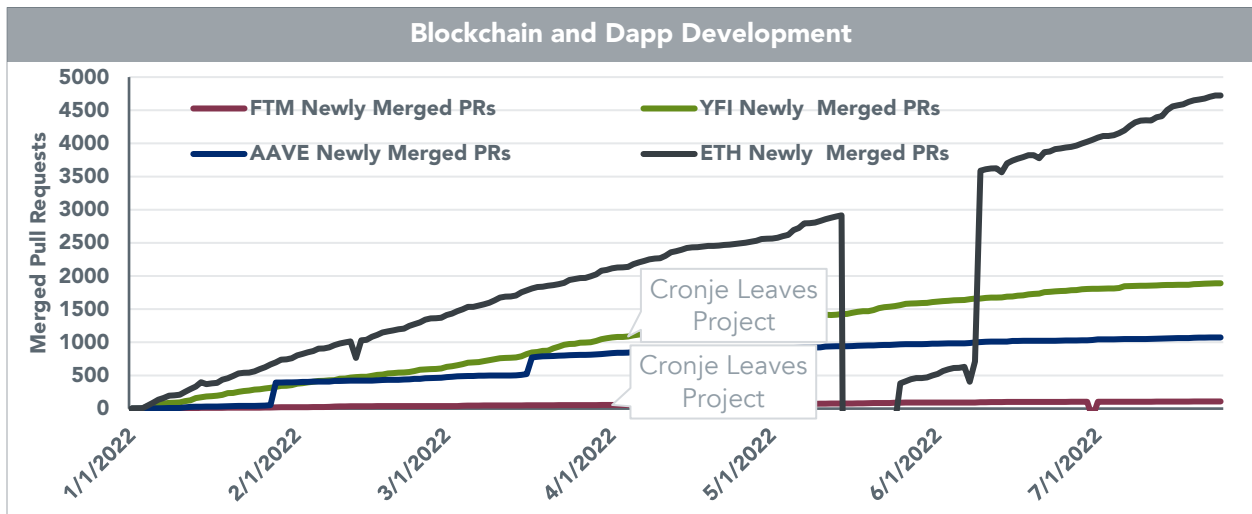
Furthermore, by reviewing various metrics, there were indications of DOT having a more user adoption (active addresses, transfer volumes) and ecosystem development (merged PRs) versus FTM, further justifying the swap.



Sources: WisdomTree, Polkadot.subscan.io, IntotheBlock, as of 8/29/22. Polkadot (DOT) data is sourced from Polkadot.subscan.io. Fantom (FTM) data is sourced from IntotheBlock.



Source: WisdomTree, Polkadot.subscan.io, IntoTheBlock, as of Sept 30, 2022. Polkadot (DOT) data is sourced from Polkadot.subscan.io. Fantom (FTM) data is sourced from IntoTheBlock. Dollar transfer volume calculated via the product of daily transfers and the prevailing price of the asset at the date of transaction.

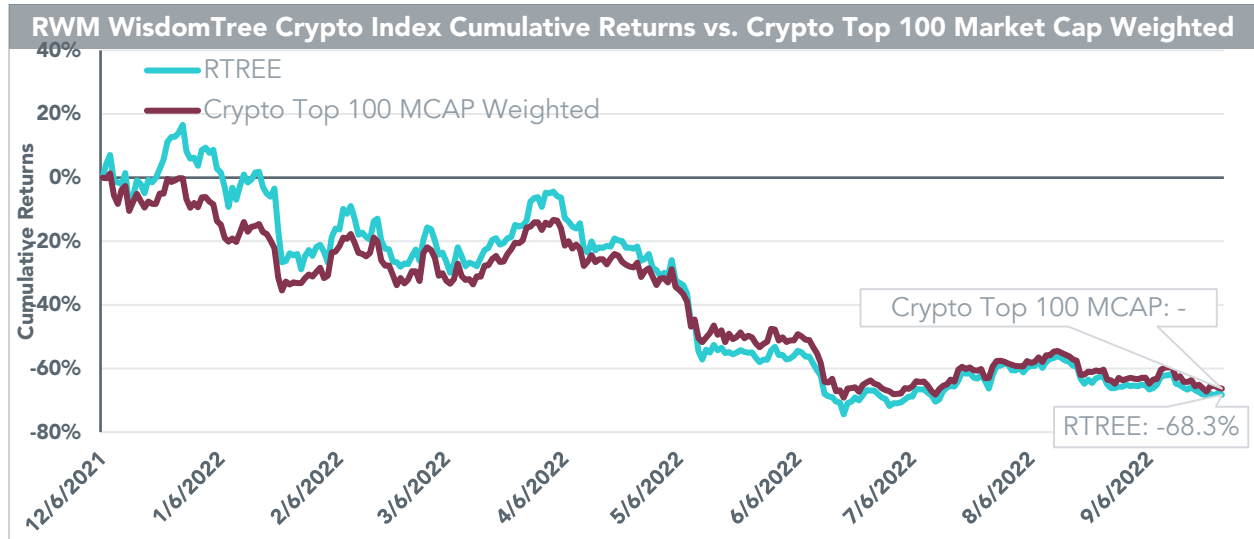


Source: WisdomTree, IntoTheBlock July 2022. Merged PRs are key software development milestones where code changes are made to the codebase. Andre Cronje is a prolific defi developer and founder of Yearn.Finance. He was involved in both FTM and Yearn.Finance development before leaving the projects in May 2022.

The additions have served the index well in terms of diversification, giving strengthened exposure layer 1 smart contract platforms and defi through their prominence in such key areas.

Performance, on the contrary, has been challenged throughout the wider digital asset ecosystem.

Performance Update



	Cumulative Returns							
	MTD	QTD	YTD	1MO	3MO	6MO	SI	
RTREE	● -7.9%	● 9.1%	● -70.8%	● -15.2%	● -4.0%	● -62.5%	● -68.3%	
Crypto Top 100 MCAP	● -9.2%	● 5.4%	● -64.1%	● -15.0%	● -7.2%	● -57.6%	● -66.3%	

Token	Symbol	Starting Weight 12/06/2021	Ending Weight 09/25/2022	Avg. Weight	Token Return SI	Token Return vs. Index	Total Return Contribution
Bitcoin	BTC	36.52%	43.39%	37.53%	-62.78%	5.49%	-22.72%
Ether	ETH	21.56%	19.89%	19.18%	-70.26%	-2.00%	-12.99%
Polygon	MATIC	5.49%	6.19%	5.10%	-67.55%	0.71%	-3.32%
Solana	SOL	0.00%	4.55%	3.27%	-83.32%	-15.05%	-2.63%
Chainlink	LINK	3.41%	4.53%	3.43%	-60.35%	7.92%	-2.00%
Aave	AAVE	3.31%	3.58%	3.16%	-60.14%	8.12%	-1.83%
Yearn.finance	YFI	3.65%	3.36%	3.44%	-66.16%	2.10%	-2.19%
Uniswap	UNI	3.76%	3.31%	2.74%	-67.35%	0.92%	-1.78%
Curve	CRV	0.00%	2.54%	1.64%	-76.11%	-7.85%	-1.20%
Decentraland	MANA	3.73%	2.27%	3.34%	-81.51%	-13.24%	-2.62%
Enjin Coin	ENJ	3.57%	1.98%	2.83%	-84.15%	-15.88%	-2.30%
The Graph	GRT	3.44%	1.66%	2.93%	-85.66%	-17.40%	-2.42%
SushiSwap	SUSHI	3.20%	1.65%	2.43%	-83.55%	-15.29%	-1.96%
Fantom	FTM	3.26%	1.11%	2.74%	-85.98%	-17.71%	-2.27%
Terra	LUNA	5.11%	0.00%	6.25%	-100.00%	-31.73%	-6.03%
Index	RTREE	100.00%	100.00%		-68.27%		-68.27%

Source: WisdomTree, Messari as of September 25, 2022. Performance is reflected prior to September rebalance. The RWM WisdomTree Crypto Index (RTREE) was rebalanced on September 30, 2022, which removed Fantom (FTM) and added Polkadot (DOT).

The RWM WisdomTree Crypto Index was not immune to the contraction that the market has seen since its inception last year. Year to date, the index is down nearly 70%, a few percentage points lower than the broader crypto market.

The reason for this is the index's natural overweight in altcoins.

Compared to the market cap weighted basket, bitcoin and ether allocations in the index have a natural, underweight with a combined weight of 50% at the start of the year, compared to a combined weight of 70% in the market basket.

This is required to make room for the altcoin exposures within other layer 1 and layer 2 blockchain solutions, as well as the metaverse, defi, and infrastructure. As mentioned above, the altcoins tend to have high beta to bitcoin and ethereum, resulting in additional volatility in these assets.

As a result, as the broad crypto market has sold off, the altcoins generally have not held up as well the two crypto 'blue-chips' bitcoin and ethereum. Even with struggling performance, our long-term conviction across the basket and broader crypto market has not wavered.

Beta to BTC Since Index Inception (12/06/2021)													
BTC	YFI	ETH	LINK	UNI	MANA	GRT	SOL	SUSHI	ENJ	CRV	MATIC	FTM	AAVE
1.00	1.14	1.14	1.20	1.24	1.27	1.30	1.31	1.34	1.39	1.41	1.41	1.43	1.50

Source: WisdomTree, Messari, as of 7/25/2022.

Looking Ahead

Remaining sanguine, the crypto market has resembled signs of bottoming through on-chain metrics even amidst strong macro headwinds. These indications are more pronounced when taking a long-term perspective towards investing in the asset class.

Two bitcoin metrics to follow are the Puell multiple, as well as the MVRV ratio.

The first is calculated by taking the USD value of daily bitcoin issuance over the average annual dollar value of issuance, offering a gauge on the profitability of bitcoin mining. Historically, when this ratio is low, it gives positive indications for adding to bitcoin positioning near cyclical bottoms.

Bitcoin: Puell Multiple



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Source: Glassnode, as of 9/27/2022.

Likewise, with the MVRV ratio, calculated as the market value of bitcoin over the realized value of bitcoin (the price at which each bitcoin was transacted at last rather than the prevailing market price) is reaching new lows.

This metric offers a proxy for valuation and has historically coincided with market tops and bottoms when reaching extreme z-score values.

Bitcoin: Market Value to Realized Value Ratio (MVRV)



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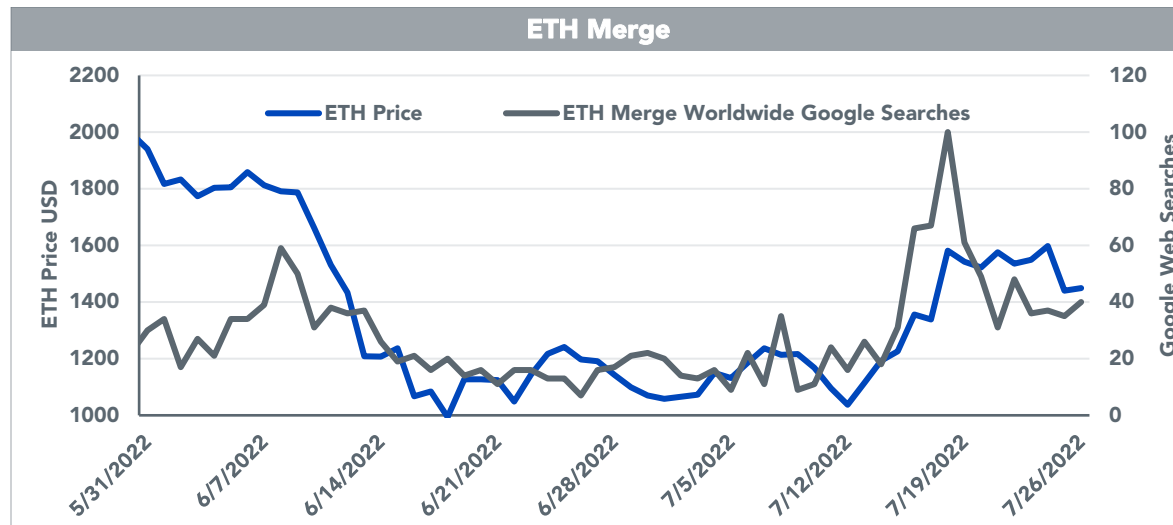
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Source: Glassnode, as of 9/25/2022.

For Ethereum, the long-awaited merge to Proof-of-Stake Consensus has led to increased interest in the cryptocurrency, as it traded higher the few weeks that precluded the official merge that took place on September 15th.

The bull case fueling the trading activity hinged on the changes in tokenomics – incentivizing staking, which would lock up supply and work in tandem with other characteristics that could have deflationary impact on the asset per [ultrasound.money](https://www.ultrasound.money).

Post-merge, ETH has sold off as traders took profits, but the long-term implications of the merge are quite optimistic.



Source: WisdomTree, Messari, Google Trends, as of 7/27/2022.

On the contrary, monetary tightening and recession fears have compressed prices as crypto has been trading with high correlation to tech stocks such as those in the Nasdaq 100. With crypto-specific metrics competing with those of the macro environment, to date, macro has been the clear winner in terms of driving pricing. As macro headwinds ease, we would expect positive indicators such as those above to lead to price recovery.

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IMPORTANT INFORMATION REGARDING CRYPTO ASSETS

There are risks associated with investing, including the possible loss of principal. Crypto assets, such as bitcoin and ether, are complex, generally exhibit extreme price volatility and unpredictability, and should be viewed as highly speculative assets.

Crypto assets are frequently referred to as crypto “currencies,” but they typically operate without central authority or banks, are not backed by any government or issuing entity (*i.e.*, no right of recourse), have no government or insurance protections, are not legal tender and have limited or no usability as compared to fiat currencies. Federal, state or foreign governments may restrict the use, transfer, exchange and value of crypto assets, and regulation in the U.S. and worldwide is still developing.

Crypto asset exchanges, liquidity providers, networks, protocols, settlement facilities, service providers and other participants in the digital asset ecosystem, and/or crypto assets related to the foregoing, may stop operating, permanently shut down or experience issues due to security breaches, fraud, insolvency, market manipulation, market surveillance, KYC/AML (know your customer/Anti-Money Laundering) procedures, non-compliance with applicable rules and regulations, regulatory investigations or orders, technical glitches, hackers, malware or other reasons, which could negatively impact the price of any cryptocurrency traded on such exchanges or reliant on a digital asset ecosystem participant or otherwise may prevent access or use of the crypto asset.

Crypto assets can experience unique events, such as forks or airdrops, which can impact the value and functionality of the crypto asset. Crypto asset transactions are generally irreversible, which means that a crypto asset may be unrecoverable in instances where: (i) it is sent to an incorrect address, (ii) the incorrect amount is sent, or (iii) transactions are made fraudulently from an account. A crypto asset may decline in popularity, acceptance or use, thereby impairing its price, and the price of a crypto asset may also be impacted by the transactions of a small number of holders of such crypto asset. Crypto assets may be difficult to value and valuations, even for the same crypto asset, may differ significantly by pricing source or otherwise be suspect due to market fragmentation, illiquidity, volatility and the potential for manipulation.

Crypto assets generally rely on blockchain technology and blockchain technology is a relatively new and untested technology which operates as a distributed ledger. Blockchain systems could be subject to internet connectivity disruptions, consensus failures or cybersecurity attacks, and the date or time that you initiate a transaction may be different than when it is recorded on the blockchain. Access to a given blockchain requires an individualized key, which, if compromised, could result in loss due to theft, destruction or inaccessibility. In addition, different crypto assets exhibit different characteristics, use cases and risk profiles.