cfbenchmarks

CF Diversified Large Cap Index

QUARTERLY ATTRIBUTION ANALYSIS

The CF Diversified Large Cap Index

The CF Diversified Large Cap Index - is a liquid, investible benchmark portfolio index designed to track the performance of large-cap digital assets. The index seeks to capture 95% of the total market capitalization of the investible digital asset universe as its constituents. Index constituents are weighted using the diversified market capitalization which is determined by the free-float market capitalization adjusted by the application of the harmonic series' terms. This has the benefit of discounting the higher capitalization assets within the portfolio in accordance with the CF Multi Asset Series Ground Rules and the CF Diversified Large Cap Index Methodology. The index is calculated and published every second. The index is re-constituted on a twice yearly basis and rebalanced quarterly. The CF Diversified Large Cap Index - was incepted on December 1st 2021 with a value of 1,000. The index was launched on February 14th, all values from inception date to launch date provided are back tested.

CF Diversified Large Cap Index

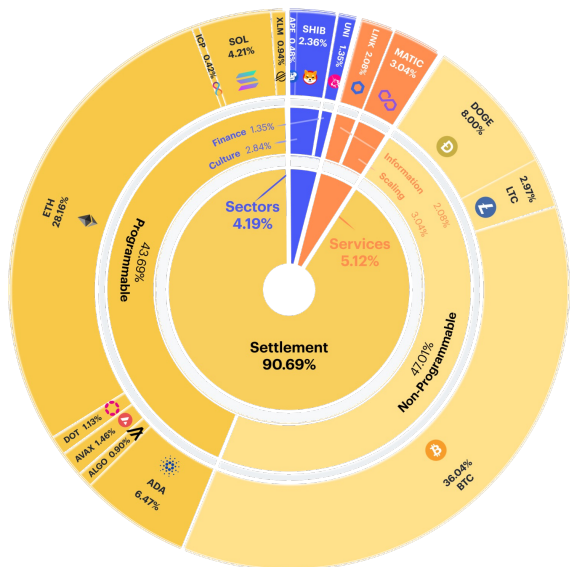Source: CF Benchmarks LTD., Bloomberg LP, as of December 1st, 2022

Deleveraging & contagion outweigh macro glimmers

Another exogenous shock has led crypto markets lower over the last rebalancing period as one of the world's largest exchanges surprisingly filed for bankruptcy. The CF Diversified Large Cap Index fell over -14.7% with pricing volatility surging in the month of November. The bear market that began earlier this year has only intensified after each over-levered institution or organization collapses. These failures have had a cascading impact on the overall asset class, with the falling prices of crypto markets sparking an industry deleveraging exercise, spreading contagion that leads to even further discounting of crypto assets.

Regarding the macroenvironment, risk sentiment has begun to look toward an eventual pivot or slowdown in monetary tightening. The most recent inflationary trends indicate that headline pricing pressures may have peaked in June. This dynamic is expected to be supportive of crypto markets, which face particularly pronounced headwinds from a rising interest rate environment. However, core inflation is likely to be more difficult to tame and the overall level of inflation is likely to remain above any acceptable threshold for some time. This has left crypto market participants in limbo when trying to balance the improving data on the inflation side and spill over impacts from the latest fallout of a major market player.
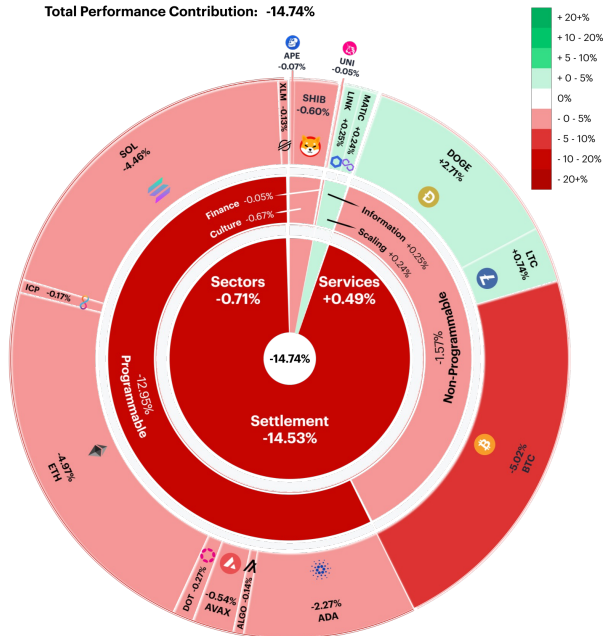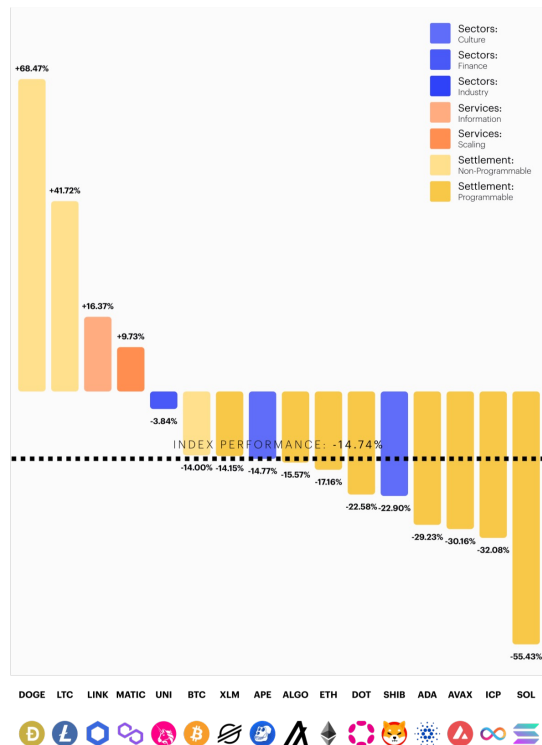
Settlement drags large-caps lower

Large-cap tokens continued on their downward trajectory, falling over -14%. From a Level 1 Digital Asset Classification Structure (DACS) perspective, the heavily weighted Settlement segment contributed most to the index's decline (-14.5%), with Solana providing a disproportionate amount of negative performance.

The Services segment saw a slightly positive performance contribution, and conversely, Sectors' contribution was slightly negative.

Source: CF Benchmarks LTD., as of December 1st, 2022

4

Absolute Performance

Index Performance: -14.74%

Source: CF Benchmarks LTD., as of December 1st, 2022

Dogecoin surges on Twitter take over

Non-programmable, Settlement altcoins led their peer group as Dogecoin finished the rebalancing period as the top performer. The popular meme coin saw a significant rally in price performance following Elon Musk's takeover of Twitter. Mr. Musk has been a frequent advocate for Dogecoin. Therefore, the fundamental catalyst for the bullish price action is centered on speculation that Mr. Musk will utilize Doge in some capacity in the Twitter 2.0 payments arena.
Litecoin, the fourth largest non-programmable token, soared after the announcement of a planned halving for mid 2023. This exercise will change the tokenomics of Litecoin by reducing the issuance supply for miners.

Solana (SOL) prices fell -55.4%, finishing the rebalance period as the worst performer. The Ethereum competitor saw steep price declines due to the fallout from FTX/Alameda where it was reported that the foundation had significant exposure to the now defunct crypto exchange. SOL now trades over 90% lower from its November peak.

cf benchmarks

Bitcoin continues search for bottom

The latest exogenous shock in the crypto industry has pushed bitcoin prices another leg lower, bringing the maximum drawdown from the 2021 peak to just over 76%. But how does this compare to previous bear market cycles?

To answer this question, one could consider using history as a guide. Bitcoin price action has impressively displayed similar drawdown characteristics over the course its existence. Since 2011, bitcoin peak-to-trough depreciations have averaged approximately -85%, with the 2011- 2013 cycle marking a record -93%. The fallout from FTX and subsequent contagion impacts have pushed this bear market cycle's low closer to the most recent historical threshold. Lastly, it is also worth noting that each bear-market cycle trough was slightly less deep than the prior, leaving the -83% level seen in 2018 potentially a stone's throw away

BTC reaching peak bearishness

CF BRR Index — Drawdown (%) (BRR)
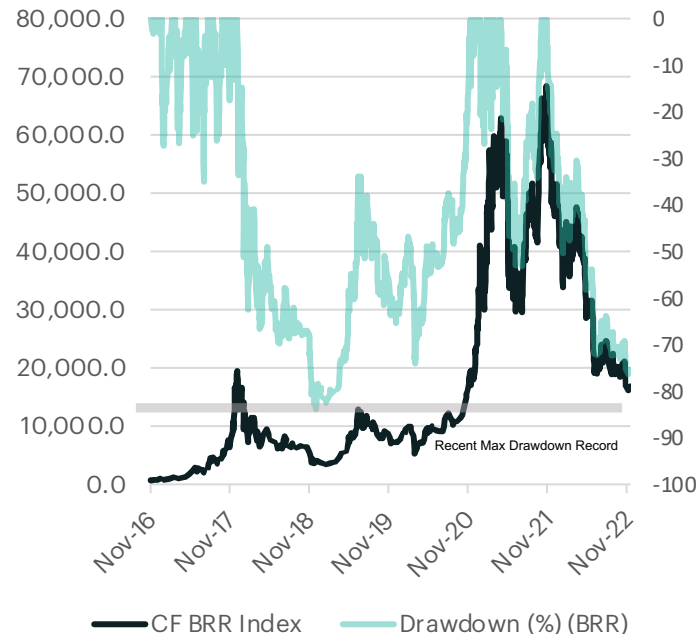
Source: CF Benchmarks LTD., Bloomberg LP, as of December 1st, 2022

What's Driving Crypto? Rolling 30-Day Large Cap Correlations

	Equities								Fixed Income									Currencies, Commodities, and Other								
	S&P 500 INDEX	NASDAQ 100 STOCK INDX	FTSE 100 INDEX	MSCI EUROPE	MSCI JAPAN	MSCI EM	MSCI WORLD	MSCI ACWI	US Generic Govt 3 Mth	US Generic Govt 2 Yr	US Generic Govt 5 Yr	US Generic Govt 10 Yr	2YR-10YR Yield Curve	5 YR Real Yield	Inflation Adjust Real Yield (10YR)	Global Aggregate	Global High Yield	DOLLAR INDEX SPOT	Gold Spot $/Oz	Crude Oil (WTI)	BBG Commodity Index	BBG Energy Index	BBG Industrial Metals	BBG Precious Metals	Cboe Volatility Index	Financial Conditions Index
Current 30-Day Correlation	0.14	-0.08	-0.31	-0.04	0.21	-0.66	0.02	-0.08	0.97	0.32	0.44	0.54	-0.94	0.14	-1.00	-0.55	-0.27	0.55	-0.81	0.75	-0.06	0.24	-0.70	-0.88	0.05	0.09
Previous 30-Day Correlation	0.83	0.88	0.85	0.89	0.57	0.42	0.83	0.82	-0.19	-0.77	-0.65	-0.63	-0.71	0.50	-0.26	0.79	0.90	-0.60	-0.05	0.28	0.82	0.79	0.88	0.43	-0.76	-0.55

The CF Diversified Large Cap Index has seen a sharp drop in its rolling 30-day correlation with equity markets. This is likely due to the asset-class specific challenges, which have been certainly are more impactful to crypto markets and less so for other risky assets. Meanwhile, crypto has maintained a sensitivity to rates market. However, the relationship has shift from nominal short-dated Treasuries to longer-dated inflation linked Treasury issues. It is likely that digital asset correlations will repair their relationship among their risky-asset peer group once industry specific uncertainty eases.

Source: CF Benchmarks LTD., Bloomberg LP, as of December 1st, 2022

Appendix: Market Performance Overview

Major Crypto-Pairs (USD)

Name	1 Day	1 Week	1 Month	QTD	YTD	90 D Volatiltity
Bitcoin	3.9%	3.8%	-16.2%	-15.3%	-63.1%	55.33
Ethereum	6.4%	10.9%	-17.1%	-17.4%	-64.8%	69.65
XRP	2.7%	8.2%	-10.2%	24.0%	-50.5%	81.54
Litecoin	2.3%	0.5%	43.3%	43.4%	-46.3%	77.95
Dash	-0.1%	-0.7%	3.5%	-4.3%	-67.8%	75.00
Zcash	9.1%	1.4%	-16.4%	-27.8%	-70.0%	75.36
Solana	3.2%	-2.1%	-57.5%	-57.0%	-91.9%	146.15
Avalanche	4.5%	2.1%	-31.0%	-32.7%	-88.1%	78.74
Polkadot	2.8%	1.0%	-17.6%	-23.1%	-79.5%	60.36
Doge	2.4%	29.6%	-16.3%	66.0%	-40.1%	106.79
Polygon	10.2%	9.4%	3.1%	11.0%	-63.2%	108.62
Chainlink	1.4%	15.7%	-6.9%	9.7%	-63.6%	77.85
Uniswap	6.8%	6.8%	-15.3%	-6.0%	-65.7%	84.26
Algorand	3.2%	1.8%	-30.6%	-15.1%	-85.1%	92.94
Cardano	1.7%	0.5%	-22.0%	-31.5%	-76.7%	50.52
Maker	2.4%	1.5%	-26.1%	-14.5%	-71.6%	87.35
Aave	6.9%	13.7%	-21.0%	-23.5%	-74.2%	78.34
Curve DAO Token	0.4%	-3.1%	-23.7%	-42.1%	-87.4%	112.57
Axie Infinity	1.9%	1.5%	-24.5%	-52.1%	-89.1%	83.03

Commodities

Name	1 Day	1 Week	1 Month	QTD	YTD	90 D Volatiltity
Bloomberg Commodity Index	0.8%	-0.4%	2.4%	17.0%	17.0%	19.61
Bloomberg Energy Subindex	0.4%	-2.8%	-1.1%	52.6%	52.6%	37.18
Bloomberg Industrial Metals Su	2.7%	3.4%	14.1%	-6.1%	-6.1%	29.67
Bloomberg Precious Metals Subi	0.2%	0.3%	7.9%	-6.9%	-6.9%	19.61
Bloomberg WTI Crude Oil Subind	3.0%	3.3%	-5.7%	23.1%	23.1%	41.71
Bloomberg Gold Subindex Total	-0.2%	0.1%	6.8%	-4.7%	-4.7%	15.88

Equities

Name	1 Day	1 Week	1 Month	QTD	YTD	90 D Volatiltity
S&P 500 INDEX	3.1%	1.4%	5.6%	-13.1%	-13.1%	25.12
NASDAQ 100 Stock Index	4.6%	1.6%	5.6%	-25.7%	-25.7%	31.87
FTSE 100 Index	0.8%	1.6%	7.1%	6.1%	6.1%	12.72
MSCI Europe Index	0.7%	0.5%	6.9%	-5.7%	-5.7%	15.83
MSCI Japan Index	-0.3%	-0.5%	2.9%	1.1%	1.1%	17.01
MSCI Emerging Markets Index	2.0%	4.3%	14.8%	-18.7%	-18.7%	20.55
MSCI World Index	2.2%	0.9%	7.0%	-14.1%	-14.1%	21.94
MSCI ACWI Index	2.2%	1.3%	7.8%	-14.6%	-14.6%	20.27

Fixed Income

Name	1 Day	1 Week	1 Month	QTD	YTD	90 D Volatiltity
Bloomberg Global-Aggregate Bond Index	0.0%	-0.2%	4.7%	-16.7%	-16.7%	9.43
Bloomberg Global Agg Credit Index	0.2%	0.0%	5.4%	-17.1%	-17.1%	9.59
Bloomberg Global High Yield Index	0.3%	0.5%	5.0%	-13.3%	-13.3%	8.95
Bloomberg US Long Treasury Bond Index	0.7%	-0.3%	7.1%	-28.0%	-28.0%	19.88
Bloomberg US Short Term Treasury Index	0.0%	0.1%	0.3%	-0.5%	-0.5%	0.51
Bloomberg Global Inflation-Linked Index	1.4%	0.7%	1.8%	-10.9%	-10.9%	9.33

Fiat Currency Pairs

Name	1 Day	1 Week	1 Month	QTD	YTD	90 D Volatiltity
DOLLAR INDEX SPOT	-0.8%	-0.1%	-5.0%	-2.5%	10.7%	11.92
EURO/US DOLLAR	0.7%	0.1%	5.3%	3.5%	-8.5%	12.04
BRITISH POUND/US DOLLAR	0.9%	0.0%	5.1%	3.8%	-10.9%	16.81
JAPANESE YEN/US DOLLAR	0.4%	1.1%	7.7%	0.7%	-16.6%	13.33
US DOLLAR/SWISS FRANC	-0.8%	0.3%	-5.6%	-3.3%	3.6%	11.18
AUSTRALIAN DOLLAR/US DOLLAR	1.5%	0.8%	6.1%	-0.8%	-6.5%	16.04
MEXICAN PESO/US DOLLAR	-0.2%	0.5%	2.8%	4.5%	6.5%	9.43
BRAZIL REAL/US DOLLAR	1.7%	3.1%	-0.3%	-0.2%	7.3%	20.42
US DOLLAR/SINGAPORE DOLLAR	-0.9%	-1.1%	-3.9%	-2.6%	0.9%	6.35
TAIWAN DOLLAR/US DOLLAR	0.3%	1.1%	4.7%	-1.4%	-10.2%	6.28

Source: CF Benchmarks LTD., Bloomberg LP, as of November 30th, 2022

cf benchmarks

Appendix: constituent changes for current period

Additions (+)	Subtractions (-)
• Ape Coin (APE): APE coin is the governance and utility token that supports the Bored Ape Yacht Club (BAYC) ecosystem. • Avalanche (AVAX): Avalanche is a system that serves as a foundation for a new wave of decentralized applications (or dApps). • Internet Computer (ICP): The Internet Computer blockchain is a "world computer," which was created to enable the full decentralization of Web3 services. • Litecoin (LTC): Litecoin is a BTC fork with faster transaction confirmations. Litecoin (LTC) was released in 2011 as a fork of Bitcoin with the primary difference being a decreased block processing time, 2.5 minutes as opposed to Bitcoin's 10 minutes, allowing for faster confirmation of transactions. • Shiba Inu (SHIB):Shiba Inu is an Ethereum-based memecoin. Shiba Inu (SHIB) is an Ethereum-based memecoin inspired by Dogecoin, launched in 2020 by an anonymous developer known as Ryoshi.	• None

Source: CF Benchmarks LTD., Kraken, as of November 30th, 2022

Appendix: CF Digital Asset Classification Structure

The CF Digital Asset Classification Structure (DACS) classifies coins and tokens based on the services that the associated software protocol delivers to end users, grouping assets by the role they play in delivering services to end users. The CF DACS powers CF Benchmarks' sector composite and category portfolio indices and allows users to perform attribution analysis to better understand the fundamental drivers of returns within their digital asset portfolios.

Additional Resources

For more information about our CF Benchmark indices and our methodologies, please visit the respective web links below:

- [CF Diversified Large Cap Index](#)
- [CF DeFi Composite Index](#)
- [CF Web 3.0 Smart Contract Platforms Index](#)
- [CF Digital Culture Composite Index](#)
- [CF Blockchain Infrastructure Index](#)
- [CF Cryptocurrency Ultra Cap 5 Index](#)

Contact Us

Have a question or would like to chat? If so, please drop us a line to:

info@cfbenchmarks.com