ASSET MANAGEMENT

market notes: Learning to Love Volatility

Macro narratives are driving digital asset sentiment, from asset swings to regulatory decisions. This alone speaks to a maturing ecosystem – investors want the macro story. But digital asset volatility has been mostly uncorrelated to other macro markets in the recent past. It is more about a shift in investor behavior.

14 January 2022
Marcel Kasumovich, Deputy CIO
Coinbase Asset Management

coinbase ASSET MANAGEMENT

Macro narratives drive digital asset sentiment, from asset swings to regulatory decisions. This alone speaks to a maturing ecosystem – investors want the macro story. But digital asset volatility has been mostly uncorrelated to other macro markets in the recent past. It is more about a shift in investor behavior.

market notes… Learning to Love Volatility
6/9/23 - Marcel Kasumovich, Deputy CIO

1. As digital assets enter the mainstream, market commentary focuses on price. And in a world where exchange rate volatility is near all-time lows, attention has naturally shifted to digital assets where volatility against the US dollar is breathtaking by comparison. The megatrend towards the digitalization of finance will not be defined by the shorter-term gyrations. The innovation happening more behind the scenes will dictate the secular formations. Recent advancements in the Lightning Network illustrate the quiet determination to digitalize finance.

2. The Lightning Network was proposed in 2015 as a way of scaling smaller payments, able to accommodate billions of transactions in a second (here). It addressed the tiring argument of Bitcoin's inefficiency head-on. And after a slow start, user adoption surged last year with a 3-fold rise in network capacity (Figure 1). It is also integrating into the regulatory mainstream. This week, Bottlepay, a payment provider built on the Lightning Network, was approved by the UK Financial Conduct Authority. These new technologies can hold up to regulatory standards including anti-money laundering (here). It is a powerful example of technologists and regulators working together to encourage innovation in a complacent legacy system.

3. Innovation may drive the megatrends, but investors are still left to manage and explain portfolio volatility from digital assets. And just as digital innovation is garnering more institutional attention, so too are the narratives around the volatility of digital assets. Investors are looking for macro thematic narratives, including the sharp downturn since November and the abrupt decline to start the year. Explanations center on the downturn in inflation expectations, the Fed pivot toward faster rate hikes and balance sheet normalization, as well as the decline in growth stocks tied to the rise in real interest rates. The high correlation of bitcoin returns to inflation expectations last year (56%) reinforces a desire to put a tidy macro narrative to the digital ecosystem.

4. But the analytics tell a different story. We run a simple empirical exercise to evaluate bitcoin returns as explained by three macro factors: market-based inflation expectations

(5y5y inflation swaps), the inflation-adjusted terminal policy rate (5y5y overnight interest rate swap less 5y5y inflation swaps), and Nasdaq 100 equity returns. These factors only explain 10-45% of the variation in bitcoin over the past two years and with various representations of the data. More importantly, there is almost no relevance of these factors in explaining the bitcoin downturn since November. Those factors would imply a bitcoin price of 50-60k, much higher than the current price.

5. What does that mean for investors? Digital assets volatility has been largely independent of macro factors in the recent past. To be sure, the independent volatility that most investors hope for is skewed to the upside. But in assets where volatility expectations have ranged from 55% to 158% in the past two years, there will be plenty of periods where idiosyncratic moves detract from a portfolio. The test for any investor is asking about the structural trends. What tokens will prosper with the digitalization of finance? How broad will token pluralism extend? If the answers to the structural questions are positive, then downside volatility should be met with programmatic rebalancing into digital assets.

6. Of course, idiosyncratic volatility is not satisfying. It is a polite way of saying we need to dig deeper for an explanation. What is behind the swings in digital assets if the macro narrative falls flat? The hunt for the explanation is partly a process of elimination and partly identifying new patterns of behavior. There are three key elements of the market microstructure of interest.

7. First, the bitcoin forward yield curve has been stable, indicating leveraged trading is not a source of downside volatility. Figure 2 illustrates the one-month annualized yield implied by bitcoin futures on the Deribit exchange, where leverage is more readily available to traders. A rise in speculative demand leads to higher forward bitcoin prices and higher implied yields (vice versa). In periods of excess leverage, forward prices fall more than spot as speculative traders forced to close positions at unfavorable prices. Last May, one-month yields fell to an annualized –75%, reflecting a costly, steep inversion of the forward curve to speculative long traders. On this downturn, the compression in yields is barely visible.

8. Second, option markets have decoupled from previous correlations to spot prices, with declining volatility expectations. The one-week implied volatility on Ether is 70%, near the lows of the past year (Figure 3). Ordinarily, declines in spot prices, particularly severe ones, would have seen a surge in volatility expectations. However, volatility is low despite a sharp decline in spot prices. The same pattern is evident in 25-delta put-call volatility skew. The one-week skew in Ether options is only marginally positive, near the average of the past year. This is strongly counter to past downturns in spot prices, where option skew spiked well above 40%! Again, leveraged trading is not the source of the recent price weakness.

9. Third, a rise in the dispersion of digital asset prices hints at a change in investor behavior. We illustrate this point with a unique parsing of the data based on the last two downturns: May 8, 2021, and Nov 9, 2021. Dispersion is measured by the median difference between the individual returns on the 12 assets of our Core Index and bitcoin returns. When Index asset returns are evenly dispersed around bitcoin returns, the measure is zero. The one-month dispersion in the latest downturn measures near-zero (–0.4%). This is vastly different from May 2021, where the one-month dispersion index measured –9.1%. Index assets exhibited higher beta to the bitcoin downturn. No doubt, two cyclical periods don't make a trend, but it does call for attention.

10/ Market behavior is bifurcating. It is evident in futures markets, where the decline in yields has been greater in regulated markets (CME) than in unregulated ones (Deribit). It is evident in active supply, where the percentage of longer-term holders has dropped alongside a more-than 20% fall in large-value bitcoin addresses (greater than $10mn). It is evident in the surge of interest in venture applications (here). Investors focused on macro narratives have mattered more than leveraged traders. And it is these ebbs and flows that should remind investors that we are at the very early stages in the digitalization of finance. It is precisely in those imperfect, inefficient early stages where megatrend assets are the most additive to a portfolio.

Figure 1 – Lightning Network Capacity Surge, Adoption Rising

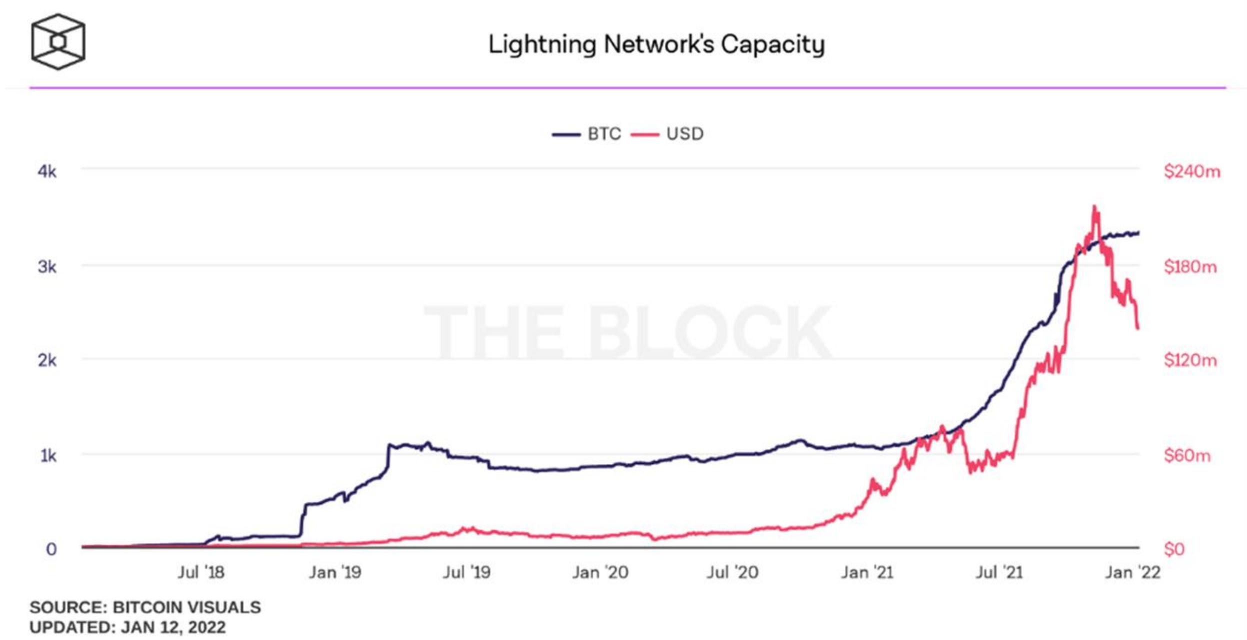


Figure 2 – Bitcoin Futures' Yield Stable, No Sign of Speculative Excess

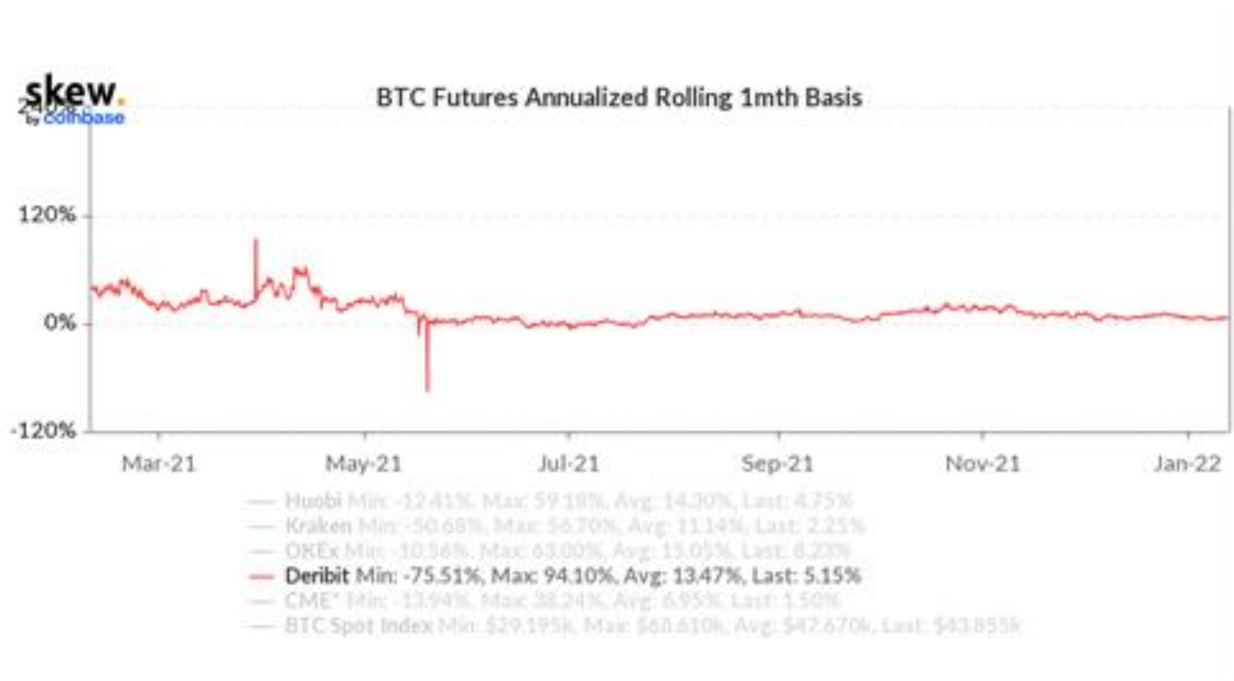
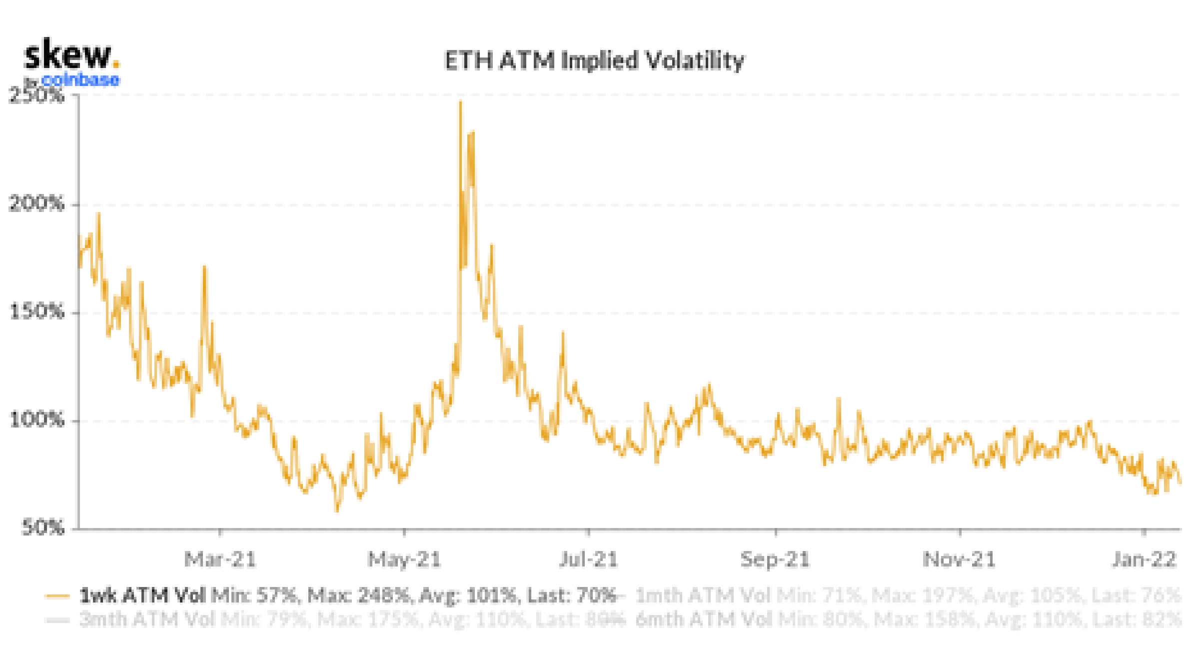


Figure 3 – Ether Volatility Low Despite Declining Prices



Disclaimer

One River Digital Asset Management has been acquired by Coinbase and is now Coinbase Asset Management. Additional details on the transaction may be found on the Coinbase blog. References to One River Asset Management and One River Digital Asset Management may be contained herein during the transition period but are subject to change.

This communication, including any attachments, is intended only for the use of the addressee and may contain information that is confidential or otherwise protected from disclosure. Any unauthorized use, distribution, modification, forwarding, copying or disclosure is strictly prohibited. If you have received this communication in error, please delete this message, including any attachments, and notify the sender immediately. The information and any disclosures provided herein do not constitute a solicitation or offer to purchase any security or other financial product or investment and is not intended as investment, tax, or legal advice. Unless otherwise noted, all information is estimated, unaudited and may be subject to revision without notice. Past results are not indicative of future results.

This communication may contain statements of opinion, including but not limited to, the author's analysis and views with respect to: digital assets, projected inflation, macroeconomic policy, and the market in general. Statements of opinion herein have been formulated using the author's experience, research, and/or analysis, however, such statements also contain elements of subjectivity and are often subjective in nature. In addition, when conducting the analyses on which it bases statements of opinion, the author(s) will incorporate assumptions, which in some cases may be shown to be inaccurate in the future, including in certain material respects. Nothing in this presentation represents a guarantee of any future outcome. The author(s) are under no obligation to update this document, notify any recipients, or re-publish the content contained herein in the event that any factual assertions, assumptions, forward-looking statements, or opinions are subsequently shown to be inaccurate.

Certain information contained in this Communication constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "may", "will", "should", "expect", "anticipate", "target", "project", "estimate", "intend", "continue" or "believe" or the negatives thereof or other variations thereon or comparable terminology. Forward-looking statements made in this communication are based on current expectations, speak only as of the date of this communication, as the case may be, and are susceptible to a number of risks, uncertainties and other factors. Assumptions relating to the foregoing involve judgments with respect to, among other things, projected inflation, the regulation of digital assets and macroeconomic policy, all of which are difficult or impossible to predict accurately and many of which are beyond our control. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation to future results or that the objectives and plans expressed or implied by such forward-looking statements will be achieved.

Certain information contained herein may have been obtained from third party sources and such information has not been independently verified by the author(s). References herein to third parties are for illustrative purposes and are not an endorsement or recommendation for products or services. No representation, warranty, or undertaking, expressed or implied, is given to the accuracy or completeness of such information. While such sources are believed to be reliable, the author(s) do not assume any responsibility for the accuracy or completeness of such information.

The information and any disclosures provided herein do not constitute a solicitation or offer to purchase any security or other financial product or investment and is not intended as investment, tax, or legal advice. Unless otherwise noted, all information is estimated, unaudited and may be subject to revision without notice. Past results are not indicative of future results.