TWO SIGMA

Street View

Risk Analysis of Crypto Assets

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07/21   Executive summary

A challenge for crypto investors, and those individuals and institutions who are considering investing in this relatively new area, is understanding crypto risk, especially in the context of their portfolios. In this Street View, we try to shed light on that question from a few angles:

1. We analyze Bitcoin through a traditional financial risk factor lens, which includes global equity market risk and inflation risk
2. We measure the historical correlations among several crypto assets, including Bitcoin, Ethereum, and Dogecoin, to understand how differentiated the returns of the individual coins can be
3. We run a Principal Components Analysis (PCA) to try to understand the extent to which there are common risk drivers across a set of crypto assets

Introduction

The chart below speaks volumes to the spectacular rise in cryptocurrency investing. Bitcoin has surged nearly 40,000%[1] (that is not a typo) since April of 2013, for an annualized return of approximately 110%.[2] It has not been a smooth ride—that return has come with an annualized volatility of 81%, but the risk-adjusted returns were still very attractive (Bitcoin's annualized Sharpe ratio was ~1.3 over this period).

Exhibit 1: Bitcoin Price
Time period: April 29, 2013 - May 7, 2021.

Sources: CoinMarketCap as of May 10, 2021, using daily data.

Bitcoin trading volumes have increased meaningfully during the pandemic. In January 2021, Cointelegraph reported that volume in the Bitcoin market doubled, smashing previous all-time records.[3] In fact, Bitcoin's five-day average daily trading volume as of April 18th was approximately $77B,[4] roughly 70% of the NASDAQ's five-day average volume.[5]

The incredible price appreciation (leading to bandwagon and "fear of missing out" effects), massive government stimulus, and people around the world spending more time at home and in front of screens have certainly contributed to Bitcoin's meteoric rise, especially among retail investors. Increasingly, institutional investors are entering the crypto space, with managers like Skybridge,[6] Blackrock,[7] and Tudor[8] announcing the addition of crypto to their investment universes or even the launch of crypto-dedicated funds. In fact, PWC estimates that crypto hedge fund assets increased 100% from $1 to

$2 billion in 2019, and it seems like it's only increasing from there.[9]

As institutional investors evaluate crypto assets, how can they think about properly assessing their risks, especially in the context of a broader, multi-asset class portfolio? In this Street View, we will seek to answer this question. We explore how traditional financial risk factor models can potentially explain the risk of the largest crypto asset, Bitcoin. We then seek to understand the extent to which there are influential, common risk drivers across crypto assets using a statistical technique called Principal Components Analysis.

Using Financial Risk Factors to Explain Risk in Crypto

Many established risk models, like our own Two Sigma Factor Lens, are constructed to explain the majority of risks and returns in traditional financial portfolios, which often include heavy allocations to well-established asset classes like stocks, bonds, commodities, and fiat currencies, as well as to well-known investment strategies such as trend following in macro asset classes and value investing in stocks.

To our knowledge, most financial risk models do not incorporate idiosyncratic crypto risk as a "factor." If crypto has mostly unique risks and returns that are specific to the crypto market, then any portfolio with allocations to crypto will have residual, or unexplained risk, according to these factor risk models. In order to understand the extent to which crypto is correlated with factors in traditional financial markets, let's start by analyzing Bitcoin's relationships with the factors in the [Two Sigma Factor Lens](#).[10] Bitcoin is the largest crypto asset by market cap and is arguably the most canonical. For a brief overview of some of the ways that investors can transact in crypto and obtain other types of crypto exposures, please see Appendix 1.

The exhibit below shows how the Two Sigma Factor Lens, which does not include a crypto factor, attempts to explain Bitcoin. 91% of Bitcoin's risk since January 2015 was unexplained. This is a relatively high amount of residual risk. For context, broad-based equity indices like the S&P

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1 As of May 10, 2021.

2 The price data for Bitcoin was sourced from CoinMarketCap (as is the other crypto data in this Street View). The start date for their Bitcoin price data is April 29, 2013 as of May 10, 2021.
Although Bitcoin's long-term historical performance has been exceptional, the cryptocurrency has declined recently. As of this writing (June 2021), Bitcoin is recovering from a drawdown that began in mid-April 2021.

3 https://cointelegraph.com/news/bitcoin-s-real-volume-doubles-previous-all-time-high

4 Source: CoinMarketCap as of April 19, 2021.

5 Source: https://www.cboe.com/us/equities/market_share/ as of April 19, 2021. The NASDAQ's five-day average market "notional value" volume was approximately $109B.

6 https://www.fundfire.com/c/3012053/377883/skybridge_launches_bitcoin_fund_crypto_assets_soar

7 https://www.reuters.com/article/uk-blackrock-investment-crypto-currency-idUKKBN29Q0FT

8 https://www.bloomberg.com/news/articles/2020-05-07/paul-tudor-jones-buys-bitcoin-says-he-s-reminded-of-gold-in-70s

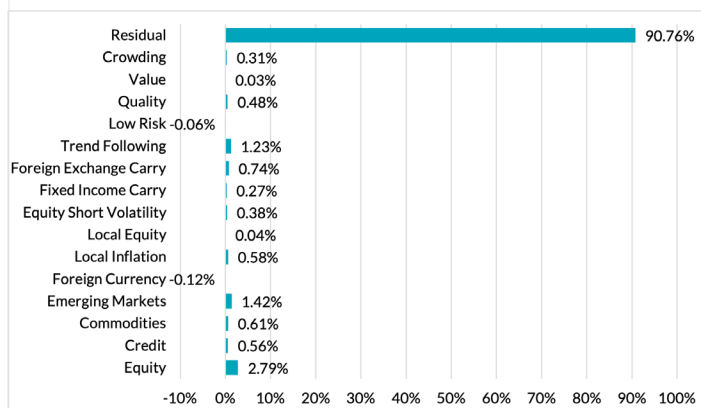9 https://www.pwc.com/gx/en/financial-services/pdf/pwc-elwood-annual-crypto-hedge-fund-report-may-2020.pdf

10 Bitcoin's market cap, according to CoinMarketCap on April 16, 2021, was $1,136,189,158,459. The next largest crypto coin by market cap was Ethereum at $272,829,066,970.

500 exhibited <1% residual risk over this period. Individual stocks typically carry higher residual risk, but much lower than that of Bitcoin's. For example, <50% of Apple's risk was unexplained over this period.

The 9% of Bitcoin's risk that was explained by the model can be attributed primarily to 3 significant factor exposures: positive Equity, positive Trend Following, and negative Emerging Markets. There were other statistically insignificant factor exposures that are worth diving into as well, namely positive Commodities, positive Local Inflation, and negative Foreign Currency.
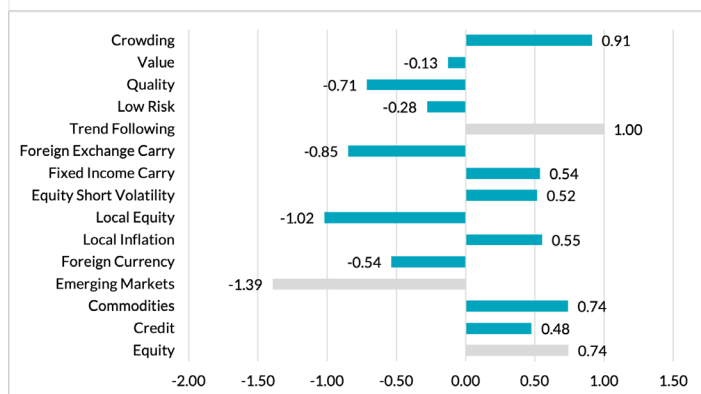
Exhibit 2: Bitcoin Factor Contributions to Risk

Time period: January 5, 2015 - March 30, 2021.

Sources: Two Sigma Factor Lens and CoinMarketCap as of March 31, 2021, using daily data.

Exhibit 3: Bitcoin Factor Exposures

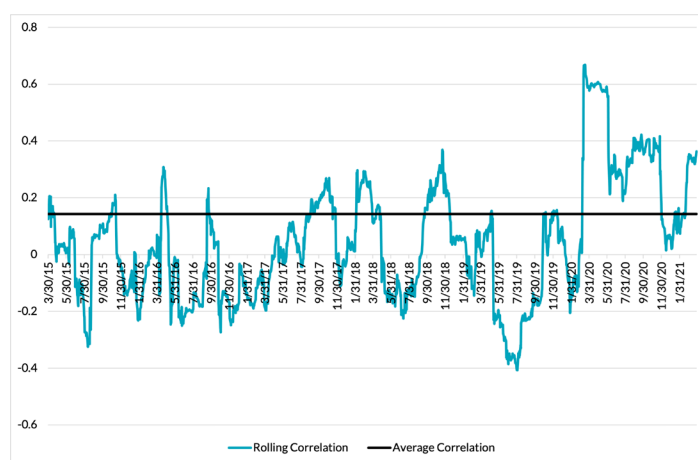Time period: January 5, 2015 - March 30, 2021.

Sources: Two Sigma Factor Lens and CoinMarketCap as of March 31, 2021, using daily data. The gray bars indicate statistical (t-statistic greater than an absolute value of 1.96) and economic (risk contribution greater than 1%) significance.

Before diving into the idiosyncratic component of crypto's risk in the next section, let's first analyze Bitcoin's relationships with other risk factors. First: Bitcoin's relationship with Equity. While Bitcoin's beta to the global Equity factor was 0.74, the correlation was much lower at only 18% over this period. The higher beta was due to differences in volatilities (~15% annual volatility for Equity and ~73% for Bitcoin). We display the rolling 60 day correlation below and find that the correlation has been elevated for much of 2020 and 2021, peaking around 60% during the depths of the COVID market crisis last year, as we covered in a [Venn blog post](#) on "safe-haven" assets.

Exhibit 4: Rolling 60 Day Correlation Between Equity and Bitcoin

Time period: January 5, 2015 - March 29, 2021.

Sources: Two Sigma Factor Lens and CoinMarketCap as of March 31, 2021, using daily data.

Bitcoin's positive relationship with the Trend Following factor likely indicates that Bitcoin tends to perform well when macro markets are trending in one direction or another, and it tends to perform poorly when macro markets are choppy and directionless. Upon further analysis, we found that Bitcoin appeared to be most highly correlated with trend following in equity markets over this period.

We should also explore Bitcoin's positive relationship with the Local Inflation factor, which is designed to measure exposure to an U.S. inflation hedge.[11] Many investors have hypothesized that Bitcoin serves as protection against rising inflation given the fact that it is decentralized and isn't at risk of being inflated by a government. In addition to the positive exposure observed in Exhibit 3, Bitcoin's univariate beta to 10-year inflation breakevens (which serve as a measure for the market's expectations for inflation) was 0.76 over the same period with a correlation of 15%. While this might not seem like a significant relationship at first glance, compare it to a commonly viewed "inflation hedge" like gold, which experienced a correlation to inflation breakevens of 9% over the same period. So in that sense the two assets (Bitcoin and gold) may be on par with regard to "inflation hedging."

Speaking of gold, what is Bitcoin's relationship with Commodities? We can see in Exhibit 3 that Bitcoin's Commodities factor exposure was positive, but not significant. Bitcoin exhibited slightly positive correlations with gold and oil over this period, as displayed in Exhibit 5. Here we also observe gold's strong negative relationship with the USD. Interestingly, Bitcoin didn't seem to have a negative relationship with the USD -- in fact, the cryptocurrency appeared to have no meaningful correlation with the dollar index.

Finally, what about Bitcoin's relationship with fiat currencies? The lack of a significant relationship to the Foreign Currency factor in the Two Sigma Factor Lens is interesting and perhaps unexpected, given both the factor and Bitcoin (in this instance[12]) are expressed relative to the USD. In Exhibit 5 we show Bitcoin's relationship with the USD and all other G10 currencies. The cryptocurrency doesn't appear to have any meaningful correlation with any fiat currency.

Exhibit 5: Correlations between Bitcoin, G10 Currencies, Gold, and Oil

Time period: January 5, 2015 - March 30, 2021.

	Bitcoin	GBP	CAD	EUR	CHF	NOK	JPY	AUD	SEK	NZD	US Dollar Index	Gold	Oil
Bitcoin		2%	4%	4%	6%	8%	2%	5%	6%	4%	-2%	9%	6%
GBP	2%		45%	53%	33%	50%	17%	47%	50%	45%	-52%	15%	12%
CAD	4%	45%		43%	29%	59%	13%	65%	47%	59%	-40%	24%	29%
EUR	4%	53%	43%		59%	64%	44%	48%	76%	48%	-76%	34%	3%
CHF	6%	33%	29%	59%		42%	42%	32%	47%	35%	-50%	34%	-1%
NOK	8%	50%	59%	64%	42%		21%	62%	73%	58%	-53%	27%	26%
JPY	2%	17%	13%	44%	42%	21%		21%	28%	30%	-40%	42%	-12%
AUD	5%	47%	65%	48%	32%	62%	21%		54%	78%	-43%	28%	18%
SEK	6%	50%	47%	76%	47%	73%	28%	54%		51%	-62%	29%	12%
NZD	4%	45%	59%	48%	35%	58%	30%	78%	51%		-43%	30%	14%
US Dollar Index	-2%	-52%	-40%	-76%	-50%	-53%	-40%	-43%	-62%	-43%		-36%	-6%
Gold	9%	15%	24%	34%	34%	27%	42%	28%	29%	30%	-36%		5%
Oil	6%	12%	29%	3%	-1%	26%	-12%	18%	12%	14%	-6%	5%	

Sources: CoinMarketCap, Morgan Stanley FX indices, and Commodity Systems Inc. as of March 31, 2021, using daily data.

To summarize, Bitcoin is not easily explained by the Two Sigma Factor Lens, nor is it substantially correlated to other currencies or any of the major commodities. This leaves us with the following question that we will spend the rest of this Street View analyzing: are there any common risk drivers among cryptocurrencies themselves, or are they each their own beast, carrying a unique, idiosyncratic return even relative to each other?

Correlations Among Crypto Assets

To examine common risk drivers across crypto, we first need to establish a universe of crypto assets. We selected the 10 coins,[13] including Bitcoin, Ethereum, and Dogecoin, that had the highest 30 day trading volume as of April 19th, according to CoinMarketCap, and that had at least 3 years of price history.[14]

Below we show the correlation matrix of the returns of these crypto assets over the last few years. At first glance, there appears to be some common risk driver across these assets, as the average correlation was notably positive at 48%. In comparison, the average correlation across the fiat currencies (G10-ex USD) in Exhibit 5 that make up the Foreign Currency factor in the Two Sigma Factor Lens was 46%.

11 For more information on this factor, including its construction, what it's meant to capture, and how it can help explain inflation sensitivity of a portfolio or investment, read Venn's three-part inflation blog series:
Part 1: https://www.venn.twosigma.com/vennsights/inflation-series-local-inflation-factor-primer
Part 2: https://www.venn.twosigma.com/vennsights/three-inflation-hedges
Part 3: https://www.venn.twosigma.com/vennsights/managing-inflation-risk-in-the-current-environment
12 There are now a number of ways to go long Bitcoin by being positioned short other crypto assets. For example, one can borrow ETH and sell it for BTC, effectively short ETH against BTC. Though it is fair to say that USD backed stablecoins represent the dominant asset that people are short against Bitcoin or cryptocurrencies as a whole.
13 See Appendix 2 for more information on the coins selected.
14 The stablecoin Tether, or USDT, made the list, however, we excluded it from this analysis given its peg to the USD.
As a caveat, the selection methodology for the coins used in this analysis may have bias. If there were no data limitations, a less-biased approach would be to select the coins based on point-in-time trailing 30 day trading volumes, instead of using only today's trailing 30 day trading volumes.

Exhibit 6: Correlations of Crypto Assets
Time period: November 2, 2017 - April 16, 2021.

	BTC	ETH	DOGE	XRP	LTC	BCH	EOS	BNB	ADA	TRX
BTC		74%	31%	44%	71%	60%	61%	58%	49%	50%
ETH	74%		27%	57%	79%	69%	71%	55%	56%	52%
DOGE	31%	27%		21%	29%	26%	26%	20%	26%	23%
XRP	44%	57%	21%		52%	47%	55%	37%	54%	44%
LTC	71%	79%	29%	52%		65%	67%	53%	50%	45%
BCH	60%	69%	26%	47%	65%		64%	42%	43%	39%
EOS	61%	71%	26%	55%	67%	64%		50%	51%	54%
BNB	58%	55%	20%	37%	53%	42%	50%		40%	35%
ADA	49%	56%	26%	54%	50%	43%	51%	40%		45%
TRX	50%	52%	23%	44%	45%	39%	54%	35%	45%	
Average	55%	60%	25%	46%	57%	51%	56%	43%	46%	43%

Source: CoinMarketCap, using daily data.

A few interesting observations from the correlations across crypto assets: first, there was not a single negative correlation in the entire matrix. All of the crypto assets exhibited positive correlations.
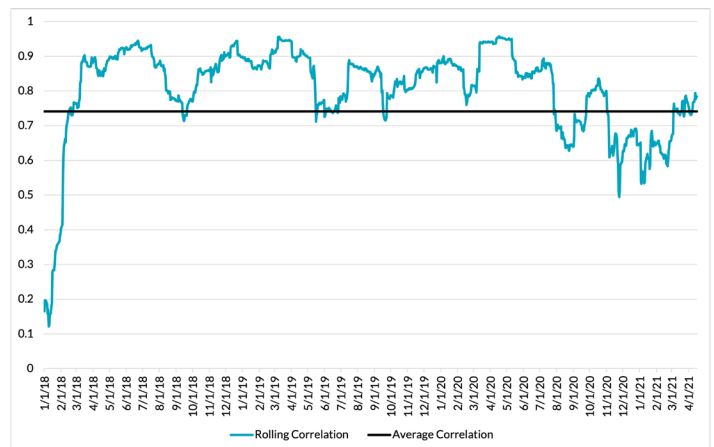
Second, the coin that appeared to be the most unique was DOGE with an average correlation of only 25%. DOGE is a largely speculative coin that has surged recently due to Reddit forums and endorsements from Tesla CEO, Elon Musk.[15] The coin started out as a lighthearted joke based on an internet meme, and it has largely been abandoned by developers, however, that could change with the recent price surge and interest.[16]

Finally, there exists a notably high correlation between the two largest coins by market capitalization: BTC and ETH.[17] Their correlation over this period was 74%. This is particularly interesting because of the different use cases of these two assets. While BTC's original intended use case was to serve as a decentralized medium of exchange, its primary function today is to serve as a store of value. ETH has that use case as well, but it expands on that by representing a platform on which to build applications using its cryptocurrency, ether. Some investors that are considering entering the crypto space might initially "get their feet wet" with BTC given its relatively long price history and market size. And while ETH still offers a decently large market, it is a slightly more complex entry into crypto, as it can be considered not only as a "store of value" like BTC, but might also serve as a proxy for DeFi (or decentralized finance) exposure.[18]

Below we see how the correlation between these two coins has changed through time. While the correlation has always been in positive territory, the correlation between the two was much lower a few years ago. It substantially picked up around the Q1 2018 crypto crash when both coins suffered their worst quarterly losses up to that point as regulatory scrutiny on crypto was picking up and tech giants, like Facebook and Google, banned cryptocurrency advertising.[19] The correlation has remained high since then, reaching a recent peak in the first half of last year, again when there was a crypto crash. BTC and ETH were both down ~40% on March 12, 2020 when a massive risk-off move across financial markets severely impacted the heavily leveraged crypto markets (as we covered in a previously-mentioned Venn blog post on "safe-haven" assets). The correlation has declined a bit since then, but has been picking up again more recently.

Exhibit 7: Rolling 60 Day Correlation Between BTC and ETH
Time period: November 2, 2017 - April 16, 2021.

Source: CoinMarketCap as of April 19, 2021, using daily data.

In summary, we see fairly high correlations among the ten coins in our universe. Even BTC and ETH, which are two seemingly very different assets, have exhibited a high correlation, especially in recent years. It appears that there are common risks within this crypto universe, which we will explore in more detail in the next section.

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15 https://www.forbes.com/advisor/investing/what-is-dogecoin/
16 https://www.coindesk.com/dogecoin-surging-price-resurrected-technical-development
17 BTC and ETH had the largest market capitalizations according to CoinMarketCap on April 21, 2021.
18 https://cointelegraph.com/news/where-does-the-future-of-defi-belong-ethereum-or-bitcoin-experts-answer
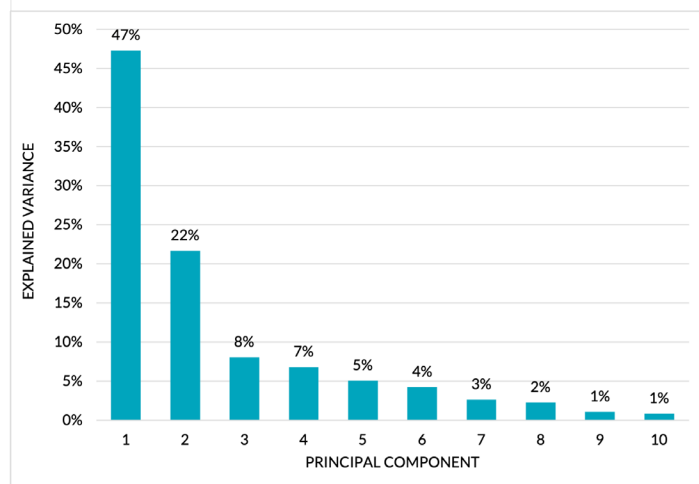See Appendix 1 for more information on DeFi.
19 https://www.cnbc.com/2018/04/03/bitcoin-price-worst-q1-2018-in-history-119-billion-value-wiped-off.html

Common Risk Drivers Across Crypto Assets

Turning back to the 10 coins examined in Exhibit 6, we use this group to run a Principal Components Analysis (PCA), which extracts uncorrelated principal components (PCs, or statistical risk factors) from the coins' covariance matrix.[20] PCA reduces the dimensionality of large data sets (in our case, a 10 by 10 covariance matrix) to a handful of PCs that convey important patterns or common risk drivers across the data. The PCs are fully data-driven and say little about economic intuition, thus making the underlying risk less clearly identifiable. However, this analysis will tell us the extent to which there are common risks (how many there are, how influential they are, etc.) across this crypto universe.

Exhibit 8: PCA Results: Explained Variance of the Principal Components

Time period: November 2, 2017 - April 16, 2021.

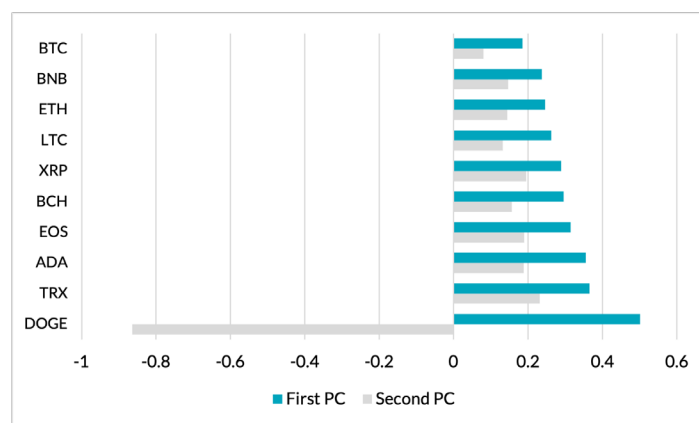Source: CoinMarketCap, using daily data.

Exhibit 8 shows that, together, the first two PCs explained ~69% of the variance. The first PC was much more explanatory, covering roughly 47% of the variance, while the second PC covered ~22%. The rest of the PCs explained 8% or less of the variance each. To put these results in context, we can compare them to the PCA results of traditional macro assets. For example, a PCA on the U.S. yield curve finds that 99.9% of the variance can be explained by the first three PCs.[21] And a PCA of the equity index returns of eight European countries shows that the first two PCs explained >90% of the variance.[22] So, while there were two major

risk drivers in this seemingly diverse crypto market, when compared with more traditional assets, the first few PCs weren't as explanatory.

Let's dive into those first two crypto PCs in more detail. As mentioned earlier, PCs are difficult to put economic intuition behind, but we can look at the portfolio weights for each PC (as denoted by their eigenvectors) to understand their constructions. Exhibit 9 displays those portfolio weights (eigenvectors) for the first and second PCs. The first unnamed risk factor is unsurprisingly long all of the coins (note that the sign of the eigenvectors does not matter), representing what might be considered "crypto beta." The second PC is a bit more interesting. It appears to be capturing the unique risk of DOGE relative to all of the other coins. This brings us back to the correlation matrix in Exhibit 6 where we noted that DOGE was the most diversifying coin with an average correlation of only 25%.

Exhibit 9: PCA Results: Eigenvectors of the First Two Principal Components

Time period: November 2, 2017 - April 16, 2021.

Source: CoinMarketCap, using daily data.

Conclusion

Crypto has been gaining a lot of attention recently. There are many ways to obtain crypto exposure, including by investing directly in coins on centralized and decentralized exchanges, through derivative instruments like swaps and futures, and via stocks that are investing in blockchain technology.

Unfortunately, it can be difficult to understand the risks of crypto assets using traditional financial risk models. For example, analyzing Bitcoin using the Two Sigma Factor Lens shows a large, idiosyncratic risk. That being said, Bitcoin was not entirely orthogonal to the factor set -- there did appear to be some meaningful relationships with existing risk factors, such as positive correlations with the global equity market and the tendency for BTC to behave like an inflation-sensitive asset.

Of course, Bitcoin is just one coin in the crypto space. In this Street View, we explored the extent to which crypto assets are diversifying among themselves. We found that the 10 largest coins by volume are all positively correlated, with DOGE exhibiting the lowest average correlation. Given these positive correlations, we analyzed whether there are shared risks across crypto assets. A PCA also revealed that there were two major risk drivers across these coins over the past few years: long crypto (i.e., crypto beta) and unique risk of the most diversifying crypto asset in the 10-coin universe (DOGE).

In summary, crypto appears to be a highly volatile, yet diversifying asset to portfolios with exposure to traditional risk factors. There does appear to be meaningful relationships among crypto assets, suggesting that a portfolio diversified across many coins might not reap massive diversification benefits.

Appendix 1: Trading in Crypto Markets

We'll provide a brief overview of some of the ways that investors can transact in crypto.

The first way is through centralized exchanges where a third party monitors the transactions and secures them on the buyers'/sellers' behalfs. There are both U.S.-based (e.g., Coinbase) and offshore (e.g., Binance) centralized exchanges, the former of which are U.S. regulated and accept USD deposits and U.S. investors.[23] This is a popular option among investors because these exchanges offer high liquidity, a degree of trust, and entry into crypto using fiat currencies, but they do carry counterparty risk.

That brings us to DeFi, a smaller, yet growing area within crypto that removes the middleman in the transaction and allows the investor more control over their account and information. Decentralized exchanges (e.g., Uniswap and Sushiswap) are one form of DeFi focused on spot trading. These markets take advantage of "automated market making" where there are two asset liquidity pools (e.g., one for Ethereum and one for Bitcoin) and the ratio of the assets held in each pool determines the market price, or exchange rate, between the two coins. These exchanges are typically lower cost, however they are generally less liquid, carry "smart contract" risk, and only offer crypto-to-crypto pairs (no fiat entry).[24] Investors can also access loans through DeFi on platforms like AAVE and Compound, where they can borrow against coins that are deposited as collateral and earn interest.[25]

In addition, investors can use derivative instruments like synthetics, swaps, futures, options, and more to transact in crypto on both centralized exchanges (e.g., the Chicago Mercantile Exchange, or CME, started listing Bitcoin futures in 2017) and DeFi. Basically, most of the ways you can trade fiat currencies are increasingly available to investors in crypto markets (though not always on U.S.-based exchanges).

Despite all of these options to trade crypto, some investors might be wary of entering the space because it can involve taking on meaningful amounts of volatility (the likes of 60-80% annually, as we mentioned in the introduction). There can be days where a coin is down a double digit percentage, which is a rare occurrence for developed fiat currencies or gold. Enter stablecoins: a central component of the DeFi explosion. Stablecoins are pegged to real world assets through an audited backing of fiat assets like the USD or precious metals and can make it possible for investors to accept the extreme volatility of crypto markets, as they are designed to reduce price volatility with respect to a stable fiat currency or asset.

Finally, investors may seek to obtain exposure to crypto and blockchain by investing in stocks of companies that are exposed to advancements in this space. One such example is investing in Coinbase (ticker COIN), the U.S.-based centralized exchange mentioned earlier, which went public in mid-April 2021.[26] Another example is investing in ETFs, which could offer more diversified, broad-based exposure to stocks in the crypto space. For example, the Amplify Transformational Data Sharing ETF (ticker BLOK) "invests at least 80% of its net assets in equity securities of companies actively involved in the development and utilization of blockchain technologies."[27] And speaking of ETFs, exchange-traded products like Grayscale Bitcoin Trust (ticker GBTC) that aim to explicitly track the price of crypto assets are another option for investors seeking exposure to crypto (though these products can have meaningful tracking error).

In summary, there are an increasing number of ways for investors to gain access to crypto markets, either directly through centralized or decentralized exchanges, using derivatives and other instrument types, or indirectly through exposure to companies that stand to benefit from increased adoption and utilization of blockchain technology.

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23 https://www.investopedia.com/binance-vs-coinbase-5120852
24 https://www.upgrad.com/blog/centralized-vs-decentralized-cryptocurrency/
https://coinmarketcap.com/alexandria/article/smart-contract-risks-and-mitigation-in-defi-a-deep-dive-by-outlier-ventures
https://www.gemini.com/cryptopedia/centralized-exchanges-crypto
Some assets can only be traded on decentralized exchanges.
25 https://www.mewtopia.com/what-is-defi/. Custody, security, and margin solutions for underlying crypto assets do not yet mirror that for traditional financial assets.
https://www.law.upenn.edu/faculty/david-hoffman/crypto-custody.php
26 https://www.cnbc.com/2021/04/14/coinbase-to-debut-on-nasdaq-in-direct-listing.html
27 https://amplifyetfs.com/blok.html

Appendix 2: Universe of Coins for PCA

Coin	Description[28]
XRP (XRP)	XRP is the currency that runs on a digital payment platform called RippleNet, which is run by a company called Ripple
Bitcoin (BTC)	Bitcoin is a decentralized peer-to-peer online cryptocurrency
Ethereum (ETH)	Ethereum is a decentralized open-source blockchain system that features its own cryptocurrency, Ether
Dogecoin (DOGE)	Dogecoin is an open-source digital currency that was forked from Litecoin in December 2013
Cardano (ADA)	Cardano is a proof-of-stake blockchain platform with an ADA token that is designed to ensure that owners can participate in the operation of the network
TRON (TRX)	TRON is a blockchain-based operating system that aims to ensure this technology is suitable for daily use
Litecoin (LTC)	Litecoin is a cryptocurrency that was designed to provide fast, secure and low-cost payments by leveraging the unique properties of blockchain technology
Bitcoin Cash (BCH)	Bitcoin Cash is a peer-to-peer electronic cash system that aims to become sound global money with fast payments, micro fees, privacy, and high transaction capacity
Binance Coin (BNB)	Binance Coin can be used as a method to pay for fees on the Binance exchange and for participation in token sales on the Binance launchpad
EOS (EOS)	EOS is a platform that's designed to allow developers to build decentralized apps

28 Source: CoinMarketCap.

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