Cryptocurrency Special Report

Part 4: Still Highly Speculative

December 2022

Summary

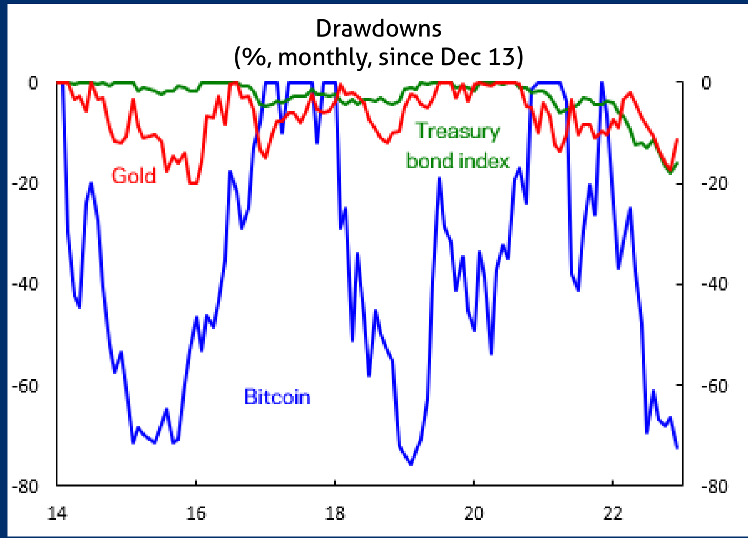
- Cryptocurrencies exhibit the characteristics of a highly speculative asset. Bitcoin and other cryptocurrencies have exhibited extreme volatility and very large drawdowns. Since 2014, Bitcoin has experienced several declines in value of more than 70% from a previous peak.

- The global search for yield in a world of low (or even negative) interest rates supported demand for cryptocurrencies. As central banks tighten monetary policy to manage growing inflationary pressures, the prices of cryptocurrencies have come under pressure.

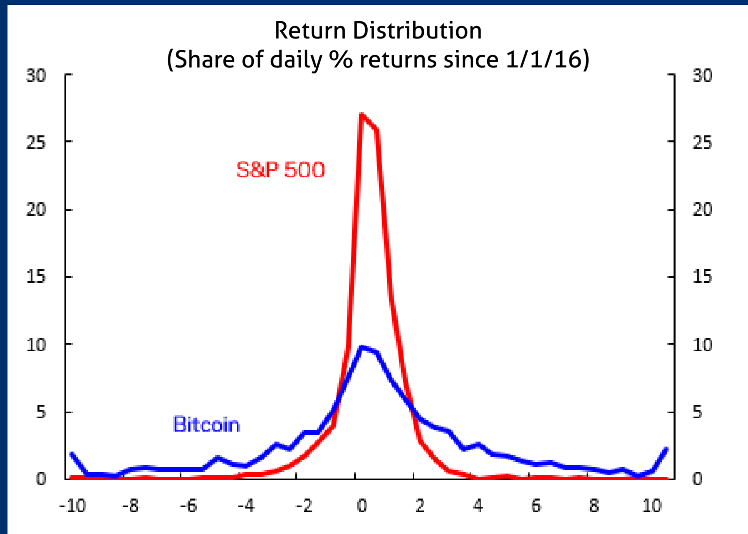
- Daily returns exhibit a much wider distribution than other risky asset classes, such as equities. This may be desired by short-term traders who are seeking to profit from large near-term movements.

- Cryptocurrencies have a relatively short history and high degree of retail investor participation. The markets are less efficient than more established financial markets. Market inefficiencies enable sophisticated market participants to exploit arbitrage opportunities that may exist.

- Cryptocurrencies do not have positive expected returns or intrinsic value. Additionally, they are zero-sum, or even negative-sum, transactions. Their long-term value is unclear, highly speculative and price growth relies on new investors buying in at higher prices.



Source: Bloomberg



Source: Bloomberg

Contents

Introduction

Proponents suggest that uses for cryptocurrencies in investment portfolios include:

1. Diversifying asset
2. Store of value
3. Inflation hedge
4. Digital Gold (i.e. safe-haven asset)

However, at the current time, the evidence does not appear to support these claims.

In contrast, it appears that significant drivers of investment in cryptocurrencies are:

5. Their use as a speculative asset
6. The search for yield

Speculative Asset

Equity investments provide investors with an ownership stake in the underlying business and enable them to benefit from future profits.

Similarly, debt investors provide capital to governments and companies in return for interest payments, commensurate with the risk of the borrower and the term of the loan. These investments have intrinsic value and investors expect to be compensated for the risk they take through a positive risk premium over time.

In contrast, various other investments may be held for speculative, and typically short-term, purposes. Commodities such as gold or oil are examples.

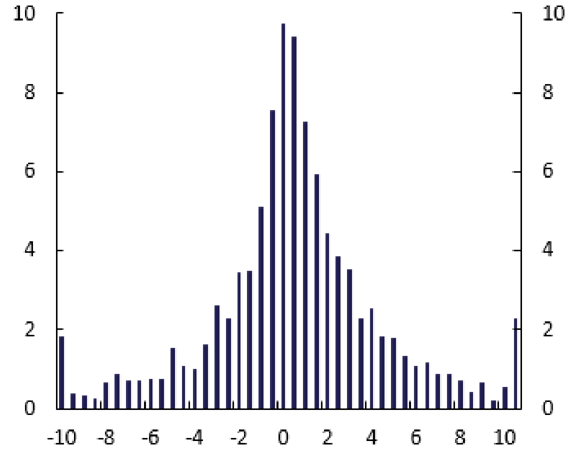
Commodities have positive intrinsic value due to their use in industry. As they are an input into the production of other products, they have a non-zero value. However, they do not, on their own, have a positive expected risk premium. For example, the price of oil is affected by the supply/demand dynamics of the oil market and inflationary factors, however, simply holding oil is not expected to generate a positive risk premium over time. Market participants typically buy and sell commodities for industrial purposes, to hedge their exposure, or for speculative reasons such as in anticipation of price movements.

Like many commodities, cryptocurrencies do not have positive expected returns. They do not generate dividends or interest payments. However, unlike many commodities, they also do not have any intrinsic value as they are not used to produce other products or services. This makes them different from commodities.

Cryptocurrencies are inherently zero-sum transactions. This means that one person's gain is another person's loss. In fact, once accounting for transaction costs, cryptocurrencies are negative-sum transactions. For an investor to realise a profit, another investor will need to purchase the cryptocurrency from them at a higher price. This process would need to continue forever for the price of cryptocurrencies to continually increase over time.

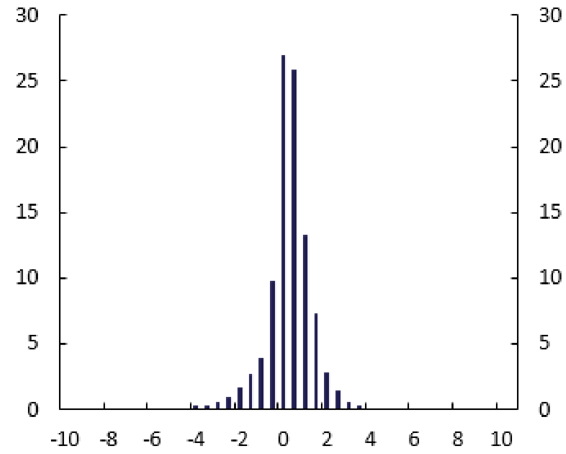
In contrast, equity investments are not zero-sum transactions. An equity investment is an ownership stake in a business. These businesses provide products and services to their customers and generate profits and investment returns to their owners via dividends and capital gains. Over the long term, stock prices increase as the underlying value of the company increases, or vice versa. Bond investments are similar as investors are paid interest and principal payments from revenue generated by the borrower.

Bitcoin Return Distribution
(Share of daily % returns since 1/1/16)



Source: Bloomberg

S&P 500 Return Distribution
(Share of daily % returns since 1/1/16)



Source: Bloomberg

Bitcoin returns have a much wider distribution than broad-based equity markets. Bitcoin's daily trading range is typically very large, and volatility is many times higher than traditional investment asset classes. While the payoff from investing in cryptocurrencies has been incredibly substantial for early adopters, many other investors have suffered significant losses during drawdowns.

These characteristics support the view that cryptocurrencies are speculative assets, rather than long-term investments with positive expected return.

Speculative assets may be used by traders and other speculators to try to generate short-term profits from price movements. Speculators often prefer assets with higher volatility as higher volatility and a wider range of prices provide more opportunities to profit from changes in price.

Additionally, as cryptocurrencies have a relatively short history and high degree of retail investor participation, the markets are less efficient than more established financial markets. This enables sophisticated market participants, such as hedge funds, to exploit arbitrage opportunities that may exist.

Bitcoin demonstrates the properties of a highly speculative asset with extreme volatility and a wide distribution of returns. Due to the zero-sum nature of speculation, the profits of one trader come from the losses of others.

Search for Yield

The global search for yield in an environment of low interest rates has provided a tailwind to the price of risky assets, including cryptocurrencies.

Investors have been incentivised to shift to risker assets to seek greater returns. In such an environment, the cost of capital is lower. This makes investing in assets that have low (or no) yield relatively more attractive than otherwise.

Until recently, interest rates had been falling for many years. While there are many factors that underpinned this trend, most economists agree that a global saving glut (initially proposed by previous Federal Reserve chairman, Ben Bernanke) and stimulus provided by central banks have played a role.

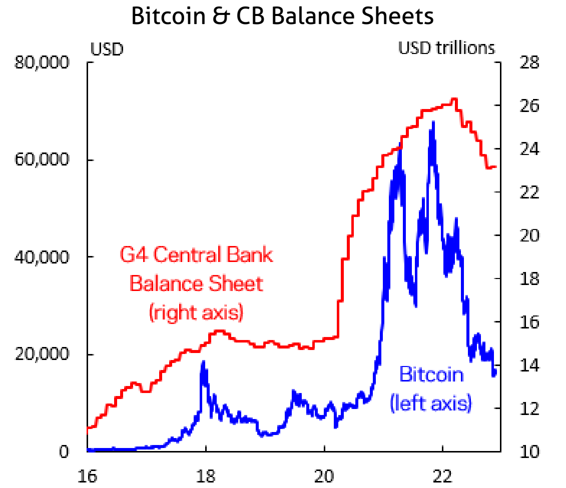
To support their economies during the COVID-19 pandemic, central banks lowered short-term interest rates and undertook unconventional monetary policy to reduce longer-term borrowing costs. At the same time, governments implemented enormous spending programs. The policies significantly increased liquidity in global markets, adding to demand. Additionally, lower interest rates reduced the cost of capital, via a lower risk-free rate of return, and provided support to asset prices, all else equal.

The level of policy support provided contributed to a rapid rebound in prices for many assets, including cryptocurrencies, following the initial plunge at the beginning of the pandemic.

As central banks have begun to withdraw liquidity from markets and increase interest rates to address elevated inflationary pressures, asset prices have come under pressure. These actions increase the short- and long-term risk-free rate, which places downward pressure on asset prices, all else equal. Additionally, tighter monetary policy settings, including the unwinding of quantitative easing programs, impact market liquidity and supply/demand dynamics.

In a higher interest rate environment, investors are likely to prefer assets which generate higher yields and where expected payoffs are likely to be closer to the present. In contrast, assets that generate lower yields and where much of the return is expected to be in the distant future face downward pressure as the cost of capital increases. Further, a higher cost of capital increases the cost of investing in assets which don't generate any yield, such as cryptocurrencies.

It is important to note that these factors do not alone explain the downward pressure on cryptocurrency prices through 2022. However, a tightening of monetary policy conditions to control elevated levels of inflation has likely contributed to the downward pressure experienced.



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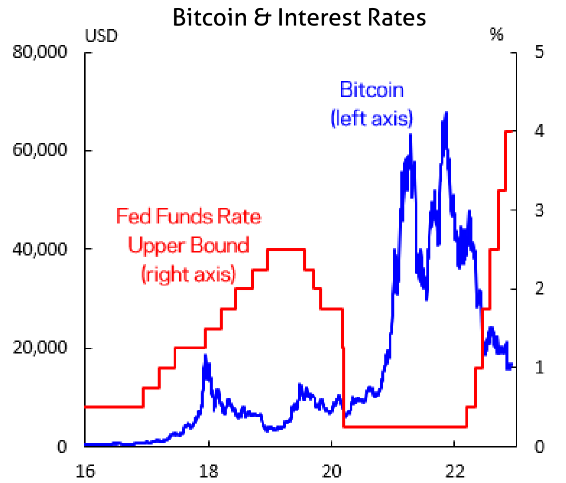

Source: Bloomberg

Highly Uncertain Times

Cryptocurrency supporters have proposed a range of potential uses for cryptocurrencies in traditional investment portfolios. However, cryptocurrencies remain a highly speculative instrument. This has been further demonstrated by recent events and high-profile failures of several significant companies in the cryptocurrency space.

Cryptocurrency investors may experience extreme volatility in their holdings and investments in cryptocurrencies may experience significant losses.

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