

## EDITORIAL

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## BITCOIN'S BUYER BEWARE

Based on an overview of the functions of a currency, cryptocurrencies should be considered as an investment instrument, rather than as an alternative to fiat money. Since the start of 2020, correlations between bitcoin and copper, equities and, in particular, breakeven inflation have increased. Probably, investors turn to bitcoin when inflation expectations are on the rise. Swings in investor sentiment also play a role. The extent of the change in the bitcoin price suggests that speculative waves are at work, driven by momentum buying and extrapolative expectations of price appreciation. When the fundamental value of an instrument like a cryptocurrency is very hard if not impossible to determine and when short-term price changes are a multiple of those observed in equity markets, caution should prevail when building and managing an exposure.

On Thursday March 11, a JPG file made by Beeple, a digital artist, was sold at Christie's for USD 69.3 million<sup>1</sup>. In the run-up to the auction, it had announced to accept payment in ethereum, a cryptocurrency, which, like bitcoin, has recently seen a spectacular increase of its price expressed in US dollar.

The news raises interesting questions about the art market, the use of cryptocurrencies, how cryptocurrency price gains can influence the price of real assets – works of art, vintage cars, real estate, etc. – as well as the possible correlation with financial assets. Since their launch, there has been debate about whether cryptocurrencies have the three functions of traditional currencies.

The first is that as a unit of account. There is some scepticism on this role. Using a cryptocurrency in parallel with a traditional currency like the euro or the dollar would require retailers to show price tags in both. However, the huge volatility of the price of e.g. bitcoin in US dollar would require daily price changes of the goods on offer. Consumers may also struggle to interpret bitcoin prices, which would run into a large number of decimal places for small-ticket items. Currently, one bitcoin corresponds to 47,535 euros, so a cup of coffee costing 3 euros would show a price tag of 0.000063 bitcoin, which is less straightforward to interpret. On the second function, that of medium of exchange, it is doubtful that it will become the key driver of the development of cryptocurrencies. After all, they need to be acquired before settling a purchase so doing this on a recurring basis would require running cryptocurrency balances, which raises the question of the quality as a store of value.

On this third function, there is the security aspect – are cryptocurrencies held in a safe digital place – and the economic aspect. Focusing on the latter, a proper store of value means that the basket of goods and services that can be bought is stable over time. For a traditional currency, this supposes low and predictable inflation – hence the focus of central banks on inflation targeting to anchor inflation expectations – whereby the erosion of purchasing power can, to a considerable degree, be easily hedged via high quality bonds<sup>2</sup>.

1. JPG file sells for \$69 million, as 'NFT mania' gathers pace, New York Times, 11 March 2021.

2. Nominal bonds can protect against expected inflation whereas inflation-linked securities can be used to protect against unexpected inflation. Very accommodative monetary policy

The real price of bitcoin – the ratio between its price in USD and the US consumer price index – has seen huge swings in recent years, which means that the basket of goods and services that can be bought with a given number of bitcoins fluctuates a lot. This implies that households that would use bitcoin as their main store of value face huge consumption risk, i.e. the risk of not being able to purchase the normal consumption basket. Bitcoin, which is sometimes called 'digital gold', shares this characteristic of being a poor inflation hedge, with gold. "In 'normal' times, gold does not seem to be a good hedge of realized or unexpected short-run inflation. Gold may very well be a long-run inflation hedge. However, the long-run may be longer than an investor's investment time horizon or life span."<sup>3</sup>. Unless one would consider that we are on the eve of an outbreak of runaway inflation

BITCOIN DAILY PRICE IN USD

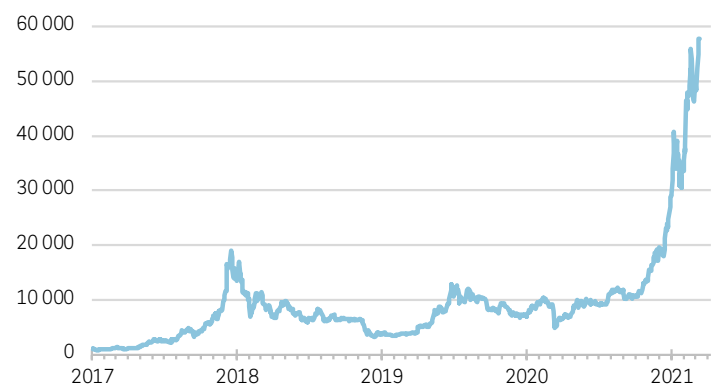


CHART 1

SOURCE: REFINITIV, BNP PARIBAS

weakens or even annihilates the value of nominal and inflation-linked bonds as an inflation hedge.

3. *The golden dilemma*, Claude B. Erb and Campbell R. Harvey, NBER Working Paper 18706, January 2013.

The extent of the change in the bitcoin price suggests that speculative waves are at work, driven by momentum buying and extrapolative expectations of price appreciation.



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-which does not correspond to the signal sent by financial markets and survey-based measures of expected inflation-, hedging inflation exposure can be done using traditional fixed income instruments.

The overview of the functions of a currency means that cryptocurrencies should be considered as an investment instrument, rather than as an alternative to fiat money. However, considering that, contrary to equities and bonds, they do not offer a right to future cash-flows, their price today exclusively depends on the expected price at which it could be bought or sold at some point in the future. Answering the question of what drives these price expectations is very difficult.

Research shows that the bitcoin/USD exchange rate has almost zero correlation with the exchange rate of the euro, the yen and the Swiss franc versus the dollar<sup>4</sup>. This means that the factors driving the bitcoin price are distinct from those driving traditional currencies. This also suggests that traditional macro-economic variables did not play a significant role, otherwise the correlations would have been higher. To explore this further, Table 1 presents the correlation between weekly changes in the bitcoin price in US dollar, the S&P500, the 10 year US Treasury yield, the yield on US high yield bonds, US breakeven inflation -the yield difference between nominal Treasury notes and inflation-linked securities- and the copper price. The upper triangular part of the matrix shows the correlations since the start of 2017. There is some correlation between the bitcoin price on the one hand and equities and breakeven inflation on the other hand. The other correlations with bitcoin are very low. Interestingly, as shown in the lower triangular part, correlations are quite a bit higher since the start of 2020 between bitcoin and copper, equities and, in particular, breakeven inflation. This would indicate that investors turn to bitcoin when inflation expectations are on the rise.

Another possible explanation for the recent behaviour could be that swings in investor sentiment also play a role, causing an increased correlation with equities. However, the extent of the change in the bitcoin price suggests that speculative waves are at work, driven by momentum buying and extrapolative expectations of price appreciation. (Social) Media attention can reinforce these dynamics, as well as the development of financial instruments like exchange-traded funds, futures and options, which facilitate position-taking. When the fundamental value of an instrument is very hard if not impossible to determine and when short-term price changes are a multiple of those observed in equity markets, caution should prevail when building and managing an exposure.

**William De Vijlder**

**BITCOIN DAILY PRICE IN USD, NOMINAL VS REAL**

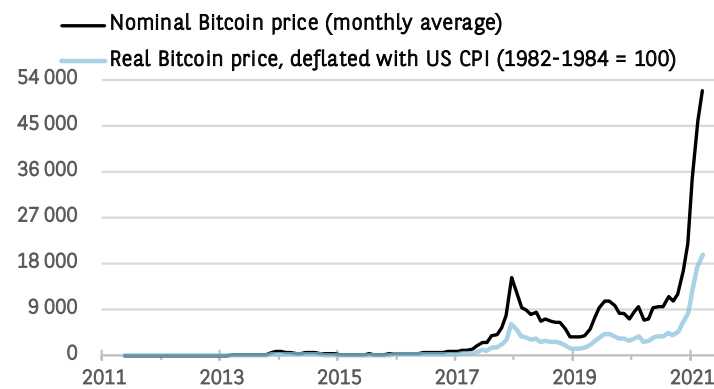


CHART 2 SOURCE: REFINITIV, COIN METRICS, BNP PARIBAS

4. *Is bitcoin a real currency? An economic appraisal*, David Yermack, NBER Working Paper 19747, December 2013. The correlations were calculated for the period from July 19, 2010 up to March 21, 2014.

**CORRELATION MATRIX**

Weekly data since start of 2017

	Bitcoin in USD	S&P500	US T.Note 10y	US High yield	US breakeven inflation	Copper
Bitcoin price in USD, weekly change in %	1	0.187	0.017	-0.078	0.187	0.058
S&P 500, weekly change in %	0.374	1	0.241	-0.708	0.564	0.387
US T.Note 10-y, weekly change in bps	0.081	0.174	1	-0.036	0.357	0.186
US High yield, weekly change in bps	-0.153	-0.758	0.007	1	-0.423	-0.410
US TIPS 10y, breakeven inflation, weekly change in bps	0.413	0.631	0.196	-0.444	1	0.338
Copper LME cash price, weekly change in %	0.168	0.466	0.140	-0.530	0.327	1

TABLE 1 SOURCE: REFINITIV, BNP PARIBAS