

Cryptocurrencies: the portfolio perspective

As a relatively young asset class, cryptocurrencies, in our view, could be a valuable portfolio addition in an uncertain (rather than just a risky) world

Constructing a good, let alone an objectively optimal portfolio, is never an easy task. Its composition will depend on an investor's circumstances, investment objectives and constraints. In addition, there are the general problems of using past observations to draw forward-looking inferences.¹ All models – whether in finance or in science – have their limitations and tend to break down under certain conditions. This is all the more reason to “try to understand what risks we can, to domesticate as many unknown unknowns as possible,” as James Weatherall explained in a highly accessible book explaining the recent origins, uses and abuses of quantitative modelling in modern finance.²

This suggestion is highly relevant as investors seek diversification, and explore alternative, but still relatively nascent, investments, such as cryptocurrencies. Much can be written – and has been, by us and others – about the potential of the underlying blockchain technology.³ But for an investor's asset allocation, such technical and historical details also need the context of the underlying economic characteristics of cryptocurrencies.

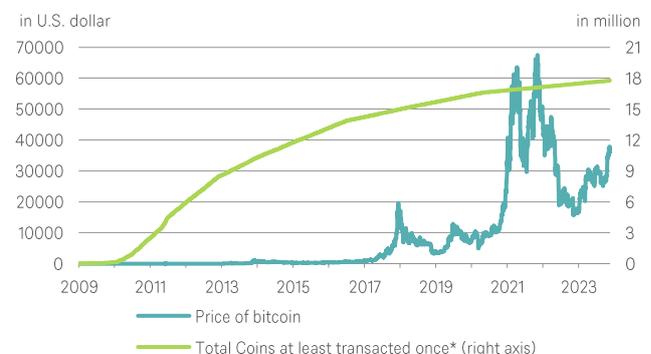
When talking about various cryptocurrencies, a key question concerns their supply. For example, Bitcoin's supply is firmly capped at 21 million coins, with its issuance schedule (see chart) transparently regulated by the Bitcoin protocol.

So, despite both Bitcoin and gold being scarce assets, and despite the terminological analogies (such as mining), Bitcoin's and gold's issuance schedules differ. Bitcoin's supply can never be changed due to increasing demand while gold mining is likely to increase with heightened demand. In addition, and similarly to gold, Bitcoin does not generate an income stream. (though keep in mind that other cryptocurrencies, such as Ethereum, have a different setup and value proposition to Bitcoin. Putting aside the assessment of individual cryptocurrencies, the underlying blockchain technology certainly has plenty of potential, most notably in becoming the base infrastructure for potentially tokenized financial markets in the future. Finally, when it comes to assessing their proposition today as a means of

payment, we believe there is still too much uncertainty for cryptocurrencies to materially matter, at least in developed countries.⁴

Until they mature further, and as long as prices remain very volatile, the use of cryptocurrencies within a traditional portfolio for risk diversification is likely to be mainly of interest for sophisticated, institutional investors with the requisite resources and skills to crunch the numbers for, initially, relatively small allocations.⁵ As an alternative source of diversification for private, retail clients, the potential of cryptocurrencies may lie less in carefully calibrated optimization work and more in having an additional type of relatively affordable optionality against uncertainties that may only become apparent with the benefit of hindsight. In particular, they could be a way to gain indirect exposure to the dynamic tech sector, or to the many already emergent longer-term changes at the heart of capital-market infrastructure. Such uncertainties go beyond traditional economic notions of the types of risks which can be precisely estimated or quantified from past observations. In our view, that could make them valuable in an uncertain (rather than just a risky) world.

Bitcoin: high price volatility while issuance is converging



Sources: CoinMetrics, DWS Investment GmbH as of 11/21/23 // * Upper limit of bitcoin issuance 21 million

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Footnotes

- ¹ Goodman, N. (1954) "Fact, Fiction, & Forecast", Harvard University Press.
- ² Weatherall, J. (2013), "The Physics of Finance: Predicting the Unpredictable: Can Science Beat the Market?", Short Books, p. 216
- ³ Digital designs | Part 1 (dws.com), June 15, 2021.
- ⁴ Digital designs | Part 2 (dws.com) July 6, 2021.
- ⁵ See, for example: The Global Market Portfolio (dws.com), September 27, 2023.

Glossary

Bitcoin is the first and still among the leading cryptocurrencies based on blockchain technology. Bitcoins are created without the involvement of central banks through the calculation of blocks that contain transactions and are created through cryptographic calculations in the course of so-called mining.

A **blockchain** is a shared, decentralized database, in where changes to its distributed ledger can only be made by creating new encrypted entries. These must be confirmed, before new data is added. In this way a blockchain has a level of tamper resistance while information is (potentially) available to all participants at the same time.

Diversification refers to the dispersal of investments across asset types, geographies and so on with the aim of reducing risk or boosting risk-adjusted returns.

Ethereum is a decentralized blockchain platform. Anyone can deploy immutable and therefore permanent applications onto it. Thereby, all kinds of advanced business logic can be run automatically, allowing for easy creation of new currencies, tokens and smart contracts. The Ethereum network is configured to find blocks every 15 seconds rather than every ten minutes (Bitcoin), enabling faster confirmations.

"**Mining**" is the process that many cryptocurrencies use to generate new coins and verify new transactions. It typically involves vast, decentralized networks of computers around the world that verify and secure blockchains.

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

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