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Is Bitcoin Junk?

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SYNOPSIS

Bitcoin has built up a substantial following in recent years. Although the cryptocurrency has no intrinsic value, it does have imputed value. The result is that volatility is endemic to the cryptocurrency and wild price swing is the norm rather than the exception.

COMMENTARY

BITCOIN'S RECENT dramatic fall has renewed the question of whether the cryptocurrency has any value. Until the meltdown, it was thought that the cryptocurrency of choice for computer hackers, fringe characters and criminals had finally gone mainstream. Indeed, bitcoin has managed to build up a significant following among institutional and retail investors in recent years. As prices tumble, the question of whether bitcoin has any value is definitely worth visiting.

At about US$700 billion (as of this writing), bitcoin's market capitalisation is nearly double that of Walmart's, a giant multinational company with more than two million employees worldwide. Before its latest plunge, bitcoin even hit a total market value of more than US$1 trillion. With such a massive valuation, an implosion of the bitcoin market will not only wipe out many investors, the ensuing deleveraging can also spill over to other financial markets and even the real economy. Because of the systematic risk, it is important for government regulators to keep an eye on the cryptocurrency.

Finite Supply

Created in 2009 by a mysterious person (or persons) called Satoshi Nakamoto, bitcoin is essentially an electronic reward for validating transactions made with the cryptocurrency. Very little is known of Nakamoto except that he published a paper in 2008 that laid down the workings of what we know today as bitcoin. Since then, bitcoin has emerged from its obscure beginnings to become the world's largest and best-known cryptocurrency. From just pennies in the beginning, one bitcoin is now worth tens of thousands.

Anyone can offer their computer power to help validate bitcoin transactions. Once a block of transactions is verified, a bitcoin is given out as reward. This decentralised feature also means that bitcoin exists outside of the traditional financial system where no individual, organisation or country can control the cryptocurrency. Furthermore, because bitcoin is secured by an ingenious public ledger technology called blockchain, fraud is virtually impossible.

The total number of bitcoins that can ever be created or "mined" is also capped at 21 million. This inbuilt limit means that there can only be a finite number of bitcoins and once the threshold is reached, no more will be created. Close to 19 million have been released so far and the remaining ones will be awarded at a decreasing rate until around the year 2140.

Digital Gold?

Bitcoin is often compared to gold. Both are scarce and require a lot of energy to produce. The two are also used as a medium of exchange and store of value – though admittedly, bitcoin remains deficient in those areas. But this is where the similarity ends. Unlike its bullion counterpart, bitcoin is intangible. So while gold has various industrial applications, bitcoin has none whatsoever.

Neither is bitcoin considered a productive asset by traditional measures. Productive assets like stocks, bonds and real estate produce a cash flow in the form of dividends, interest payments and rental income, respectively. This income-generating feature allows owners of productive assets to recoup their capital over time. But with no obvious cash flow from bitcoin, investors can only expect to recover their capital through appreciation.

At the most fundamental level, bitcoin has no intrinsic value. Businesses have intrinsic values because of the physical assets they own. In the event of bankruptcy, these assets can be liquidated to repay shareholders. The practical implication of not having intrinsic value is that bitcoin can leaving investors with nothing in the worst bear case. This begs the question: why would anyone invest in the cryptocurrency when it has no intrinsic value?

Imputed Value

While bitcoin has no intrinsic value, it does have imputed value or the value we assign to something when it is unknown. In other words, bitcoin's imputed value is whatever people think it is. The cryptocurrency derives its imputed value namely from its scarcity, soundness and utility.

Firstly, investors believe bitcoin is valuable because of its scarcity. Not only is bitcoin scarce, it is scarcer than gold because the total supply of bitcoins is perfectly inelastic whereas gold's is not. If bitcoin is rarer than gold, then logic dictates that it ought to be more valuable than the precious metal. Further boosting this scarcity argument is the fact that many bitcoins have been lost or destroyed meaning that the actual number of bitcoins in circulation is far fewer.

Additionally, bitcoin is prized because it is seen as an inflation hedge. With loose monetary policies around the world, cash is no longer king. In contrast, bitcoin is thought to hold its value as central banks debase their fiat currencies. This emphasis on "sound money" speaks to investors who think that the fiat currency system is breaking down. To them, bitcoin is a safe haven in an environment of unchecked money printing and rising inflation.

Thirdly, investors buy bitcoin in the belief that it will see widespread adoption as the world pivots towards a cashless society. Compared to physical cash, bitcoin is more portable and exchangeable internationally. Furthermore, being a convenient way to transfer money over the Internet, bitcoin allows people without access to traditional banking infrastructure to remit funds at almost or no fees. As millions around the world still lack access to traditional banking services, bitcoin's potential as a payment transfer system can be significant.

Practical Implications

Even if bitcoin is not entirely worthless, having only imputed value makes it an extremely volatile asset and the recent sell-off is archetypal. As the cryptocurrency undergoes its price discovery phase, that meltdown is neither the first nor the last. Since bitcoin has no intrinsic value, a complete collapse that leaves investors with nothing cannot be ruled out either. And it would be a huge mistake to see the bitcoin market in isolation, not least because it is correlated with other cryptocurrencies'.

Perhaps the more important takeaway, from a policy standpoint, is what steps may have to be taken to protect and insulate the real economy from bitcoin's extreme volatility. Favouring free markets, some governments will deem such contingency plans superfluous. But every country is different. Moreover, being prepared for a catastrophic meltdown of the cryptocurrency and its fallout is not just sound policymaking but also the hallmark of a thoughtful and forward-looking government.

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