
HOW MUCH BITCOIN WOULD THAT BE, SIR?

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We previously explored corporations' [bitcoin purchases](#) and the [investment management industry's participation](#) as two sources of growing institutional demand driving bitcoin's past rally.

Here, we consider a third source of demand—the public's increasing acceptance of bitcoin as payment.

Invented as peer-to-peer electronic cash, bitcoin aims to function as a global decentralized digital [currency](#). Its creators envisioned an efficient and transparent financial system without centralized parties, directly empowering participants.

In the current stage of Bitcoin's development, some doubt whether it's a mature system able to facilitate transactions, given its high [volatility](#) and scalability issues, as well as regulatory uncertainties, tax complications and environmental concerns.

But potential developments could help move bitcoin forward.

Companies' growing acceptance of bitcoin for payment could bring wider adoption, and the consequent increase in demand could dampen volatility. Technological advancement, such as the lightning network, could also improve the system.

Current Challenges

Money is a social construct to conveniently exchange goods. It has evolved from shells to fiat currency backed by governments.

These forms of currency have three aspects in common: [store of value](#), medium of exchange and unit of account.

Examining bitcoin's current stage of evolution from these three angles raises some doubts about whether it can be counted as money:

- **Store of value:** bitcoin's price fluctuates widely
- **Medium of exchange:** bitcoin is not yet accepted in many places
- **Unit of account:** bitcoin is not a good vehicle to denominate goods given its volatility

The major challenge is volatility, which ensures that it is neither a good store of value nor a unit of account. Over the past five years, Bitcoin's annualized volatility is approximately 80%. Its [drawdowns](#) during sell-offs could also be intimidating.

Regulatory uncertainties and crypto influencers' changes of attitude can feed this volatility. Recently, we've seen bitcoin drop as much as 40% due to Elon Musk suddenly changing his decision to accept bitcoin as payment, citing environmental concerns.

The IRS's current tax guidance also hinders Bitcoin's adoption. Bitcoin is treated as a property rather than a currency, which implies that users need to pay capital gains taxes or recognize tax losses when transacting. This could lead to high tax payments when bitcoin's price is soaring.

From a technical aspect, the system’s design poses a challenge to its scalability. Due to Bitcoin’s inherent block time and proof-of-work mechanism, it can only process up to seven transactions per second, compared to Visa’s 65,000.¹ These limitations prevent the network from handling large numbers of transactions, which can result in delays in processing times and increasing transaction fees, making it inefficient and expensive.

All these factors hold bitcoin back from being a “digital payment.”

Recently, investors appear to be focusing more on the “digital gold” narrative, treating bitcoin as an asset class that could provide inflation protection and portfolio diversification.

Yet, the narrative could shift again in the future as the network develops and its adoption accelerates.

Payment Platforms’ Participation

Payment platforms such as Square, PayPal, Visa and Mastercard are expanding their [crypto currency](#) businesses as bitcoin becomes mainstream. By participating in the crypto space, they hope to grow their revenues and leverage their existing infrastructures to form their own integrative crypto ecosystems.

With these companies’ participation making access easier, bitcoin could draw more usage from the public. Increased usage could potentially support bitcoin’s substantiation as a currency and lead to the stabilization of its price, although the challenges noted above may be difficult to overcome.

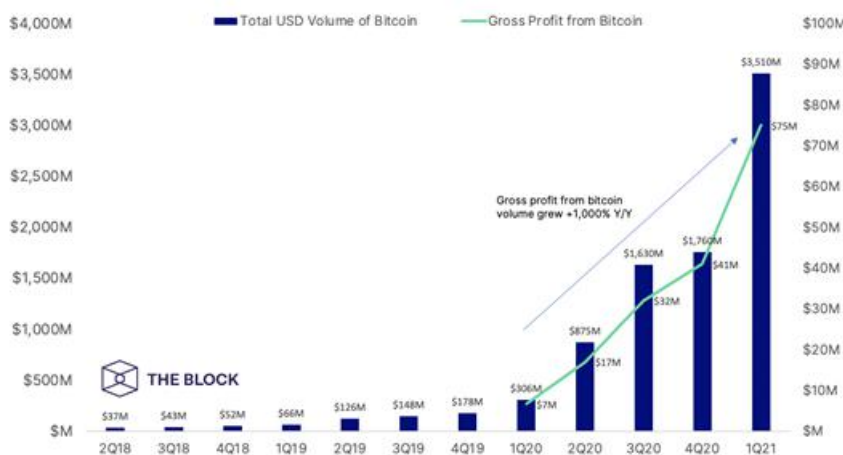
Payment platforms engage with cryptocurrencies in two major ways: providing cryptocurrency trading services and facilitating payment with cryptocurrencies. The latter is worth particular attention as it enables cryptocurrencies to function as money.²

Square

Square expanded Cash App—a payment service that allows users to transfer money to one another (like Venmo)—to include bitcoin in 2018.

The success of Cash App indicates the service’s high demand. In the first quarter of 2021, Cash App generated a revenue of \$3.5 billion related to its bitcoin services, or 11 times growth, year over year.³

Square’s Cash App–Bitcoin Sales Volume, Q1 21



Source: Square Company Filings, The Block
Source: The Block, as of 5/6/21.

More than three million users transacted bitcoin on Cash App in 2020.⁴ While this number includes both purchasing and transacting in bitcoin, Square saw a larger base of customers interacting more frequently with the payment app.

Paypal

In November 2020, PayPal established its crypto selling and buying services. In March 2021, it started letting users pay seamlessly with selected cryptocurrencies through its “Checkout with Crypto” service, like using a credit or debit card.

Visa and Mastercard

Visa and Mastercard partnered with various digital platforms to roll out debit and prepaid cards that allow customers to pay with selected cryptocurrencies. These partners help convert cryptocurrencies to [fiat currencies](#) when processing the payment.

Going forward, Visa and Mastercard will focus on allowing direct settlement of stablecoins and central bank digital currencies (CBDC).⁵

The Lightning Network

Bitcoin developers are working on a solution to solve its scalability problem—adding a second layer protocol on top of Bitcoin called the lightning network. It carries transactions off-chain, allowing users to send instant payments and conduct micropayments (payments in small amounts).

The lightning network was introduced in 2017 and has been adopted by major crypto exchanges such as Kraken and OKEx. It now has 10,000 active nodes and holds around \$69 million in value.⁶ If widely supported, it could scale up the transaction process, making it faster and cheaper.

The Beginning of a New Trend

The idea of a decentralized currency is an exciting one, and Bitcoin’s invention opens up the possibility of a more efficient and transparent financial system.

Right now, we are at an early stage and the system is being put to the test. More participants are riding this trend: Microsoft, Yum Brands (KFC in Venezuela accepts Bitcoin), Landry’s restaurants (including Mastro’s)...

As PayPal’s CEO Dan Schulman said, we are at “a transitional point where cryptocurrencies move from being predominantly an asset class that you buy, hold and or sell to now becoming a legitimate funding source to make transactions in the real world at millions of merchants.”⁷

¹Sources: Kyle Croman et al, “On Scaling Decentralized Blockchains (A Position Paper),” International Conference on Financial Cryptography and Data Security, 2/16; “Visa Fact Sheet,” [usa.visa.com](#), 7/19.

²However, most of the payment options offered now do not allow direct settlement. Instead, cryptocurrencies need to be converted to fiat currency to be used.

³Source: Square, “Q1 2021 Shareholder Letter,” EDGAR, 5/6/21.

⁴Source: Square, “Q4 2020 Shareholder Letter,” [investors.squareup.com](#), 2/23/21.

⁵Sources: “Digital Currency Comes to Visa’s Settlement Platform,” [usa.visa.com](#), 3/29/21; Raj Dhamodharan, “Why Mastercard Is Bringing Crypto onto Our Network,” [mastercard.com](#), 2/21/21.

⁶Source: Colin Harper, “Bitcoin’s Lightning Network Now Has 10K Active Nodes and \$69M in Locked Value,” [coindesk.com](#), 5/5/21.

⁷Source: Anna Irrera, “Exclusive: PayPal Launches Crypto Checkout Service,” [reuters.com](#)

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DEFINITIONS

Bitcoin (the currency)...: A digital currency (also called a cryptocurrency) created in 2009, which is operated by a decentralized authority as opposed to a traditional central bank or monetary authority.

Currency...: Currency in which the underlying index returns are calculated. Euros: The returns are calculated, and there is no currency conversion; resulting statistics result purely from the returns of the equities. U.S. dollars: The returns are calculated and then converted into U.S. dollars; resulting statistics are the result of a combination of the euro's performance against the U.S. dollar and the returns of the underlying equities.

volatility...: A measure of the dispersion of actual returns around a particular average level.

Store of value...: An asset that maintains its value over time without depreciating.

Drawdowns...: Periods of sustained negative trends of return.

Cryptocurrency...: a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend.

Fiat money...: Any money that is accepted by a government for paying taxes or debt, but is not pegged to or backed directly by gold and other valuables.