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The Future Of Banking: Cryptocurrencies Are Still Mostly About Speculation, Not Payment

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Key Takeaways

- There is a new wave of excitement about cryptocurrencies in general and bitcoin in particular, on the back of a strong rally early this year.
- Yet, over the past few months, these instruments have become somewhat more accessible and acceptable as investments or means of payment, and we have not seen big technological or regulatory advances.
- The environmental footprint of certain cryptocurrencies is high, and they might expose banks to mis-selling and other conduct risks.
- The credit risks related to cryptocurrencies for banks remain limited because, out of caution, they have minimal exposures.

Financial markets are getting excited again about cryptocurrencies—especially bitcoin after prices rallied to record highs in February. However, S&P Global Ratings believes cryptocurrencies continue to be speculative instruments, which investors mostly use as a store of value rather than a means for commerce, despite some moves toward broader adoption. Indeed, after its spectacular rise, bitcoin prices pulled back in what some market watchers believe is a sign of caution.

We believe regulators and much greater public confidence are the keys to more widespread use. In the long run, we see a greater chance of large-scale adoption of central bank digital currencies (CBDCs) as a means of payment than private digital currencies (see "The Future Of Banking: Central Bank Digital Currency May Replace Cash, Not Banks," Dec. 2, 2020). In our view, ultralow interest rates, substantial liquidity, growing inflation expectations, and high valuations for other securities may have contributed to the renewed interest by investors in bitcoin. Some investors see bitcoin as a competitor to gold and other commodities as a store of value and hedge against inflation.

In our analysis of risks, we note that the environmental footprint of these instruments, mainly bitcoin, is reportedly high. For example, last year bitcoin reportedly consumed a broadly comparable amount of electricity as the Netherlands or the United Arab Emirates consumption. However, we view cryptocurrencies' price volatility as a limited risk for the financial institutions we rate. We believe a collapse in the value of cryptocurrencies would be just a ripple across the financial services industry, still too small to destabilize the system or weaken the creditworthiness of banks we rate. That said, some banks—for instance those active in marketing cryptocurrency ETFs (exchange-traded funds)—might be exposed to product mis-selling or reputational risks if prices collapse. It could be argued that buyers do not really understand the risks of investing in digital currencies.

What would lead to increased risks for rated banks would be a wider adoption most likely of CBDCs. Indeed, they may face changes to and perhaps even disruption of their business models. Another game changer for financial markets as a whole could be cryptocurrencies' distributed ledger technology, which many traditional financial institutions are working to use for various purposes.

Acceptability And Accessibility, As Investments Or Means Of Payment, Are Somewhat Increasing

S&P Global Ratings still considers bitcoin and other cryptocurrencies more as speculative instruments than as payment vehicles that could substantially alter the financial system. Showing bitcoin's speculative nature, prices peaked on Feb. 21 at 10 times the March 2020 low. Prices then dropped almost a quarter and subsequently started to recover (see chart 1). However, acceptability of these instruments has increased somewhat over the past couple of years, though more as an investment rather than a payment tool. We have seen the first ETF launched in Canada and a few others lining up. We also observe traditional asset managers becoming more open to the idea of investing in cryptocurrencies or in taking positions. Blackrock, for example, announced that Bitcoin derivatives registered on commodity exchanges will become eligible investments for a couple of its funds. In the same vein, U.K.-based Ruffer Investment Co. took a £550 million position on bitcoin. The assets under management of Grayscale Bitcoin Trust, managed by digital currency asset manager Grayscale, increased tenfold from $2 billion in 2020. Finally, we have also seen new players starting to accept or offer products connected to cryptocurrencies, with large payment providers (Visa and Mastercard), PayPal, and Tesla, being the most noteworthy examples, but volumes remain marginal.

Chart 1

Bitcoin Prices Are Skyrocketing Again
Daily closing prices (USD)

Sources: S&P Global Ratings, Coindesk.com.

Visa and Mastercard have partnered with crypto wallet providers (for example, Coinbase, BlockFi, and Wirex) to issue cards, allowing the customers of those companies to spend their digital currencies at merchants on their networks--following conversion to fiat money by the wallet providers. We understand that the volatility risk linked to the cryptocurrency valuation remains with the client, and neither the merchant nor the payment service firm is taking this risk. Visa and Mastercard are also building capabilities to eventually allow movement of stable coins and CBDCs directly on their networks, which could help pave the way to much broader acceptability.

Similarly, PayPal is allowing U.S. customers to purchase or sell digital currencies (such as bitcoin and ether) and will allow U.S. customers to make purchases at merchants on its system (after a partner crypto-company converts the digital currency into fiat money) in the next two quarters. Tesla announced it will start to accept bitcoin as a mean of payment, subject to applicable laws and initially on a limited basis. It remains to be seen if the conversion of bitcoin will happen prior to the conclusion of the transaction or after, although publicly available information so far suggests the company might go the former route. Tesla also bought $1.5 billion worth of bitcoin. A few banks in Europe and the U.S. have also teamed up with external providers to hold bitcoin and other cryptocurrencies on behalf of their customers (BNY Mellon with Fireblocks and European banks with Metaco).

Regulators Are Key To Broad Adoption

Despite the sharp increase in prices, several unanswered questions could hinder the plans of these companies. Chief of which is customer protection (privacy and security), compliance with law--particularly taxes--and regulations, and more importantly, the volatility of the instrument itself. We understand that there were no major significant technological improvements or regulatory rulings--beyond U.S. regulatory approval for the provision of custodian services in the country. In our view, regulators still hold the key to broad adoption and widespread use of these instruments.

Some regulators are clearly moving against these instruments to protect end users. Regulators in Sweden and the U.K., to name a few, acted in this direction over the past few weeks. In Sweden, the Financial Supervisory Authority advised against the suitability of bitcoin exchange-traded products for retail consumers. Earlier, the U.K. Financial Conduct Authority enforced a ban on the sale of derivatives and exchange-traded notes based on cryptocurrencies to retail clients. Finally, exposure to cyber risk remains significant, as the hacking of cryptocurrency exchanges shows. One of the most recent to date was a New Zealand-based exchange that was hacked while in liquidation following a previous breach.

Ultralow interest rates, substantial liquidity, and growing inflation expectations in certain regions as well as high valuations on stock markets could explain the increased interest in bitcoin and cryptocurrencies. Investors, particularly retail ones, are hunting for yield and appear to be jumping on the boat to avoid missing the opportunity. Despite such interest, the overall market capitalization of bitcoin is still under that of major companies and small compared with the size of global capital markets. Moreover, the market is still concentrated, with about 1 million of active addresses among the 30 million with nonzero balances and only 788,000 addresses with more than 1 bitcoin. The number drops to 16,000 if we increase the minimum holding to 100 bitcoins (all numbers are as of Feb. 22, 2021, and from Glassnode.com). Such concentration makes the instrument prone to market manipulation, in our opinion. We continue to believe that bitcoin and other cryptocurrencies will have to overcome their technical and nontechnical weaknesses, including lack of regulatory support, to thrive.

The Environmental Footprint Of Cryptocurrencies Is Reportedly High

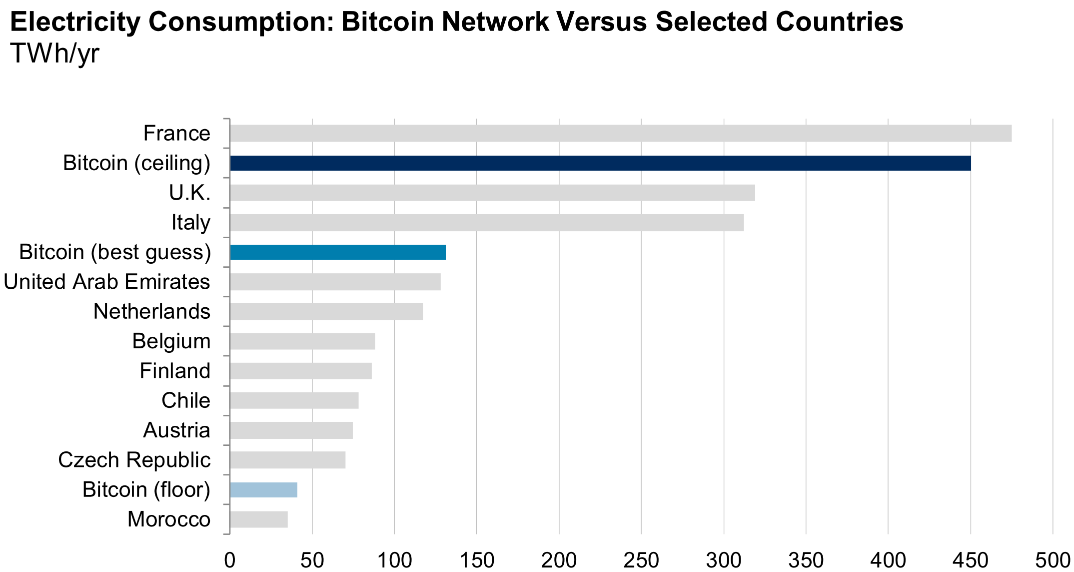
Bitcoin and other cryptocurrencies consume a large amount of electricity (see chart 2), equivalent to the Netherlands or the United Arab Emirates (see chart 3), according to the Cambridge Bitcoin Electricity Consumption Index. Nevertheless, the cost of electricity is estimated to absorb less than a fifth of miners' income, which still makes it a profitable activity. It is also worth mentioning that cryptocurrency supporters assert that a comprehensive analysis of the energy consumption of cryptocurrencies would show they are more efficient. They also argue that the highest amount of energy consumption is spent on the issuance of new coins rather than maintaining the network. Finally, these supporters believe that as a large amount of the maximum supply has already been issued for bitcoin, electricity consumption is therefore likely to reduce. Bitcoin and other cryptocurrencies could also leverage clean energy solutions as they become more prevalent. However, renewable energy is a partial solution for cryptocurrencies because their networks need a constant energy supply.

Chart 2

The Bitcoin Network's Electricity Consumption Is High And Increasing
Estimated TWh/yr

Note: The Cambridge Bitcoin Electricity Consumption Index (CBECI) provides a real-time estimate of the total electricity load and consumption of the Bitcoin network. Given that the exact electricity consumption cannot be determined, the CBECI provides a range of possibilities consisting of a lower bound (floor) and an upper bound (ceiling) estimate. Within the boundaries of this range, a best-guess estimate is calculated to provide a more realistic figure that we believe comes closest to Bitcoin's real annual electricity consumption. Sources: S&P Global Ratings, CBECI.

Chart 3



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Another angle to the environmental footprint of cryptocurrencies is the reportedly short lifespan of the mining machines. While bitcoin was initially supposed to use the spare capacity of computers, miners discovered that graphic cards and then Application Specific Integrated Circuits (ASICs) can do a better job. Once becoming obsolete, these machines cannot be recycled easily elsewhere, and they become a source of electronic waste. The average duration of an ASIC is estimated at around 1.5 years, which can be longer or shorter depending on the price of bitcoin. That explains the significant amount of e-waste generated by bitcoin.

If Prices Plunge, Retail Investors Are The Ones To Lose Out

If bitcoin prices were to nosedive, retail investors would feel most of the heat because we understand they represent most of the market's activity either directly or through investment in funds. The damage would unlikely be felt beyond this group of investors. One reason is the relative contribution of cryptocurrencies to global wealth formation is still small. For example, global stock market capitalization reached approximately $85 trillion at year-end 2020, compared with bitcoin at slightly above $1 trillion before the correction. Therefore, we do not foresee any systemic risks to the wealth effect.

From a risk perspective, because of the lack of regulation and possible use of cryptocurrencies in illegal activities, banks that accept them might expose themselves to operational and legal risks, if regulators accuse them of assisting in money laundering, for instance. Previous cases show how expensive this could be for banks. Banks might also be exposed to product mis-selling risks if they start to offer cryptocurrency ETFs without properly explaining the pros and cons of the product to their clients. Other channels of transmission to banks include direct exposure, credit cards, and brokerage operations on behalf of clients. While we understand that banks' direct exposure is minimal, if retail investors fund their cryptocurrency purchases with credit card debt and prices of the instrument subsequently drop, the deterioration of their creditworthiness could lead to an increase in delinquency rates. On the other hand, banks can benefit from new activities related to cryptocurrencies, such as custody services, which could generate a new source of fees.

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