Cryptocurrencies May Transform Capital Markets

Speculation is extraordinary, but so is potential

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KEY INSIGHTS

- T. Rowe Price has had an early and front-row seat to the development of cryptocurrencies, or crypto, and the distributed ledgers that enable them.
- While we are not currently investors, crypto has an impact across capital markets, and our investment and technology teams are intensifying their research.
- We believe that just as in the early stages of the internet, current excesses may recede, and the crypto landscape will likely take shape over many years.

Whether investors welcome it—or even realize it—cryptocurrency, or crypto, is having an impact on their portfolios. The immense size of the cryptocurrency ecosystem and its disruptive effects are being felt across capital markets. Crypto in its various forms is also changing the way businesses operate.

Our analysts and portfolio managers have given us an early and front-row seat to the development of cryptocurrencies and the distributed ledgers that enable them. Our financial analysts have seen the potential for banks to adopt new technology that makes banking faster and more secure, while also watching the shifting, continually disrupted landscape of mobile payments and fintech. Our retail analysts are watching how cryptocurrency could shape the purchase of goods or services. And our technology and other sector teams have watched as companies—both large, established firms as well as small start-ups—began to put distributed ledgers to work across health care, cloud computing, cybersecurity, and supply chain management, among many other applications. This is influencing the risks and opportunities we are identifying across the investing landscape.

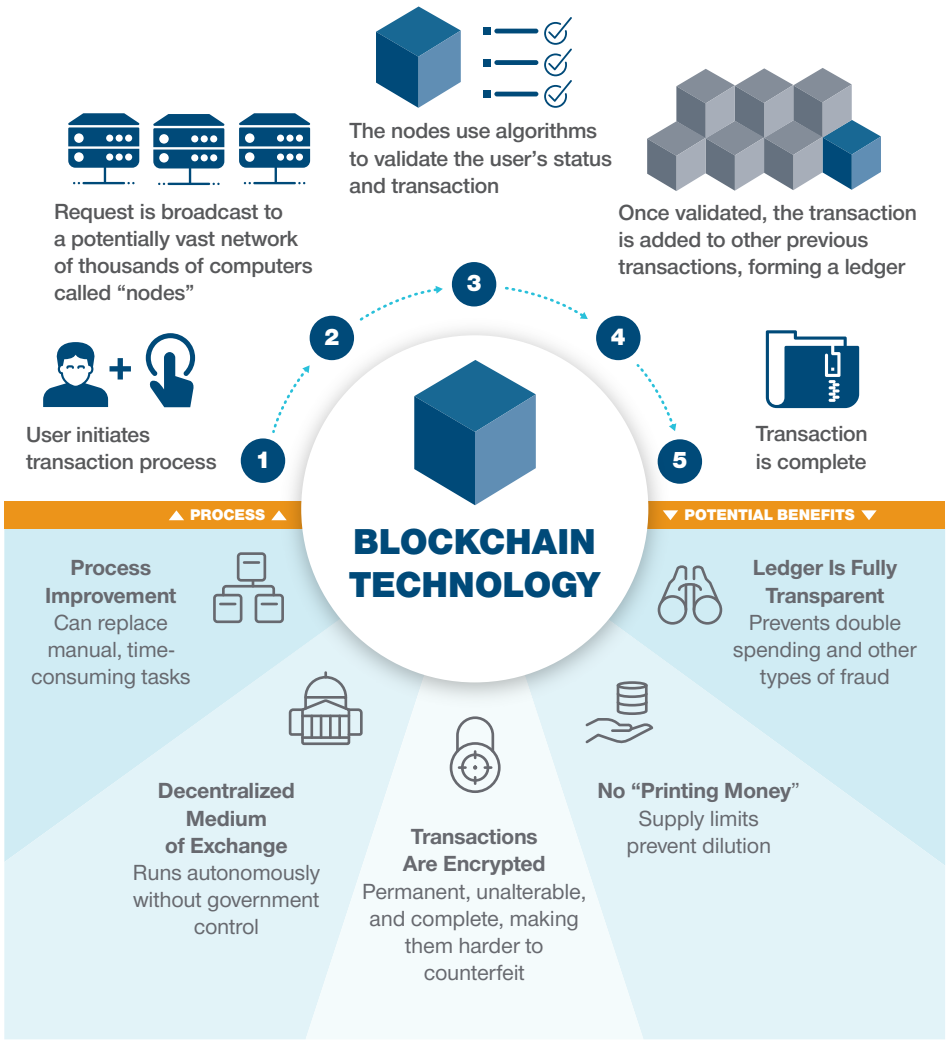
We believe that blockchain and the technology behind the new cryptocurrencies have significant economic potential. At the same time, we're carefully monitoring the potential of individual cryptocurrencies.

We don't hold cryptocurrency in our portfolios. We've studied the risk and return characteristics and portfolio implications of cryptocurrencies. The mandates we manage for clients do not currently appear well suited for investing in cryptocurrencies, especially given the extraordinary level of speculation and volatility in many crypto markets. Nonetheless, crypto has an impact across capital markets, and our research in this space will continue to intensify.

> We continue to discuss whether cryptocurrencies might eventually have a place in select portfolios and for a limited set of investors.

Blockchain Explained

A "distributed" technology



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We recently held an internal forum on cryptocurrency with several portfolio managers and analysts from across our Multi-Asset, Fixed Income, and Equity divisions, along with members of our technology and trading teams. This was done in true T. Rowe Price collaborative fashion: We discussed and debated the tough questions, such as the relative merits and applications of the underlying technologies involved, market sentiment, and how to value cryptocurrencies.

We continue to discuss whether cryptocurrencies might eventually have a place in select portfolios and for a limited set of investors. While this debate will continue, we all agree that we are witnessing the developing stages of a transformative technology.

A Transformative Technology

Generally, our experts agree that cryptocurrencies are unlikely to soon supplant traditional currencies in most retail transactions, particularly in large, developed markets.

> We expect the landscape to take years to unfold....

Decentralized systems are inherently slower, and one of our technology analysts observes that Bitcoin and others have had difficulties in scaling up. However, trust in centralized currencies is eroding in many emerging markets, and recent signs of inflation are encouraging more interest in crypto alternatives.

Privacy concerns and the freedom from government control are also driving interest in cryptocurrency. As one of our international economists puts it, "some people like owning something that no central authority can manipulate or devalue." Of course, some users desire privacy to hide illicit activity but many others are simply attracted to a system that lies outside of government control.

Indeed, we are keeping a close eye on how governments are responding to the crypto revolution—although regulators are mainly still just "sharpening their pencils," one of our analysts observes. Governments' choosing to strictly regulate or even ban cryptocurrencies outright poses a risk to current investors, but clarity about regulations could also invite opportunities. Properly regulated cryptocurrencies could become less volatile and more environmentally sound. Recent ransomware attacks demanding payments in cryptocurrency are highlighting the issue for regulators.

Meanwhile, many central banks are also exploring developing their own digital currencies. Central bank digital currencies (CBDCs) may carry none of the privacy benefits of their counterparts, but they promise to promote financial inclusion—likely allowing the "unbanked" to conduct transactions using a smartphone or a digital card.

There are already some 1,000 different currencies in circulation, and a shakeout is likely inevitable, especially as we see the speculation in cryptocurrency investing as one sign of increasing speculation in markets. Yet, just as the implosion of prominent early dot-coms didn't doom the internet, the potential demise of any prominent digital tokens may not doom cryptocurrency. We expect the landscape to take years to unfold, and we are aware that the technologies and tokens that dominate the future may not even yet exist. Indeed, we find the growing diversity of cryptocurrencies as intriguing as opportunities in any single coin.

Given the ability of some virtual currencies to facilitate payments at relatively low fees, applications in banking, payment processing, and financial services are being vigorously pursued. This has already led to a growing adoption of cryptocurrencies for cross-border payments, such as remittances.

Smart contract cryptocurrencies like Ethereum take it a step further by giving rise to decentralized finance (DeFi), which aspires to recreate the entire traditional financial ecosystem, including lending platforms and exchanges. DeFi's main selling point is its strictly code-based enforcement mechanism, which dispenses with the need for a centralized intermediary between transacting parties. Oracle cryptocurrencies, such as Chainlink, connect with the smart contract ecosystem by feeding it with real-world data such as market prices—thereby enabling real-world use cases for the smart contracts themselves.

The past few months have demonstrated that Bitcoin may not remain the dominant cryptocurrency. Our technology experts observe that other digital tokens have faster processing speeds, and the "proof of work" computing resources needed for Bitcoin mining are coming under scrutiny for their electricity usage and environmental impact. We are keeping an eye on alternative methods for ensuring chain integrity and how these may favor competing currencies. At the same time, as one of our experienced technology portfolio managers points out, there are significant network effects in crypto, as elsewhere in the digital world. Identifying the strongest systems will be key.

We expect there to be an investing opportunity for active investment managers who can better understand the longer-term viability of certain currencies.

Possible Investment Case

Directly investing in cryptocurrency may be appropriate for certain investors for a small portion of their assets, though many caveats apply. Much is uncertain and the risks are very high; Bitcoin, for example, has had five crashes of 80% or more since its inception in 2009. Indeed, one of our fixed income leaders sees the rise of many cryptocurrencies as a symptom of heightened speculation in markets, fed in turn by fiscal and monetary policies that have created an environment where more money is chasing fewer investments.

Whatever the risks and opportunities presented by crypto, its very size—about USD 1 trillion, and currently around that of the emerging markets corporate debt market—makes the case for treating it seriously as an asset class. Whether cryptocurrencies have any inherent value is something we are still debating internally, as is whether we could bring the strength of our global investment research team to bear on any analysis of that value.

What we can do, however, is to draw on our diverse perspectives on which currencies and technologies have the best chance to survive. For example, will digital tokens emerge with all the benefits stemming from the distributed ledger technology but also with a negligible environmental footprint and improved processing speeds? And will so-called "stablecoins" with a set value solve the problem of volatility and become widely accepted? Or will CBDCs come to dominate, and what does that augur for the global financial system?

These are highly complex questions, and we are glad to be able to draw on a wide range of technological and investment expertise to seek the answers.

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