

TECHNOLOGY

## A Crypto Cataclysm? The Case for The Long View

by Olaf J. Groth, Tobias Straube, and Dan Zehr



*Cryptocurrency is here to stay. Business leaders and policymakers are rightfully skeptical - but they should not ignore the hype.*

The waves of cryptocurrency news are enough to leave anyone confused about its future. Just when one major announcement suggests a new threshold of credibility – in October, for example, PayPal announced plans to integrate crypto into its payment solution – another headline comes along to raise more questions. Even Elon Musk’s announcement in March that Tesla would invest \$1.5 billion in Bitcoin raised as much criticism as it did praise. While the underlying concepts of blockchains and decentralization have gained much broader acceptance, too many signs of a crypto bubble remain. Bitcoin’s value rose to an unprecedented \$56,000 in February 2021 before falling back to \$45,000 later the same month. Is this unusual? No. It has crashed more than a dozen times since 2011, by as much as 30 to 80 percent. The crypto environment includes far more than just Bitcoin, but given its volatility and the lingering memories of past financial collapses – not least the subprime mortgage crisis in 2007-2008 and the dot-com bust in the early 2000s – it’s hard to fault anyone for questioning the wisdom of crypto investments.

## Bubble Economics

Yet, the many comparisons between crypto’s boom-and-bust cycles and previous bubbles too often overlook a crucial point. The lasting lesson from those previous examples isn’t just the way a bubble inflates, but how it deflates – and what’s left behind when it does. Much like what occurred during the dot-com bubble, the frenzy of interest in crypto has sparked a wave of technological and structural innovation – some of which will undoubtedly fail, but much of which will last. Instances of questionable activity, such as the **coordinated yet artificial inflation of value in the Dogecoin token**, will continue to occur as long as we have markets. However, crypto has continued to gain trust in the financial and business sector. In January, strategists at JPMorgan Chase & Co., once a bastion of crypto critics, said **Bitcoin’s long-term value could hit \$146,000 in the long term as it competes with gold as an asset class**. Not long after that note came out, BlackRock Inc., the world’s largest investment firm with \$8.7 trillion under management, said it had **“started to dabble” in cryptocurrency**.

Is it possible even these sophisticated investors are getting sucked into the hype, much as they did during the boom days of past bubbles? Many renowned economists, including eight Nobel Prize winners, have railed against crypto, raising questions about what they

see as a bubble. Renowned New York University economics professor **Nouriel Roubini has even questioned the entire concept of Bitcoin – its decentralization, its security and its scalability** – warning that a crypto cataclysm could become the latest in the series of booms and busts that damage the economy and ruin many hapless investors' lives.

## Centralization and Decentralization

Thoughtful and agile regulation and policy will become increasingly necessary as crypto continues to expand. But for all the concerns about where it could go from here, business strategists and policymakers would make a serious mistake if they ignore this paradigm-changing innovation or take a heavy-handed approach to regulating it. Crypto has already begun to shift the foundations that will define our global economy in the decades to come. It has birthed new economic models, infrastructure and actors. Alongside the slate of Altcoins (Bitcoin alternatives) and payment tokens, more than 60 countries have tested national digital currencies since the start of 2020, most notably China, which has **recently expanded the rollout of its electronic Chinese yuan (eCNY)** to major cities, including Shanghai and Beijing. Unlike pure cryptocurrencies and the decentralization that underlies most of the crypto ecosystem, these digital currencies remain under centralized control, simply providing a digital form of existing bank notes. Still, the slower uptake of similar experiments in the U.S. and, to a lesser extent, the EU raises questions about whether any globally trusted regulation of digital currency and other crypto-related elements could evolve.

Such concerns underscore one of the enduring strengths of crypto – its remarkable ability to develop new ways of creating and conferring trust at a time when trust in capitalism's ability to create better lives for all has wavered. The frothy pattern of Bitcoin's series of bubbles too often obscures what a higher-resolution lens reveals – that the nascent pillars of trust scattered throughout the crypto world will survive a potential cataclysm and establish new, credible and robust ways of creating, holding and exchanging value. Crypto provides an alternative for the growing number of retail investors who distrust current institutions because they believe, rightly or wrongly, that existing structures are subject to human frailties, skewed incentives or undue political influence on monetary policy in an

era of increasing radicalization. And now, the innovation born of that distrust has reached a point at which its elements are too deeply entrenched – including within traditional financial structures – to be swept aside.

History repeatedly shows that experimentation follows times of deep dissatisfaction and, as is the nature of experimentation, some disrupts the status quo and ignores prevalent consensus and convention. As the virtual body bags of the initial renegades get carried off and other revolutionaries learn from their experiences, smarter experiments will quickly follow. The initial distrust of fiat currency and central banking drove an already prospering ledger and tokenization ecosystem and a decentralized model of trust assurance. However imperfect they might be, these innovations have already nestled into corners of the global financial marketplace, nursed and nurtured by smarter revolutionaries – and, increasingly, established institutions as well.

Still, human nature dictates that we distrust the new. Research in behavioral economics, for example, finds that most people will avoid the risk of losing \$1 rather than taking a risk to gain the same amount. So, when we look back on the lessons of past bubbles, we need to make a deliberate effort to learn not just from what was lost, but what was gained, as well. Yes, investors pumped hundreds of billions of dollars into companies with valuations based on nothing more than a belief that economic principles and fundamentals, such as profitability, were a thing of the past and that the rules of the old analog world did not apply in the age of the internet. And yes, that house of cards collapsed. But some of the cornerstones of today's digital economy remained – buried at first in the ashes and pain of bad business models and all-too-easy money, but eventually unearthed in the years that followed. The mobile data infrastructure, the flattened hierarchies of digital-native companies, the multi-sided platform models with their greater service accessibility and network effects, the computer science, AI and data engineering capabilities, the customer engagement techniques, and the expanded accessibility of services – all of these benefits we see today have their root in that first troubled attempt to light up the internet. That era laid the foundations for what has become today's thriving digital economy.

So, can we proverbially return to the height of the dot-com era and, given the benefit of hindsight, learn how to identify the concrete pillars that are emerging in the uncertain world of crypto? What existing structures can regulators, business leaders and retail

investors use as a foundation for a new framework of trusted financial interaction?

## Building Trust

Some of these pillars have already emerged within the evolving frontier of blockchain infrastructure itself. Although Bitcoin remains somewhat overhyped as an actual payment means, a growing number of sophisticated investors have started to explore the broader portfolio of coins and tokens – and for good reason. Developments such as utility tokens (which grant holders access to a product or service) and security tokens (which contain investment contracts in digital or physical assets) are providing some of the initial building blocks needed to connect the crypto and non-crypto economies. These innovations rely on smart-contract “do it yourself” blockchains, such as Ethereum, one of a rapidly growing array of ledger and other foundational technologies to take hold. The Polkadot protocol and the Lightning Network, two other foundational innovations, facilitate transactions across separate blockchains and allow millions to billions of transactions across a network, a functionality that removes one of the main bottlenecks to the scalability of Bitcoin and other blockchain-based platforms. The lack of these types of technologies had inhibited inter-operationality and limited Bitcoin’s use as payment means. With these, the crypto economy has fertile grounds for a variety of business model innovations across finance, logistics, law, transportation and many other sectors. And while these innovations remain nascent in the non-crypto economy, they’re already dictating the pace of innovation within the crypto economy itself – mainly within the evolving models of Decentralized Finance (DeFi).

The growing momentum that’s gathering behind DeFi will extend the reach of these crypto systems even further. In its purest form, DeFi involves efforts to decentralize the entire financial system. This is particularly disruptive for the existing crypto economy, which still relies on central actors, such as exchanges, despite the decentralized character of the underpinning blockchain technology. DeFi seeks to remove all those points of centralized control or authority for virtually every kind of financial service. In combination with decentralized money, such as certain cryptocurrencies, developers and firms can build exchanges or provide lending, insurance and other similar services without any central authority overseeing or controlling it.

A range of these DeFi platforms and services have already emerged and, in many cases, have provided options that add to or improve on offerings in both the crypto and non-crypto economies. One of the most prominent examples of a decentralized financial system involves new exchanges that promise to increase the security and efficiency of trading. Today, listed crypto tokens trade on centralized exchanges, such as Binance, Bitmex Coinbase and Kraken. Although such exchanges have become increasingly secure, past incidents of hacking and the underlying DeFi mindset has started to lead toward **decentralized exchanges** (DEX). With DEX, tokens trade directly in a peer-to-peer fashion in a process controlled by code and recorded in a decentralized ledger, instead of entries in order-books of a central authority.

**Decentralized insurance** has emerged as another increasingly popular component of a DeFi system, providing an option that, rather than merely providing an alternative to traditional insurance structures, improves on them in two significant ways. First, DeFi insurance uses smart contracts that are open to the public, which increases scrutiny, enhances competition and improves insurance services. Second, in decentralized insurance, a pool of investors serve as the underwriters, collectively sharing the risk among themselves and receiving a premium in return. This opens up a pathway for groups of investors to develop insurance for things that traditional industry players might never consider. One DeFi insurance protocol, called Etherisc, already provides a platform for offerings such as flight-delay insurance, hurricane insurance, crop insurance and even social insurance. A growing set of **decentralized lending** platforms has developed, as well, utilizing smart contracts to allow everyday people to lend their cryptocurrency and receive interest in exchange. While decentralized lending is collateral-based, like traditional lending schemes, it allows users to take out loans without declaring their identity or providing a credit score. Such platforms could open up lending services to a new array of currently underserved people and remove possible biases in the assessment of a person's creditworthiness.

While the true believers in DeFi see it has a way to decentralize and re-create the entire global financial system, the underlying ability of decentralization to ensure trust in transactions remains one of crypto's most promising benefits – and will serve as the core for these and an array of other new platforms and services. These innovations remain in their infancy, not unlike the foundational pillars of today's robust digital economy were

during the dot-com days of the early 2000s. But even now, it doesn't require too much imagination to envision how crypto's innovations – and the trust they can foster if developed thoughtfully – could herald a new model for economic transactions, liquidity, and transparency. As the breadth of these applications continues to increase and the diversity of users and usage expand, the system will become increasingly robust. Centralized exchanges that made negative headlines in the past will beef up security measures to attract institutional investors. Financial management vehicles will become more professional <sup>1</sup> as will investment products and services they offer. The pendulum of regulation will swing and, one hopes, reach an equilibrium at which innovation can flourish and investors can confidently transact without fear. To be sure, these developments concern policy makers and regulators alike, for many good reasons. How will they be able to shape and safeguard the economy, influence important outcomes like unemployment levels or trade imbalances, if the levers are so heavily decentralized? It will take not just technology innovation, but policy and regulatory innovation to answer those important questions.

Perhaps the bubble will blow and we suffer a crypto cataclysm. Perhaps smart regulation will slowly deflate it, or a more professionalized ecosystem will absorb the chaos and heal it. Regardless, the foundations for a new, more-decentralized structure of global finance are beginning to emerge, potentially pushing us toward a more resilient, equitable and trusted approach to transactions. We should nurture them, carefully, yes, but concertedly to create a more equitable financial system.

## 1. [PwC Elwood Annual Crypto Hedge Fund Report 2020.](#) ↩

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