

# What Robinhood and Bitcoin Reveal About the Future of Technology

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## TECHNOLOGY SECTOR TEAM

*The efforts of the disenfranchised to adopt new technologies that democratize access may look chaotic, but they represent an important driver for still further innovation.*

The first month of 2021 has provided a number of reasons to think that the adoption of new technology is playing a significant part in society's chaotic evolution. Understanding its role will help explain how the commerce and governmental layers in society may change in coming years and, therefore, better show which technologies will likely proliferate and grow to become part of the accepted infrastructure for our digital future.

We would argue that these tensions and the often-shocking consequences are inevitable and follow a historic pattern we have seen before at times of significant technological disruption. Digital technologies that lower the costs and frictions of transactions will democratize access, dramatically reshape how markets operate, and lead to a new generation of market leadership.

The events surrounding the Robinhood investors congregating on the Reddit social media platform can trace their roots to the same forces driving the popularity of cryptocurrencies in the last few months. Anger at restricted access to financial markets, frustration with the institutions that sit at the heart of the financial and political systems that perpetuate the status quo, and the resulting widening of economic inequality are manifesting themselves in financial markets, causing an urgent reassessment of the current system's stability.

The kneejerk regulatory responses to these specific events may well block the path of growth for the likes of Robinhood, or even Bitcoin. However, it is clear that technological disruption has been building for over a decade, and gaining a better understanding of why these events happened is an essential part of best practices needed to successfully navigate investing in the rise of technology in our society.

### **History Never Repeats Itself, But it Does Often Rhyme...**

Looking back at history and focusing on the major technological innovations since Richard Arkwright opened his mill in Cromford, U.K., in 1771 (igniting the first Industrial Revolution with the concept of the factory) offers insight to current events. There are clear patterns to how these past technological disruptions occurred and how financial markets innovated to accelerate the dispersion of the technological innovations through society .

The difference this time is the speed of adoption of digital innovations versus, for example, the speed of adoption of distributed electrical motors and mass production at the time of Henry Ford. This is a

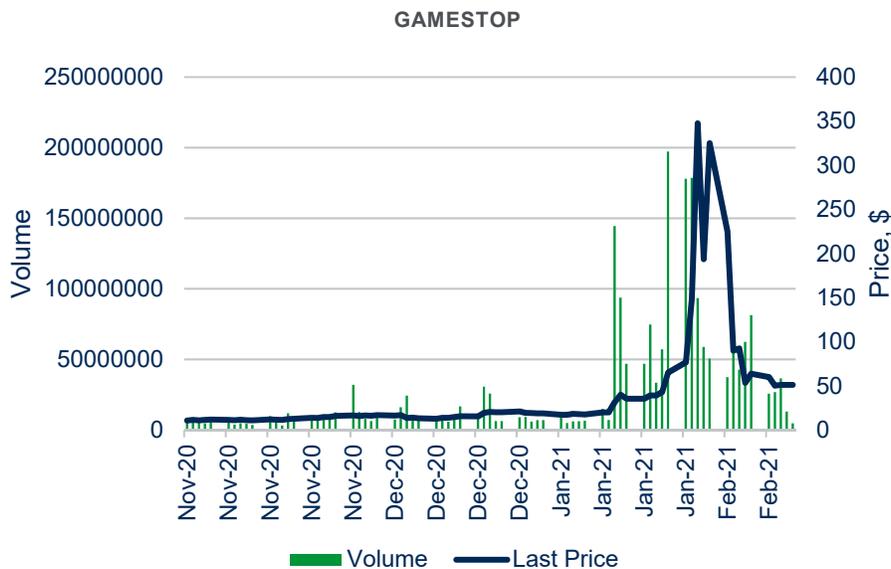
major challenge for those institutions tasked with ensuring the stability and trust in the system but that also lack the tools and experience to operate at digital speeds.

Typically, the “establishment” that exists at the time of the innovation will seek to minimize the impact on the businesses and governmental structures that are the basis of the establishment’s power, using excessive regulation and limiting market access for new entrants, all under the guise of protecting the “greater good.” History has proved repeatedly though that technological disruptions circumvent these hurdles and become the established way of doing things in the decades that follow.

### A Challenge to the System

January 2021 was marked by retail investors’ attack on financial markets to bid up stocks with very high short-interest, poking a finger in the eye of the billionaire hedge fund managers who were betting on future share price declines for struggling businesses such as GameStop and AMC. The media is portraying this battle between David and Goliath as a triumph for the “little people” who were financially crippled in the Global Financial Crisis and unable to access the capital markets to benefit from the following decade of Central Bank-funded bull markets in shares and bonds. In other words, they accused the establishment of looking after its own, and they were angry about it.

GameStop’s stock price rose 17-time from the end of December 2020 to the closing high of \$347.51 on January 27, 2021. Volumes spiked sharply as hedge funds moved to close short positions in the face of buying pressure from Robinhood investors who had congregated on the Reddit website to discuss stock ideas and target heavily shorted stock positions. Robinhood then limited trading GameStop shares due to its own regulatory capital requirements, taking the buying pressure out of the market, which allowed GameStop shares to fall back towards their prior trading range.



Source: Bloomberg. As of February 10, 2021.

After the financial crisis, financial innovations followed and opened up access to the stock market for huge numbers of small-scale retail investors. In 2013, Robinhood was founded with their stated mission to democratize finance for all, championing zero-commission trading and fractional share ownership, thus playing an important role in removing financial barriers to market access for the masses.

The **technological** innovation was the use of the Public Cloud, which enabled the small startup to scale its platform such that it could cope with huge numbers of transactions. By June 2020, Robinhood was processing 4.3 million daily trades, more than their primary competitor, TD Ameritrade, which was the next largest at 3.84 million. Prior to launching their mobile app, Robinhood had a waitlist of 700,000 users; today they have reached 13 million.

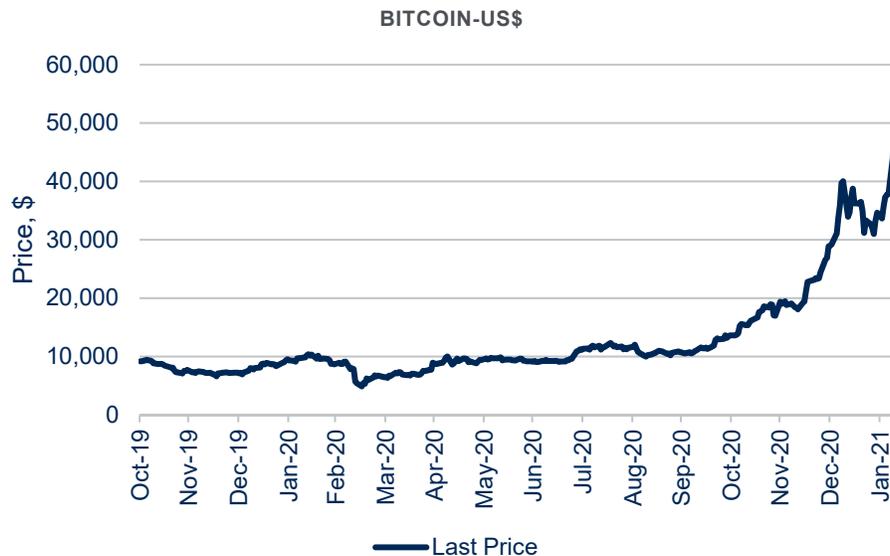
*“The desire of the disenfranchised to share in these profits acts as an impetus for subsequent technological revolutions, which in turn leads to chaotic political and regulatory responses. However, these historic events have always been an important part of the efforts within society to heal itself and as such should be viewed as milestones in the adoption of new technologies, rather than a threat.”*

The post-GFC world saw increasing regulation being applied to financial and banking businesses, which made being able to scale-up at low cost and without breaking the business or running afoul of too many regulations a remarkable achievement in itself. While mistakes were made in the rush for growth, and regulators levied fines, the company’s recent surge in popularity has resulted in financing rounds raising \$3.4 billion. These were required to keep the business operating in the face of the huge trading volumes being generated by the Reddit investors, a sign that their own investors were confident of Robinhood’s future growth prospects.

#### **Cryptocurrencies – Populist Protest or Disruptive Technology?**

The Global Financial Crisis and the falling cost of access to powerful computing infrastructure were similar catalysts in the rise of Bitcoin and other cryptocurrencies (such as Ethereum, Ripple, etc.). Bitcoin was invented with the intent of creating a digital currency that could be used for transactions and protect anonymity while at the same time remove the need for any central control of the currency – in other words, another embodiment of the populist protest against the establishment, this time in response to the role Central Banks played in the GFC and the moral hazards relating to bailing out the banks that had caused the crisis in the first place.

Chart: the rise in value of Bitcoin has been attributed in part to the demand for a currency with no centralized control, as well as anonymity for the participants.



As of February 10, 2021.

Most financial transactions today require some form of intermediary to establish the “trust” between counterparties that enable transactions to occur. Often this entails the processing and validating of both the financial aspects of the transaction itself, as well as the identities of the various parties involved. Bitcoin specifically aims to enable the system to function in a “trust-less” way and remove the need for such intermediaries, and therefore remove the ability to exert centralized control over the system – a clear threat to the role of central banks and financial regulators, not to mention government treasuries.

The blockchain technology used by Bitcoin suffers many trade-offs that in turn limit the use of Bitcoins as an effective medium of exchange, not least the volatility in the Bitcoin price and the time it takes for the miners to validate a transaction, leaving both sides exposed to the wild swings in Bitcoin’s value. The underlying blockchain technology that Bitcoin is road-testing, however, can have far wider uses than just cryptocurrencies.

The path forward for cryptocurrencies and blockchains requires an acceptance of these trade-offs when looking to other uses. This has led to a proliferation of blockchain solutions that manage global supply chains, automate trade finance and insurance contracts, and many more. The common aim is to remove today’s frictions caused by the complexity and cost of closing transactions with trading partners, and the need to establish trust in the counter-parties in the transaction.

### **Takeaway**

The new generation of technological solutions built on the Internet and Public Clouds, through dramatically lowering the costs of adoption and breadth of distribution, promise to democratize economic participation for the masses. The newfound ability to build much more transparent and credible systems for commerce and participation in governance are huge opportunities for the technology companies with the talent and foresight to innovate.

While the Robinhood/Reddit brigade may not bring down capitalism as we know it today, nor will Bitcoin replace the U.S. dollar, the technological catalysts for these events are consistent with the history of technological disruption and the interaction with the tensions in society at those times. Such crises inevitably arise as the establishment tries to maintain the status quo by extending the life of the old technologies and financial structures that underpin their power but fails to innovate and address the inescapable widening inequalities. The desire of the disenfranchised to share in these profits acts as an impetus for subsequent technological revolutions, which in turn leads to chaotic political and regulatory responses. However, these historic events have always been an important part of the efforts within society to heal itself and as such should be viewed as milestones in the adoption of new technologies, rather than a threat.

12 February 2021 | Research Note

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\*As of December 31, 2020

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