

# The Future of Money

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## Abstract

In this issue, we present a symposium that considers a possible monetary future. Each article is grounded in reality and history, but also considers current trends and the possible future evolution of monetary institutions. England and Fratrik present an overview of bitcoin and its possible development as either a financial asset or money. Luther focuses on the theoretical question of what the source of value for bitcoin is. It turns out to be a tricky one. Cargill and O'Driscoll argue that the Federal Reserve has been following the Bank of Japan's monetary policy, with equally unsatisfactory results. They suggest some remedies.

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## I. Introduction

Just over twenty years ago, the Cato Institute published a volume of essays on the future of money (Dorn 1997).<sup>1</sup> The work anticipated many of the issues being discussed today. They included monetary policy in the information age and the future of banking. It began with a section on electronic commerce and monetary evolution, which was a prescient pairing of two developments now obviously linked (but less so at the time). Many of the authors in that volume, such as Lawrence H. White, George Selgin, and Jerry Jordan, are active participants in today's debates over the future of money. Money has continued evolving, as has the discussion, but themes recur.

The papers in this symposium reflect both the evolution of money and finance, and the theories and evidence on that evolution. England and Fratrik (2018) provide an overview of the issues surrounding bitcoin and other cryptocurrencies. The authors are agnostic about bitcoin's future as either money or a financial asset.

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<sup>1</sup> The book collected the papers presented at Cato's fourteenth annual monetary conference held in May 2016.

They set forth all the major factors impacting that future and leave it to the reader to decide.

England and Fratrik consider whether bitcoin is money now (pp. 12–13).<sup>2</sup> They answer their own question by asking whether bitcoins are a generally accepted medium of exchange, a unit of account, and a store of value. They answer no to the first two and yes to the third. So, they conclude that bitcoins are not money now. Luther (2018, p. 31) asks the same question, but is less definitive on whether bitcoins are money now. I will return to this issue later.

In late 2017, bitcoin's price surged to \$18,000 with the emergence of futures markets. We will leave it to bloggers to keep up with daily developments. We will persist with principles and analysis in the two bitcoin papers. A surging price does not by itself change the issues raised in the papers.

England and Fratrik (2018, pp. 13–14) review the creation of bitcoin in response to the trust issue raised by the historical record of monetary debasement. Bitcoin depends not on trust in a central authority, but on trust in its algorithm and the distributed ledger system. Other alternatives to government fiat money discussed over the years include gold and competitive currencies. Advances in cryptography created new possibilities.

Privacy concerns have enhanced interest in bitcoin and other cryptocurrencies. But solving privacy concerns brings blowback from banking regulators and law enforcement, who worry especially about bitcoin's usefulness to conduct transactions on the dark web and to evade anti-money-laundering statutes (England and Fratrik 2018, p. 17). This has brought government into the world of bitcoin. Governments around the world have reacted differently, with China being the most draconian in its regulations. US officials are still feeling their way through the e-currency maze (England and Fratrik 2018, pp. 19–22). But signs indicate that they are not inclined to permit bitcoins to become a virtual currency.

What, then, of bitcoin's future? Perhaps it is as a store of value, rivaling gold. Gold's durability is well known, and its long history certainly gives it an advantage. But as England and Fratrik (2018, p. 24) explain, bitcoin has its own advantages: "Bitcoins are divisible and more portable than physical gold or even wealth held in a local financial institution. Bitcoins can be accessed from anywhere with an internet connection and a private key." So there is a rivalry between

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<sup>2</sup> Professor England also had a paper in Dorn (1997).

gold, a former money and now physical asset, and bitcoin, a not-yet money and an already-digital asset. That seems to be the financial state-of-play at the moment. Bitcoin as a financial investment seems less concerning to governments than bitcoin as a rival monetary system. Recently, there seems to be far more volatility in the markets for bitcoins than for gold.

In the end, England and Fratrik (2018, p. 27) can say that “only time will tell” bitcoin’s future role in finance.

## II. Why Does Bitcoin Have Value?

Luther’s focus is different than England and Fratrik’s. Mises (1934, p. 131) argued that “an object cannot be used as money unless, at the moment when its use as money begins, it already possesses an objective exchange value based on some other use” (quoted in Luther 2018, p. 40). That characterization is what is meant in the literature by “intrinsic value.” Mises’s analysis came to be known as the regression theorem: the value of a monetary unit regresses upon a prior value as a nonmonetary good. That reasoning applies in a straightforward way to gold. Luther argues it is less obviously applicable to the value of bitcoins.

One possibility is that bitcoins had no prior value when invented, i.e., no intrinsic value as defined here. In that case, value must have been established through some coordination process. Entrepreneurs have seen that bitcoins *might* actually become money in the future, so they have been willing to pay a sum of dollars today for bitcoins (Luther 2018, p. 37). It is a bootstrap theory, and these are typically unsatisfactory. Let us examine the alternative, however, before deciding.

From whence can we adduce an intrinsic value for bitcoin so we can salvage the regression theorem? It’s a stretch. One possibility is to treat bitcoin as a collectible. Luther (2018, p. 32) considers alternatives. I leave it to the reader to decide whether a case for the intrinsic value of bitcoins can be made. What hangs in the balance is the regression theorem.

Acceptance of bitcoin is a network problem: its value depends on how many and much others value it. It is not unlike the creation of a club. No one wants to belong to a club of one. Creating a club involves trying to create value from nothing. Studying the creation and growth of well-known clubs, such as Washington, DC’s private social Cosmos Club, might provide a clue to the coordination

problem that Luther identifies. I agree with him that “more attention should be given to the role of coordination” (Luther 2018, p. 44).

### III. Cash vs. Bitcoin

The authors do not delve deeply into comparing bitcoins to currency. At many margins, the two payment means do not seem competitive. Bitcoin is an alternative to existing online payment systems, which are still largely bank-centric. Conventional electronic banking is bitcoin's chief rival.

In dire situations, bitcoin, gold, US currency, and perhaps precious gems can be thought of as alternatives for transferring wealth. England and Fratrik (2018, p. 18) consider the case of present-day Venezuela. Its economy and society are collapsing. The average Venezuelan has lost over 30 pounds in weight (Jorge M. 2017). The imperative to flee with one's wealth is great. Gold and currency are bulky and easy to seize. Precious gems, like diamonds, are less so. Anecdotal evidence suggests that bitcoin has become a preferred alternative.

A different kind of emergency situation changes the trade-off between bitcoin and physical currency. During natural disasters, power is frequently interrupted for hours, days, or even longer. In the wake of Hurricane Maria, some residents of Puerto Rico still did not have power restored at the end of 2017. No power means no internet. Backup generators can substitute, but generators require fuel. Fuel is typically dispensed with the aid of electricity. To pay for food, water, and everyday supplies, cash becomes king.

Indeed, cash's role in today's payment system is often wrongly slighted.<sup>3</sup> Cash remains the dominant means of payment by volume, at 40 percent of transactions. Large transactions are generally settled by other means, and so cash's share by value is 14 percent.<sup>4</sup>

Cash is the dominant means of payment for many expenditure categories, such as gifts and transfers to people (67 percent) and food and personal care supplies (51 percent). Despite their commitment to online activities, millennials are big users of cash.

In short, the death of cash is greatly exaggerated. Consumer choice drives the use of cash. The so-called war on cash is, in reality, a war on consumer choice.

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<sup>3</sup> What follows draws from O'Driscoll (2017).

<sup>4</sup> Unless otherwise noted, all cash facts are from Bennett (2014).

The last observation helps put the discussion of bitcoin in perspective. Whatever one believes about bitcoin's future as money, surely bitcoin presents a liberty issue. One can be skeptical about bitcoin's emergence as money—a generally accepted medium of exchange—and yet still believe the decision ought to be the outcome of consumer choice. That is still the touchstone for economic analysis of goods markets generally. Absent some market failure, it ought to be also for payments choices.

#### **IV. The Fed in the Shadow of the Bank of Japan**

Cargill and O'Driscoll (2018) deal with comparative monetary policy and institutions. Their paper's starting point is much different than that of the two bitcoin papers. At the end of this section, I will suggest a connection.

The Fed has been mimicking the policies of the Bank of Japan (BOJ) for a decade. The policy outcome for the US central bank has disappointed, much as it has for the Japanese central bank. Federal Reserve officials have largely ignored the Japanese experience, believing that it reflected special factors. These officials were wrong in their assessment.

Slow or stagnant economic growth is the salient way in which policy outcomes have been similar. The US economy has now gone a decade without one year of 3 percent growth. That is a historical record of economic weakness.

Cargill and O'Driscoll (2018, p. 49) examine three similarities between BOJ and Fed policies. First, asset bubbles and their subsequent bursting in Japan (1985–91) and the United States (1995–2000 and 2001–06) reflected central bank policy errors combined with flawed financial structures. Second, the political economy of the operating environment of the two central banks ensures policy failures regardless of any institutional redesign of the banks. Third, the two central banks present a serious contradiction to the conventional wisdom that legal independence is the foundation for optimal central bank policy.

Japan experienced simultaneously an equity and real-estate bubble from 1985 to 1990–91, the collapse of which set the stage for Japan's lost decades of economic and financial development. The United States exhibited two successive asset bubbles, with the relatively brief dot-com bust in between. The first was an equity bubble (1995–2000) and the second was a debt-financed housing boom (2001–06). The second bust was far more severe because asset bubbles financed by

debt typically have greater consequences than stock bubbles. Leverage is the culprit. In both cases, easy monetary policy by the BOJ and the Fed played a major role (Cargill and O'Driscoll 2018, p. 51).

Cargill and O'Driscoll (2018, pp. 52–53) examine the flaws in the financial systems of the two countries. Japanese banks had “hidden reserves” in the form of unrealized gains on their equity holdings. And land collateralized many bank loans. A boom that began in 1985 based on fundamentals evolved into a phase of “irrational exuberance.” Bank lending raised the value of equities and land, which fueled more lending. Two asset booms resulted. Japan’s flawed financial system was the outcome of incomplete financial liberalization, which retained key elements of the old financial system.

The US financial system began partial financial liberalization in the 1980s and continued into the 1990s. While financial institutions gained new powers (e.g., allowing thrifts and credit unions to issue checkable deposits) and were relieved of regulatory burdens (e.g., interest-rate ceilings on deposits), other government policies remained in place or were expanded. Deposit insurance expanded; A variety of government programs supporting housing were in place and expanded. The government first encouraged and then pressured depository institutions to make “affordable” housing loans. And “too big to fail” bailouts were in place and would be expanded. Three policies were in place simultaneously:

1. expansionary monetary policy;
2. credit channeling to housing; and
3. implicit and explicit guarantees of financial institutions.

Hence, the monetary policies of both Japan and the United States were expansionary in the face of flawed financial systems. That combination generated asset bubbles, then busts. Bailouts of financial institutions generated moral hazard, setting the stage for future financial crises.

Central bank independence is supposed to result in lower inflation and better financial stability. Cargill and O'Driscoll (2018, pp. 57–58) find that central bank independence is more myth than reality. During its period of best performance (1950 to the late 1980s), the BOJ was one of the most legally *dependent* central banks. After it became legally independent, its performance deteriorated.

Since the Treasury/Federal Reserve Accord of 1951, the Fed has been viewed as independent. Yet its performance has waxed and waned over the period. It was responsible for the Great Inflation

from 1965 to 1985. It then did better from 1985 to 2000 on the inflation front, though as we have seen, it also facilitated the dot-com bubble. Since 2009, monetary policy has failed to contribute to a robust recovery.

Cargill and O'Driscoll (2018, p. 61) argue that only with financial-market reform, including an end to credit allocation and housing subsidies, will monetary policy be able to operate effectively and avoid creating asset bubbles.

## Conclusion

Is there coherence among the three papers? There is obviously so for the two bitcoin papers, even if there is a different focus in each. Yet, all three papers look at the possibility of alternative financial institutions and policies. Bitcoin would be a radical change. O'Driscoll and Cargill (2018) argue for substantial changes in both monetary policy and financial markets policy. A more modest Fed and an end to credit allocation would be a big change from current practice. In the end, all three papers aim at a sounder monetary and financial system.

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