

# Bitcoin Issues

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Everyone at this meeting will know of the existence of an extremely interesting recent development in the area of monetary institutions, namely, the appearance of the Bitcoin system, which offers a radically new type of asset that is intended to be used not only as an investment but also as a medium of exchange – and whose operation lies entirely outside the domain of the Federal Reserve. I won't at this moment try to describe Bitcoin's mechanism since my time is limited and because I believe that almost everyone here is somewhat familiar with it – indeed, that many of you will be more familiar with its details than I am. It must be said, nevertheless, that the development of the system reflects an extremely impressive intellectual achievement.

As matters stand now, the quantitative magnitude of Bitcoin is extremely small in comparison with traditional assets. As a store of value its magnitude (\$7.7 bil) is less than three tenths of one percent of the value of the U.S. money supply, measured as the sum of currency plus demand deposits (\$2800 bil) – and this money stock is in turn only about one percent of the assets of households plus non-profit organizations.

This does not mean, of course, that Bitcoin will never develop into a major medium of exchange and thereby take an important part of monetary transactions outside the domain of the Fed. Does this logical possibility also seem plausible? To me it does not. But, then, if I think back to the early 1990s, I would myself, at that time, have never believed that email and other internet uses could take over as large a part of my own daily activities as, in fact, they have. So I cannot trust my current feelings of plausibility. In any event, a major consideration in this regard is how the U.S. government is going to proceed in terms of regulation. I will come back to that topic in a minute.

To many of Bitcoin's admirers, one of its most attractive features is that its design puts the growth of the bitcoin supply on auto-pilot, outside the influence of any monetary policymaker. Specifically, the stock of bitcoins is programmed to grow automatically at the rate of (approximately) 25 bitcoins every 10 minutes but with this figure being cut in half every four years, thereby implying that the total stock will asymptotically approach a magnitude of twenty-one million. Thus the nation's monetary growth (under a Bitcoin scenario) would certainly not possess the inflationary bias that some of us (i.e., SOMC members) see as a characteristic tendency of the Fed.

Actually, however, it is not the case that bitcoin growth is *fully* on auto-pilot. Instead there is (if I understand correctly) a five-person Bitcoin "development team" that could probably modify the pace of future growth rates. Why, then, is it widely believed that this team – which influences but does not dictate the common beliefs of Bitcoin users,

which are central to its coherence – will not turn inflationary? Well, these five individuals are probably large bitcoin holders who would suffer from any reduction in the real value of bitcoins. Anyhow, the relevant point is that the auto-pilot is not fully predetermined as of now.

A major item of concern to Bitcoin boosters is, of course, whether the U.S. government will take legal steps to prevent its growth and possible dominance. In this regard it should be kept in mind that the U.S. Constitution "...has nothing to say about private parties creating money," to quote a legal expert (Grinberg, Hastings Science and Technology Law Journal, 2011). Thus Articles 8 and 10 of Part I specify that "Congress has the power to coin money, regulate the value thereof, and of foreign coin, and fix the Standard of Weights and measures" while "No state shall ... make any thing but gold and silver coin a tender in payment of debts." So in fact the Constitution's provisions regarding money evidently specify a gold or silver or bimetallic standard and therefore would appear to be sharply inconsistent with the Federal Reserve's monetary powers as presently recognized. How did this come to pass? The answer is, as many of you will know, that the current situation was enabled as a result of three Supreme Court decisions concerning the Greenbacks from the Civil War, decisions the reasoning of which seems to be highly illogical, as described in detail by Richard Timberlake in a recent (2013) book (and very briefly in a short paper of mine).

In this context it would seem possible that attempts at *severe* federal government regulation of Bitcoin could backfire, in the following way. Presumably, the government would have to rely on these three mentioned cases to establish the government's responsibility for management of the U.S. monetary system. But the illogical nature of the decisions in those three cases could lead to their positions being overturned – which could put us back on a gold and/or silver standard. This might seem implausible (again) but I do not see anything wrong with the above reasoning. Perhaps it underestimates the ability of the court system to depart from economic rationality.

It seems more likely, however, that the Supreme Court would take no notice of the lack of logic in the previous rulings in the three "legal tender" cases and leave the control of monetary management in the hands of the Fed. Even more likely, perhaps, is that the federal government will let Bitcoin prosper with the latter providing a non-dominant alternative payments mechanism that is valued and used by a significant but fairly small portion of the population. This also seems to be a desirable outcome from the standpoint of economic efficiency and perhaps improved monetary policy.

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