

## Should Fiat Money be Replaced with Virtual Currencies?

Written by Amir Reza Malekzadeh

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AMIR REZA MALEKZADEH, JAN 13 2015

### **Do the Arguments for the Replacement of Fiat money with Virtual Currencies, such as Bitcoin, Outweigh the Arguments Against?**

The debates on the future prospects of fiat money have intensified in the years following the Global Financial Crisis. In this essay, I will first discuss the features of fiat money and virtual currencies and also highlight the importance of conducting such a study to weigh up their pros and cons. I will then analyse the arguments made by the Austrian School to replace fiat money with a 'decentralised' currency such as Bitcoin, but also highlight the weaknesses of the Austrian theories. Then, I will argue that virtual currencies such as Bitcoin can bring huge innovations to the current banking and financial system, however I will point out that its volatility has undermined its adoption as a store of value. Finally, I will argue that from a realist perspective, the rise of a 'decentralised' currency such as Bitcoin is a threat to the power and security of the state, and therefore it will most probably come under more regulations that could further erode its competitive edge.

Fiat money is any legal tender designated and issued by a central authority, usually a central bank (ECB, 2012:9). It differs from commodity-backed money as a concept, because it cannot be redeemed for a commodity. People accept it in exchange for goods and services because of the trust that they have in the central authority that issues the currency (ECB, 2012:10). Since the collapse of the Bretton Woods international monetary system in 1971, the major economies of the world have been based on fiat money (Duncan, 2012:522). However the current fiat money system has been heavily criticised by many liberal economists, especially from the Austrian School, who object to the government's monopolistic supply and management of money (Hayek, 1990; Mises, 2010; Rothbard, 2005). These criticisms have increased and intensified since the Global Financial Crisis in 2008, which has cast doubts over the future of major currencies such as the euro, and has undermined the pre-eminence of the US dollar (Benigno, 2011; Duncan, 2012). Furthermore, the competence of the central banks in managing national currencies has also been called into question (Aron, 2011). As a result, investors have been searching for alternative stores of value. One example of this has been commodities such as gold, which have seen dramatic increases in price in the years following the Global Financial Crisis, as investors have searched for a hedge against volatile fiat currencies such as the US dollar (Baur, 2010). Another example is virtual currencies, which have proliferated since the Global Financial Crisis. Though this medium of exchange is at a very early stage of evolution and has a much smaller community of users, it is viewed by many as a promising concept which can compete and even challenge the dominance of fiat money in the future (Gapper, 2014). Given the significance of money, described by Rothbard as the 'lifeblood of the economy', it is important to further investigate the rise of virtual currencies and the challenge that they pose for the future of fiat money (Rothbard, 2005:83).

The European Central Bank has defined virtual currencies as, 'a type of unregulated, digital money, where traditional financial actors, including central banks are not involved' (ECB, 2012:5). This lack of government control over the supply and management of the money is a significant distinction between a virtual currency and conventional fiat money. The most prominent example of a virtual currency is Bitcoin, which was first introduced as open source software in 2009 (Bitcoin Foundation, 2009). Bitcoin uses peer-to-peer technology to operate with no central authority or banks, thus the management of transactions and the issuing of bitcoins is carried out collectively by the

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network (Bitcoin Foundation, 2009). This independent aspect of Bitcoin is one of the main attractions of the currency. Bitcoin operates on a global scale and can be used in all types of transactions, for both virtual and real goods and services (ECB, 2012:21). This functionality of the currency is what has made many view Bitcoin as a competitor of traditional fiat currencies such as the euro and the US dollar. Its exchange rate with respect to other currencies is determined by supply and demand and several exchange platforms exist that allow bitcoins to be traded with other fiat currencies (ECB, 2012:21). Bitcoin is not the first, and certainly not the last virtual currency we are likely to see (Kaminska, 2014). Nevertheless, given that it is probably the most successful and the most widely used virtual currency to date, I will predominantly be focusing on Bitcoin throughout my analysis in this essay (ECB, 2012:21).

The main arguments for the replacement of fiat money with 'decentralised' virtual currencies such as Bitcoin come from economists from the Austrian School, who argue that the government's monopoly of the supply and demand of fiat money has resulted in exacerbated business cycles and long-term inflation. The Austrian business cycle theory (ABCT), originally developed by Mises and further elaborated on by Hayek, argues that exacerbated business cycles are the inevitable consequence of the monetary interventions of the central banks in the market (ECB, 2012:22). They argue that since the widespread adoption of fiat money, and the increase in fractional-reserve banking, central banks have been in a position to expand credit considerably beyond the limit set by their own assets and by the funds entrusted to them by their clients (Mises, 1997:28). This in turn has led to an increase in the supply of money and to artificially low interest rates, which consequently has led to an increase in economic activity (ECB, 2012:22). They argue that this intervention and manipulation of the market by the central banks leads to malinvestments and an inefficient allocation of resources (Mises, 1997:28). The continuation of credit expansion leads to an artificial and unsustainable boom in the economy, which eventually collapses and leads to a prolonged recession (Mises, 1997:31). Economists from the Austrian School argue that until the credit-based economic paradigm and manipulation by central banks remain, we are likely to see more frequent and severe recessions in the future (Duncan, 2012:184). Hayek claims that a 'decentralised' money, that is regulated by market forces, is the only way towards market stability (Hayek, 1990:102). In which case, it can be argued that the replacement of fiat money with a 'decentralised' virtual currency, such as Bitcoin, can be highly advantageous as it could avoid these extreme business cycle fluctuations. The other argument made by the Austrian School is that government should not have a monopoly over the issuance of money since 'governments are inherently inflationary' (Rothbard, 2005:52). Hayek claims that there is a constant temptation by governments to 'commit the crime' of over-issuing and manipulating their currency in order to create 'cheap money' to fund governmental projects (Hayek, 1990:104). However this very action leads to a distortion of the structure of relative prices and to long-term inflation (Hayek, 1990:104). This inflation is believed to be very damaging to economies, as it disrupts the working of the capital markets and also makes future prices harder to foresee and current price movements harder to interpret (Hayek, 1990:20). Hayek concludes by stating that the only way to achieve a stable price level is by removing from national governments their monopoly over money creation (Hayek, 1990:19). Virtual currencies, such as Bitcoin, are not controlled by a government or a central authority, their price is determined by the market forces of supply and demand. It can be argued that by moving away from fiat money and adopting virtual currencies such as Bitcoin, we may be able to bring about stable price levels and put an end to long-term inflation. Thus, it is clear that if we were to take the arguments made by the Austrian School at face value, it would be highly advantageous to replace fiat money with a 'decentralised' virtual currency such as Bitcoin, as it would bring about price level, and overall market, stability.

However, important critiques of Bitcoin from contemporary Austrian economists, and criticism of the ABCT by prominent economists outside of the Austrian School must be taken into consideration when weighing up the benefits of Bitcoin. The main critique of Bitcoin raised by the Austrian School, is that the system fails to satisfy the 'Misesian Regression Theorem' (ECB, 2012:23). Mises claims that for an economic good to function as a money, it must already possess exchange-value based on some other cause than its monetary function (Mises, 2010:49). However, when the characteristics of Bitcoin are analysed against this Austrian model, it seems clear that it cannot be classed as a money, since it has never been a commodity money and thus has no intrinsic value (Pattison, 2011). While Bitcoin does possess some of the qualities of money, it is not money in the Austrian sense (Pattison, 2011). Furthermore, the Austrian School itself and especially the ABCT has been subject to a lot of criticism in recent years by prominent economists outside of the Austrian School. Friedman has argued that the ABCT does not give an accurate explanation of economic recessions as they happen in practice, and that the theory lacks empirical accuracy (Friedman, 1993). Krugman has claimed that although the ABCT has 'powerful emotional appeal' it is

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intellectually incoherent by again pointing out the failure of the ABCT in predicting how recessions happen and what they are like (Krugman, 1998). Other economists have argued that the simplified model that is given in the ABCT is not an accurate reflection of how market actors really behave (Tullock, 1988:75). When such factors are taken into consideration, it is clear that the arguments given by the Austrian School for the replacement of fiat money with a 'decentralised' currency such as Bitcoin should not be taken at face value, and must be placed under more academic scrutiny.

A second argument for the replacement of fiat money with virtual currencies, such as Bitcoin, is the great benefits and innovations that it can bring to the current banking and financial system. Firstly, virtual currencies such as Bitcoin make transactions much cheaper and faster, as the cost of transferring bitcoins via the Internet is less expensive and quicker than through conventional banking systems (Tanaka, 1996). Secondly, given the borderless nature of Bitcoin, international transfers are made without having to worry about expensive bank charges or exchange rates related to the transfer of fiat money (Avent, 2013). These innovations can potentially have the effect of an increase in business opportunities and the expansion of international trade (Tanaka, 1996). These advantages were acknowledged by the former chairman of the Federal Reserve, Ben Bernanke, when he proclaimed that Bitcoin 'may hold long-term promise' as a payment system (Bernanke, 2013). However, analysts in the banking sector have not all shared a similar opinion about the future of Bitcoin. They have generally pointed to Bitcoin's failure to match fiat money as a unit of account and as a store of value, highlighting the volatility of the price of bitcoin as the main contributing factor. A report by J.P. Morgan has pointed out that bitcoin's realised volatility has averaged 120 per cent over the past three years, with a range of 50 per cent to 400 per cent (Normand, 2014). This is in stark contrast with the fiat currencies of the G10 countries, which have had a realised volatility of 8 per cent with a range of 7 per cent to 16 per cent in the same period (Normand, 2014). The report argues that even in periods of extreme financial market stress such as the Asian Crisis of 1997 and the Argentine Default of 2002, currency volatility only reached levels closer to 50 per cent for Asia and 120 per cent for Argentina, and this only lasted for a few weeks (Normand, 2014). Therefore, although it is clear that Bitcoin has brought some innovations to the current banking and financial system, its volatility has seriously undermined its status as a competitor to conventional fiat money.

The strongest arguments against the adoption of virtual currencies, such as Bitcoin, to replace fiat money come from realist perspectives of the IPE. It can be argued that 'decentralised' currencies such as Bitcoin undermine the power and security of the state. Hayek has argued that the government's exclusive right to issue and regulate money has profoundly assisted the general growth of its power (Hayek, 1990:32). He argues that the modern expansion of government has largely been assisted by the possibility of covering deficits by issuing more money (Hayek, 1990:33). Furthermore, the monopoly over the monetary system has given states a vital command post for the control over the economy (Rothbard, 2005:83). Thus, it is very much in the interest of states to strongly defend any challenge to their control over the supply and management of money. Virtual currencies such as Bitcoin, pose a challenge to this power and authority due to their 'decentralised' nature. This has led Krugman to describe Bitcoin as a 'weapon' designed and intended to undermine the state's control of money, its ability to collect tax and monitor the financial transactions of its citizens (Krugman, 2013). This inability to monitor financial transactions has also undermined the security of the state. The near complete anonymity granted to buyers and sellers in bitcoin transactions, has made Bitcoin the perfect currency for illicit transactions on the Internet (Landau, 2014). For this reason, Bitcoin has received a lot of negative publicity and has often been linked with organised crime (ECB, 2012:25). The most prominent example of this being on the now defunct Silk Road, commonly known as the 'Amazon.com of illegal drugs', which at its height was facilitating sales worth more than \$1million a month (The Economist, 2014). Dealers from across the world were able to sell all manner of illegal substances, with a high degree of anonymity (The Economist, 2014). More security concerns were raised with the recent collapse of Mt Gox, Bitcoin's most widely used currency exchange platform. It filed for bankruptcy in the US after losing 745,000 bitcoins, without any clear explanation of how it had happened (Gapper, 2014). A report by J.P. Morgan has highlighted this issue, arguing that the lack of external oversight is a real obstacle for the future of Bitcoin (Normand, 2014). They claim that market participants would prefer the accountability of known but fallible entities to one based on a mathematical code (Normand, 2014).

However, the security concerns highlighted so far are also prevalent in conventional fiat currencies such as the US dollar and the euro. In fact, there is a far greater level of drug dealing, money laundering and tax evasion that is conducted with fiat currencies than with bitcoins (ECB, 2012:25). For example, the Serious Organised Crime Agency

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(SOCA) has claimed that more than 90 per cent of all 500 euro notes that are in circulation in the UK are in the hands of serious organised criminals (Casciani, 2010). Nevertheless, the challenge that virtual currencies such as Bitcoin pose on the power and security of the state will undoubtedly lead to more regulatory scrutiny and restrictions. This has already been the case in Russia and China where measures have been put in place to curb the growth of the virtual currency, and threats of banning the currency altogether have been made by government officials (Hille, 2014). The US is also looking to devise some form of regulatory framework (Hille, 2014). Any such regulation will raise the possibility of Bitcoin becoming more expensive. Goldman Sachs have estimated that Bitcoin transfers are currently 1.5 per cent cheaper than Visa-type card payments, however further regulations on the virtual currency could erode that competitive edge (Gapper, 2014). Therefore, the reluctance of states to allow virtual currencies such as Bitcoin to exist in the market without regulation, may perhaps lead to the currency losing its benefits and advantages over fiat money.

Overall, it is clear that virtual currencies, such as Bitcoin, do have some advantages over fiat money. As I have shown, the Austrian School is in favour of a 'decentralised' virtual currency such as Bitcoin, as they argue that government monopoly of the supply and demand of fiat money has resulted in exacerbated business cycles and long-term inflation. They believe that the replacement of fiat money with Bitcoin could bring about long-term price level, and overall market, stability. However, I then argued that such arguments should not be taken at face value, as it is clear that Bitcoin does not fully fit with the Austrian model, as it does not satisfy the 'Misesian Regression Theorem', and the Austrian model, and in particular the ABCT, has come under immense criticism by today's leading economists. Then I argued that replacing fiat money with Bitcoin could bring great benefits and innovations to the current banking and financial system. However as I then pointed out, the volatility of the currency has undermined its use as a store of value and has led to a loss of confidence from large segments of the banking sector. Finally, I presented the realist perspective, and argued that the rise of Bitcoin has posed a threat to the power and security of the state. Then I argued that given the reluctance of states to let virtual currencies, such as Bitcoin, go on unregulated, we are likely to see even more regulations on the currency that could further erode its competitive edge. This means that any advantages that a virtual currency such as Bitcoin may have over fiat money may in the long run prove to be short-lived. Thus, although Bitcoin may have some advantages over fiat money, the arguments for adopting it as a replacement to fiat money do not outweigh the arguments against.

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*Written by: Amir Reza Malekzadeh*  
*Written at: Royal Holloway University of London*  
*Written for: Professor Ben O'Loughlin*  
*Date written: March 2014*