Why Bitcoin Has No Intrinsic Value

And the Nature of Money

"The idea that [bitcoin] has some huge intrinsic value is just a joke in my view," Billionaire investor, Warren Buffett.

Source: Yahoo Finance, April 28th, 2018

This paper discusses why bitcoin has no intrinsic value—and why this is irrelevant in the context of Bitcoin's purpose. Bitcoin is currency in digital form. Currencies are inherently not designed to be investments but are forms of money. Money, generally speaking, is created to facilitate trade and does not have the 'risk premia' associated with other financial assets, such that they provide a return. Currencies, nonetheless, have fluctuating value versus other currencies or assets as determined by

underlying fundamental factors. Traders and speculators, the world over and throughout time, consider currencies an asset class by itself—one that is as important, if not more, than conventional financial assets.

The paper is organised as follows:

How and why money is created,

Why money has no intrinsic value,

Why bitcoin is money,

Why bitcoin is fiat money,

Concluding remarks on Bitcoin's perceived worth.

Finance

Finance can often seem abstract and removed from the general functioning of society, with terms such as 'capital markets', 'financial assets', and 'money' being considered to belong in the domain of 'the banks.' Banks are said to extract profits for themselves by using their privileged vantage point over the economy. The banks have come to do it so well, it is easy to think they invented finance—this is, however, far from the truth.

In the book 'Gold: The Once and Future Money', Nathan Lewis describes how finance is a human-made phenomenon that is borne out of society in the same way societies have created languages, built houses and practised medicine.

"In their most simple state, humans can hardly exist without creating tools and building knowledge"—In finance, this is called Capital Investment.

People "Engaging in specialisation and trade, jointly entering into productive endeavours" is referred to as Equity Investment.

Groups "Forming contracts, or promises, with others" is the nature of Bonds.

Markets

Lewis describes the pervasive nature of finance: as societies grow from families to villages to civilisation, exchanges and agreements within them also grow boundlessly. Even in the smallest human societies the activities of capital creation, trade, specialisation, organisation, shared equity, and obligation can become complex. In primal times, the circle of exchange can encompass specialised spear makers who trade spears with hunters who gather meat. Hundreds and thousands of arrangements between humans (equity and debt investments) can emerge even from the simplest stage. Records are kept informally in memory, payments may not be demanded immediately, and debts are remembered and enforced privately. Even derivatives are possible with wagers on weather or harvest yield.

As humans deal with others with whom they are less closely related, their transactions become more abstract and formal. A stranger may have to pay upfront, engaging in

barter. “Formalised contracts will appear when they cannot rely on relationships formed and enforced through daily occasion.” Once transactions become anonymous and frequent, we begin to form markets. Trade becomes essential for a prosperous society. Economic and moral philosopher Adam Smith described best, how self-interest has the tendency to produce better outcomes for the commons. As humans specialise and trade for the benefit of themselves, the result is a more productive society—pushing beyond the limits of producing as individuals.

Money

“Money is created organically as one commodity becomes increasingly used in barter”, as a medium of exchange, to facilitate the growing transaction economy. One commodity is accepted in trade not because of the intent to use it but because of the expectation to be able to trade again with it in the future. Money, therefore, would exist even without government or legal enforcement. Throughout history, we have seen money take the form of cowrie shells, beads, precious metals and finally fiat paper currencies printed by governments. “No one invented money, it is as natural as clothing or shelter and has emerged independently all over the world”.

“Money, or indirect exchange, allows humans to make a quantum leap in their ability to generate capital, engage in specialisation and trade, and for contracts of joint ownership or obligations (stocks and bonds). Money achieves this through the creation of a unit of account, a measure of value. In a money economy, everything has one price, expressed in terms of the monetary standard. In a barter economy, prices are expressed in terms of each of the goods available to trade. In a four-goods barter system, there are six market prices, but in a 1,000 good barter exchange, there are 499,500 exchange rates. In a money economy, 1,000 goods have 1,000 prices.”

Money makes it particularly easy to trade with strangers. Direct barter is no longer needed. People can use money to trade indirectly with the world at large.

Money has No Intrinsic Value

Money is created to be a 'token', a 'medium of exchange', it serves no other purpose. The single purpose of money, and what differentiates it from all other goods, is that it has no use but to purchase goods and services. Money has no intrinsic value. We can show this by the peculiar manner in which it is related to the goods it purchases.

Consider sugar, it has a specific desirability dependent on its quantity. The value of sugar depends on its physical volume and spatial measurement. If the quantity of sugar is changed from 1 kilogram to 1 pound, the value of sugar in pounds is not the same as the value in kilograms (since 1 kg = 2.2 pounds). The weight or quantity of sugar is what remains important, not the unit it is measured in. Money has no such quality, it is independent of weight or quantity. One dollar as a coin, or as a note, or as a digital representation, is the same in every unit. The value of each unit is the same. Money is an abstraction of record keeping and it "has no power to satisfy human wants except a power to purchase things which do have such power" *.

Bitcoin is Money

Bitcoin is contested as being a 'real currency', but it is money in its own system. In order to use the Bitcoin network, a user must hold bitcoin money. It is convention to reference the network and protocol with capitalisation, Bitcoin, and its money in the lower case, bitcoin. Bitcoin is like a borderless country that exists only in cyberspace. The requirement to use bitcoin on the Bitcoin network is no different to someone who

must hold UK pound sterling to shop in a UK shopping mall. Bitcoin has no intrinsic value because it is money—the money of the largest computer network in the world.

Bitcoin is Fiat Currency

Bitcoin is a fiat currency because it is backed by nothing. The currency is made 'legal tender' by the system that governs it, the Bitcoin protocol. The word "Fiat" is from Latin, "Let it be done", used in the sense of official order. Fiat money has no intrinsic value because it is not convertible into gold or any other physical commodity.

Bitcoin differs from traditional fiat currencies because it has no central bank. Typically, a central bank is responsible for monetary policy (which includes controlling the monetary base), with the goal of maintaining price stability and trust in the currency. In the Bitcoin network, the protocol is the de facto central bank—with policy set by algorithms.

Bitcoin's perceived advantages over traditional money is rooted in being a decentralised network, with no central authority, having a fixed money supply and being governed by code. These ideas can, however, be misleading with regard to Bitcoin's overarching governance model. It is important to remember Bitcoin's governance is decentralised not automated—the Bitcoin Protocol itself is governed by people, not computers.

In "Bitcoin is Fiat Money too", The Economist lays out the similarities between the consensus building governance in Bitcoin, to that of central banks:

“Bankers talk about “governance”, ways to ensure private banks and central bankers make sound decisions—so they create just enough money to make commerce easier, but not so much that the system collapses through inflation or panics. The developers behind distributed ledgers, however, often talk as if governance is something they are beyond. They are not. Computer code is just a set of rules. Code is governance. And it can change. Take bitcoin: if a supermajority of the computers running the bitcoin distributed ledger run an upgrade, the upgrade becomes the new code. But behind each computer is a human, making decisions. Distributed-ledger developers talk about a consensus-driven model, where you improve the system by bringing everyone on board. So do central bankers”.

The Bitcoin Protocol is routinely updated by what is called a ‘Soft Fork’. A Soft Fork is when the underlying code of the blockchain is updated on a forward basis and requires a super-majority of the network for implementation. Soft Forks are essential for the system to evolve, add new features and improvements, increase security and fix programming bugs. In contrast, a ‘Hard Fork’ is when the system splits because the proposed changes may involve altering core design principles. Factions are created, with no majority, and what results is a new parallel currency.

“…different humans have different interests. In bitcoin, the people who own the computers verifying transactions—the “miners”—want code that increases fees for miners. People who use bitcoin want code that keeps those fees low. These two sides could not agree, and so in August the bitcoin distributed ledger “forked”—a smaller group of developers created a copy with slightly different rules, called “bitcoin cash”. Everyone who owned one unit of bitcoin also suddenly owned one unit of bitcoin

cash. Out of a governance dispute, new money. In mid-September bitcoin traded at about $3900, while bitcoin cash fetched only $500".

It is worth noting a Hard Fork can, in theory, increase the money supply—however, this is very unlikely as it would diminish the currency's value and go against the vested interest of the endorser.

Bitcoin is governed by a democratic process. The 'miners', the computers that maintain the network, vote using their computing power. Since miners are compensated in bitcoin, they will vote depending on profitability, which in turn is a function of the market price. The market price is determined by the market—which is the 'voting machine' of the users.

Bitcoin's Worth

The market capitalisation of bitcoin, at $130 billion, is around the same size as the money of New Zealand. Whether the network can grow further or even maintain its current value is a point of contention in the public domain. The Bitcoin economy currently has only one main industry, digital transaction processing, and its main competitors are firms like Visa, MasterCard and Paypal. In this regard, it is argued to be an inferior product due to transaction processing times. Bitcoin can also be considered to be a provider of banking and saving accounts. For the large unbanked population in emerging market countries, a free to use, censorship resistant digital bank account is an especially attractive proposition. However, for users who need other currencies for general expenses, the exchange rate volatility can make bitcoin unviable.

Widespread examples of goods and services that bitcoin can purchase, and use cases for the network, are yet to be seen (or imagined). Nonetheless, despite its perceived limited usability, bitcoin is money, and its usefulness to an individual will depend on the usefulness of the network. This is perhaps bitcoin's main hindrance at the moment—the wider population see it as useful as the Azerbaijan Manat, the Zambian Kwacha or the El Salvadoran Colon.

References

"Gold: The Once and Future Money", 2007, Nathan Lewis

* Quotation from "The Purchasing Power of Money", 1911, Irving Fisher, also from where the example has been adapted from.

"Bitcoin is Fiat Money too", Sep 22nd 2017, The Economist