

Chapter 19

Has Bitcoin Achieved the Characteristics of Money?

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ABSTRACT

Bitcoin is a peer-to-peer network that facilitates transactions between parties minus the proof requirement of an appointed third party (i.e., banks or financial institutions). Accurate understanding into the implementation of bitcoin can be acquired from data of the universal record of bitcoin transactions. Although data from numerous websites show that bitcoin daily transactions count has reached capacities of tens of thousands, it is widely believed that most of these transactions comprise activities between speculators and only a few are actually used for trading of goods and services. The chapter explores if bitcoin has achieved the characteristics of money. For it to survive, bitcoin must overcome the problems of its unconventional pricing mechanism, shortage of vendors who accept it, and the circuitous way of obtaining it.

INTRODUCTION

In late 2013 and early 2014, the term bitcoin had made headlines in the global financial news. Designed and developed by Satoshi Nakamoto¹ (Nakamoto, 2008), this “virtual money” was propelled by cyber lobbyist and at the end of 2013 the exchange rate per bitcoin had multiplied more than five times over a space of several weeks. Supporters claim that the fundamental objective of bitcoin is to act as a substitute to the current payment systems and to allow dealings internationally, across currency denominations, without intervention of dominant bodies or central banks, and without the abuse of traditional financial institutions such as banks. According to followers of electronic currencies, government administrations regularly enforce unwanted controls and constraints and central banks may expedite oversupply of money leading to increased inflation. In addition, a large number of supporters also complain on the overpriced fees charged among other claimed exploitations done by banks. The dramatic rise in bitcoin’s value in

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November 2013 had triggered exceptional interest to it. The trading price of a bitcoin was only USD0.05 when it begun in 2010 and had reached and all time high exceeding USD1, 200.00 (Wood, 2013)

As the main role of Bitcoin's creation is to function as an alternate form of currency that individuals can use to conduct transactions with each another without the interest of governing bodies such as banks, the main question that arises is "how well can bitcoin serve the role of currency?" Money is commonly accepted to be a mechanism that functions as a medium of exchange, a unit of account, and a store of value (Halaburda & Gans, 2014). For the purpose of this paper we will be looking at how bitcoin has achieved these three functions.

BACKGROUND

Essentially, bitcoin is a peer-to-peer network version of e-cash that facilitates transactions between parties minus the proof requirement of an appointed third party; i.e. banks or financial institutions. This unit of network is denoted as bitcoin, which is considered by most to be the greatest digital currency to date (Brito & Castillo, 2013; Lo & Wang, 2014).

The advantages that bitcoin (Rogojanu & Badea, 2014) seems to offer are: 1) it is believed to be a completely decentralized method not linked with any predominant bodies, central banks, or recognized payment systems, which are ruled by banks and therefore it is thought to be less susceptible to exploitation or fraud; 2) it has pseudonymous characteristics; 3) it forces no direct charges on transactions and shows the possibility for transaction fees in general to be lesser. A person can use a bitcoin, by sending his or her account number which is the "public key" and a password which is the "private key" for authentication on the public transaction record, known as the "block chain" (Reid & Harrigan, 2013). Certain individuals or "miners" will then use their computers processing power to authenticate if the transaction is real by solving a rigorous computational task also known as "finding the hash of a nonce" (Lo & Wang, 2014). As a payment for validating the transaction, the first person or party to provide the answer to the task will be compensated with a certain number of bitcoin, accumulating to the available stock of bitcoin and consequently generate money creation.

There is a process in the system, which routinely regulates the computational difficulty of validating transactions to guarantee that each transaction is normally verified within 10 minutes (Bamert, Decker, Elsen, Wattenhofer, & Welten, 2013). However, it is unavoidable that there are some uncertainties in the actual extent of time taken to verify each transaction. The same process also dictates the eventual quantity of bitcoin, which is estimated to be 21 million units by 2140.

BITCOIN AS MONEY

Medium of Exchange

While bitcoin has no inherent value, its price eventually depends on its practicality as a form of money in the consumer market. Indication of bitcoin's mark in daily business is mostly hearsay, comprising of articles about individuals simply living by using bitcoin or estimations of big statistics of industries that are eager to agree to bitcoin. Majority of the high-ranking traders receiving bitcoins are led by companies

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