Inherent Qualities of Blockchain and Varied Implications

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Blockchain

Metaverse

NFTs

HODL

Cryptocurrency

Web3

Ethereum

Coinbase

Bitcoin

DeFi

DAOs

What is Money?

How does Blockchain work?

Applications and Importance

Framework

Timeline of Money

Metal coins were used as
a medium of exchange.
1000BC

6000BC
Evidence of people
bartering goods and
services.

1500
Banks centralized and
standardized currency. Their
bank notes were backed by
physical reserves.
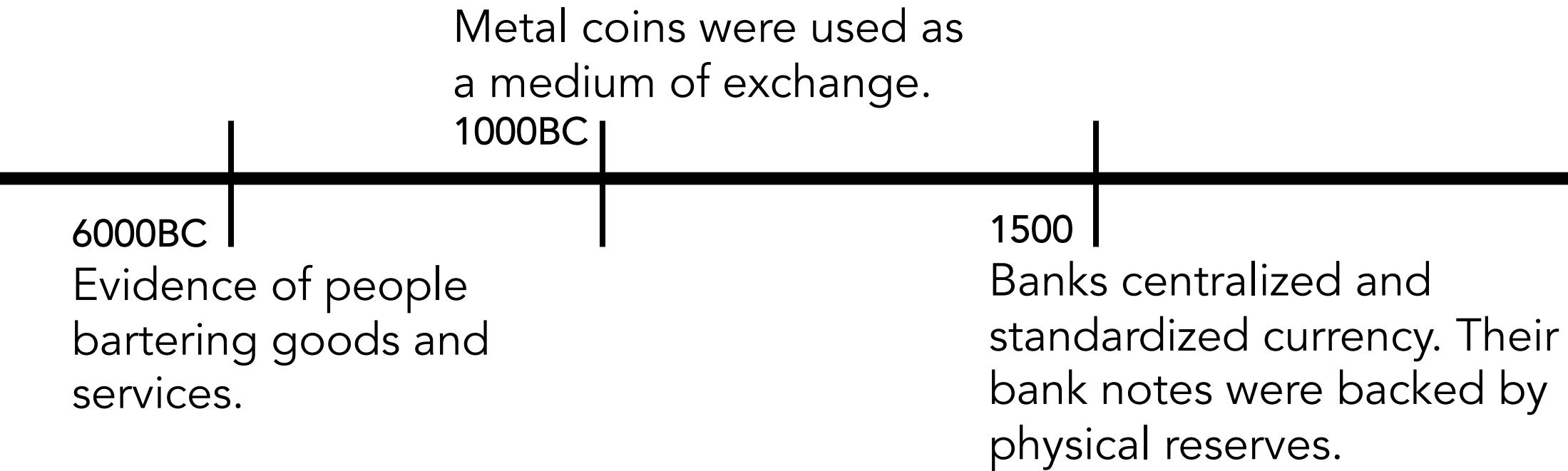
Primer: What is Money? - Timeline

Source: From barter to cryptocurrency:
a brief history of exchange

The Treasury-Federal Reserve Accord gave the Federal Reserve the power to create monetary policy. This ushers in the Central Banking era.

1951

1933
FDR's Executive order 6102 made hoarding gold illegal and mandated the exchange of gold for dollars. The dollar is not a reserve backed currency at this point.

2008
Bitcoin: A Peer-to-Peer Electronic Cash System was released by Satoshi Nakamoto.

Primer: What is Money? - Timeline cont.

Source 1: Executive Order 6102 Wikipedia
Source 2: FED History of the Federal Reserve

Functions of Money

Store of Value:

      -Reflection of goods and services that can be acquired with it.

Medium of Exchange:

      -Widely used as a method to transact.

Unit of account:

      -Common measurement of value.

Primer: What is Money? - Functions

Source: FED Functions of Money - The Economic Lowdown Podcast Series

Properties of Money

Durability – Rate of deterioration.
Portability – Ease of carrying.
Divisibility – Granularity of value possible.
Uniformity – Standardization.

Scarcity – Limitation of supply.
Acceptability – Network of usage.

Primer: What is Money? - Properties

Source: FED Functions of Money - The
Economic Lowdown Podcast Series

Outlook

One monetized unit, i.e. dollar, is used over another because it holds value. The United States dollar holds value because it has a limited supply. The Federal Reserve dictates monetary policy and is protected by the United States military.

Bitcoin is a response to 2008 financial crisis bailout, that proposes innovations on storing value by removing government involvement.

Primer: What is Money? - Outlook

Source: Here's how much the 2008 bailouts really cost
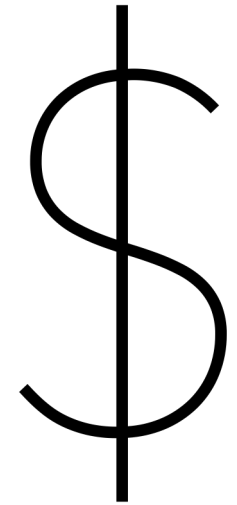
Bitcoin Optimization

Supply:

Bitcoin has a fixed limited supply. Vs.

USD is easily inflated with congressional spending powers.

Acceptability:

Bitcoin can be transacted anywhere. Vs.

USD's usage is limited geographically and within financial intermediaries.

Portability:

Bitcoin is secured digitally with public key encryption. Vs.

USD can be seized and frozen by the state.

Primer: What is Money? - Optimization

Source: Bitcoin: A Peer-to-Peer
Electronic Cash System

What is a Blockchain?

The innovation on supply, acceptability, and the portability of bitcoins compared to the dollars are due to Blockchains.

A blockchain is a distributed ledger that is **decentralized** and **distributed**. Transaction occur between two individuals and then these transactions are broadcasted with fees into the ledger by a miner. The miner takes the transactions and attempts to compute a problem. Whoever complete it first wins a bitcoin and their ledger(block) is to be worked on next (Nakamoto).

How does Blockchain work? – What is a Blockchain?

Source: Bitcoin: A Peer-to-Peer Electronic Cash System

Inherent Qualities

Organization Theory

<u>Distributed:</u>
Decision making is distributed among stakeholders in governance. Consensus governance determines decisions not a concentrated group.(Vergne 5)
<u>Decentralized:</u>
Information is widely available to all. The blockchain is transparent and all smart contract can be read. (Vergne 5)

How does Blockchain work? – Distributed and Decentralized

Source: Bitcoin: Decentralized vs. Distributed Organization: Blockchain, Machine Learning and the Future of the Digital Platform

Economic Efficiencies

Reduced Cost of Verification:

The blockchain cannot reverse transactions resulting in less meditation needed in transaction. Also, the amount of regulation is reduced.(Catalini and Gans 83-86)

Reduced Cost of Networking:

Financial incentives can be embedded for users to invest time and effort. This reduces the cost of forming a robust network. (Catalini and Gans 86-88)

Applications and Importance – Economic Efficiencies

Source: Bitcoin: Some Simple Economics of the Blockchain

Overall Implications

Decentralized and distributed blockchains are fundamentally different to centralized technology and imply a spread of information and decision making. The blockchain reduces cost in networking and verification that will allow for new possibilities. Bitcoin is a better store of value than the United States dollar by optimizing properties for the benefit of the individual.

Applications and Importance – Overall Implications

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