BITCOIN: THE INTERNET OF MONEY

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WHAT IS BITCOIN?

- Math-based asset
- Decentralized cryptocurrency
- Peer-to-peer network
- Internet of money
WHO CREATED BITCOIN?
“The root problem with conventional currency *is all the trust that's required* to make it work. The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust. Banks must be trusted to hold our money and transfer it electronically, but they lend it out in waves of credit bubbles with barely a fraction in reserve. We have to trust them with our privacy, trust them not to let identity thieves drain our accounts. Their massive overhead costs make micropayments impossible.”

-Satoshi Nakamoto
CLASSIFICATION?

COMMODITY

CURRENCY

TECHNOLOGY
# CURRENCY: BITCOIN VS. FIAT

<table>
<thead>
<tr>
<th></th>
<th>Scarce</th>
<th>Durable</th>
<th>Portable</th>
<th>Divisible</th>
<th>Authenticity Verification</th>
<th>Storage</th>
<th>Fungible</th>
<th>Difficult to Counterfeit</th>
<th>Widespread Use</th>
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- **Yes**: The feature is present.
- **Neutral**: The feature is present, but with some limitations.
- **No**: The feature is not present.
# COMMODITY: BITCOIN VS. GOLD

<table>
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<td>✔️</td>
<td>✔️</td>
<td>✗</td>
</tr>
</tbody>
</table>

- ✔️ Yes
- ✗ Neutral
- ✗✘ No
TECHNOLOGY: A NETWORK

*net·work*: a system of devices that are connected to each other

INTERNET
Global computer network

AMAZON
Server-based network

BITCOIN
Peer-to-peer network
TECHNOLOGY: A PROTOCOL

*pro·to·col* (computer science) a set of rules or procedures for transmitting data between electronic devices, such as computers
POSTAL SERVICE

Slow + Costly

SMTP

Free + Instant

Slow + Costly
Voices are converted into electronic signals and sent long distances.

VoIP

Voices are digitized and transmitted as real-time data.
FINANCIAL SERVICES

Expensive + Slow

Bitcoin Protocol

Free + Instant
IMPLICATIONS: NO BAIL-INS
IMPLICATIONS:
DIFFICULT TO APPROPRIATE

United States
May 1, 1933
IMPLICATIONS: NO CAPITAL CONTROLS
IMPLICATIONS: HEDGE AGAINST INFLATION
IMPLICATIONS: HEDGE AGAINST THE FED?
IMPLICATIONS: INFERIOR ALTERNATIVES FLOURISHING

Figure 6. How people in Kenya sent money after the introduction of M-PESA

Source: FSD Kenya M-PESA study 2007

M-PESA USERS

Source: FSD Kenya M-PESA study 2007
IMPLICATIONS: CHINESE SUPPORT?
POSSIBILITIES: REMITTANCES

“The World Bank estimates that migrants will send about $515 billion to relatives in developing countries by 2015.”

-TechCrunch
POSSIBILITIES: BANK THE UNBANKED

Bitcoin address = Email address for cash = Bank account
POSSIBILITIES: MICROPAYMENTS

Confirm Send

Amount: 80 µBTC (1¢)
From: 1P2xjKjrvagB6hHgeAHj1xcc7HKKgVXfPo
To: 1CgzM9Xop2JxvD89kDzTXdhAGrC8cS5q

Donate

BITCOIN
Buying Bitcoin isn’t easy and requires technological proficiency
ETF can bypass these pain-points

Storing Bitcoin securely takes expertise
ETF can offload this security burden

Pension funds, mutual funds, 401k’s, etc., cannot hold Bitcoin (or gold bars)
ETF can give mainstream investors Bitcoin exposure
“I will not deny that there are some troublesome [virtual currency] providers out there. But, that is balanced by a recognition of the innovation these virtual currencies provide, and the financial inclusion that they might offer society. A whole host of emerging technologies in the financial sector have proven their capacity to empower customers, encourage the development of innovative financial products, and expand access to financial services. And **we want these advances to continue.**”

-Jennifer Shasky-Calvery
Director, Financial Crimes Enforcement Network
FUTURE

Imagine you could take a time machine back to the early days of the Internet; how would you act differently?