

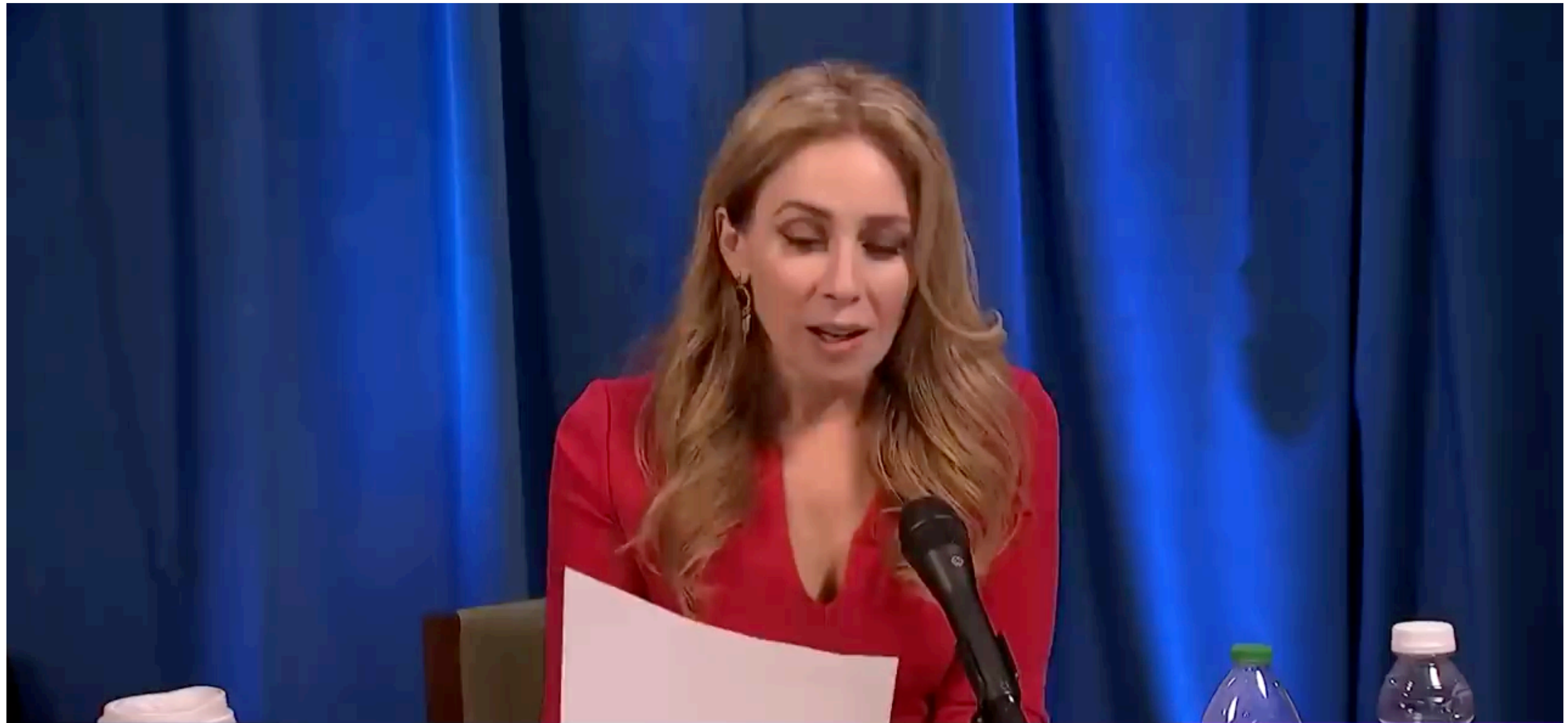
“Rat Poison”

or



“Elixir”

A dive into the Crypto world



yahoo!
finance

2021 BERKSHIRE HATHAWAY ANNUAL MEETING, #YFBUFFETT



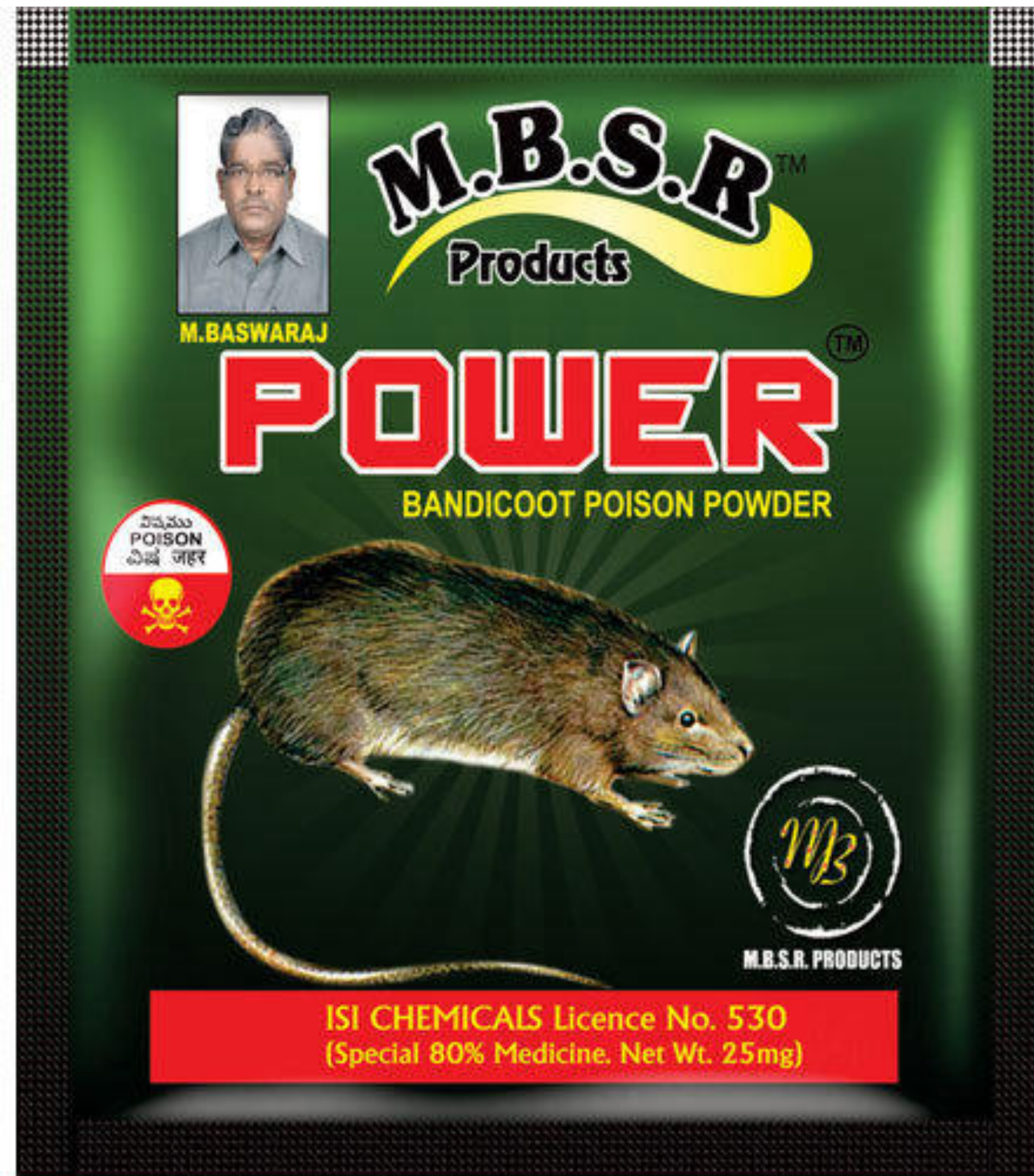
2021 BERKSHIRE HATHAWAY #YFBUFFETT

Pro

- Mark Zuckerberg (create own token?)
- Jack Dorsey (?)
- Winklewoss twins
- Naval Ravikant
- Elon Musk (?, Dogefan)
- Micree Zhan (Bitmain, largest mining company)
- Changpeng Zhao (founder and CEO of Binance)

Anti

- Munger and Buffett
- Nassim Taleb
- Peter Schiff
- Paul Krugman
- Bill Gates (?)
- Ray Dalio



So what is Crypto?

Fence Sitters

- Howard Marks
-

& Rajeev Thakkar

Why Bother?

Is it a threat to

- Banks?
- Depositories?
- Exchanges?
- Master / Visa?
- Insurance companies?
- Central Banks & Governments?
- Law enforcement?
- Tax authorities?

What is Money?

- Medium of Exchange
- Measure and Store of Value
- Unit of account and a standard of deferred payment

Current state of money

- Largely dominated by Fiat Currency (issued by the central banks of the country / block)
- Fiat currency is the denomination but it comes in various forms
 - Notes and coins
 - Bank account statements and transfers
 - Prepaid cards and wallets

Broadly works well, so what is the problem that Crypto is trying to solve?

Problem definition

- Transactions and store depend on trusting financial institutions
- Transactions can be reversed
- High costs of transactions
- Privacy

Non Satoshi

- Government regulation & interference with freedom
- Money printing and inflation
- Decentralised Finance (DeFi)

Bitcoin consists of

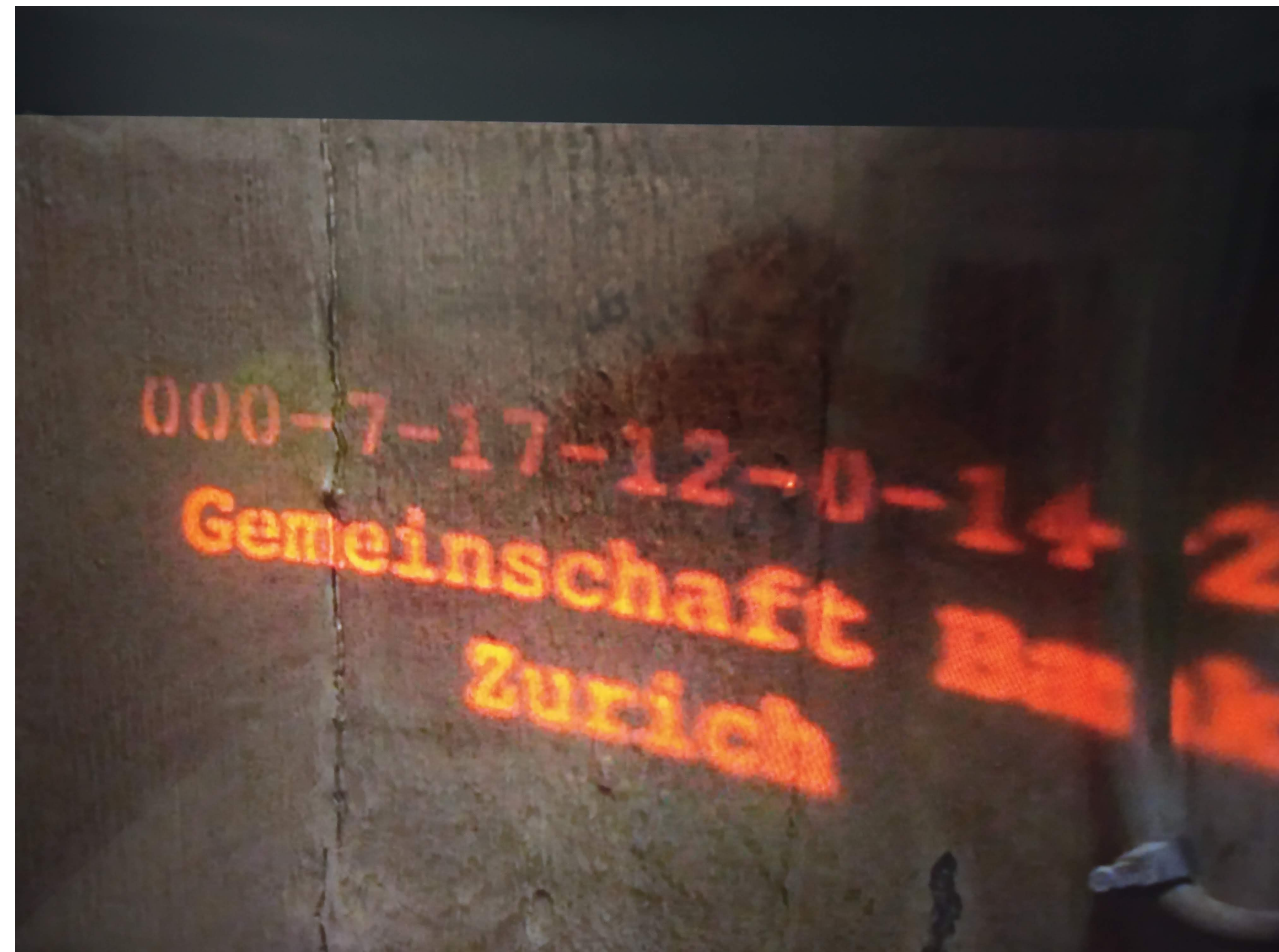
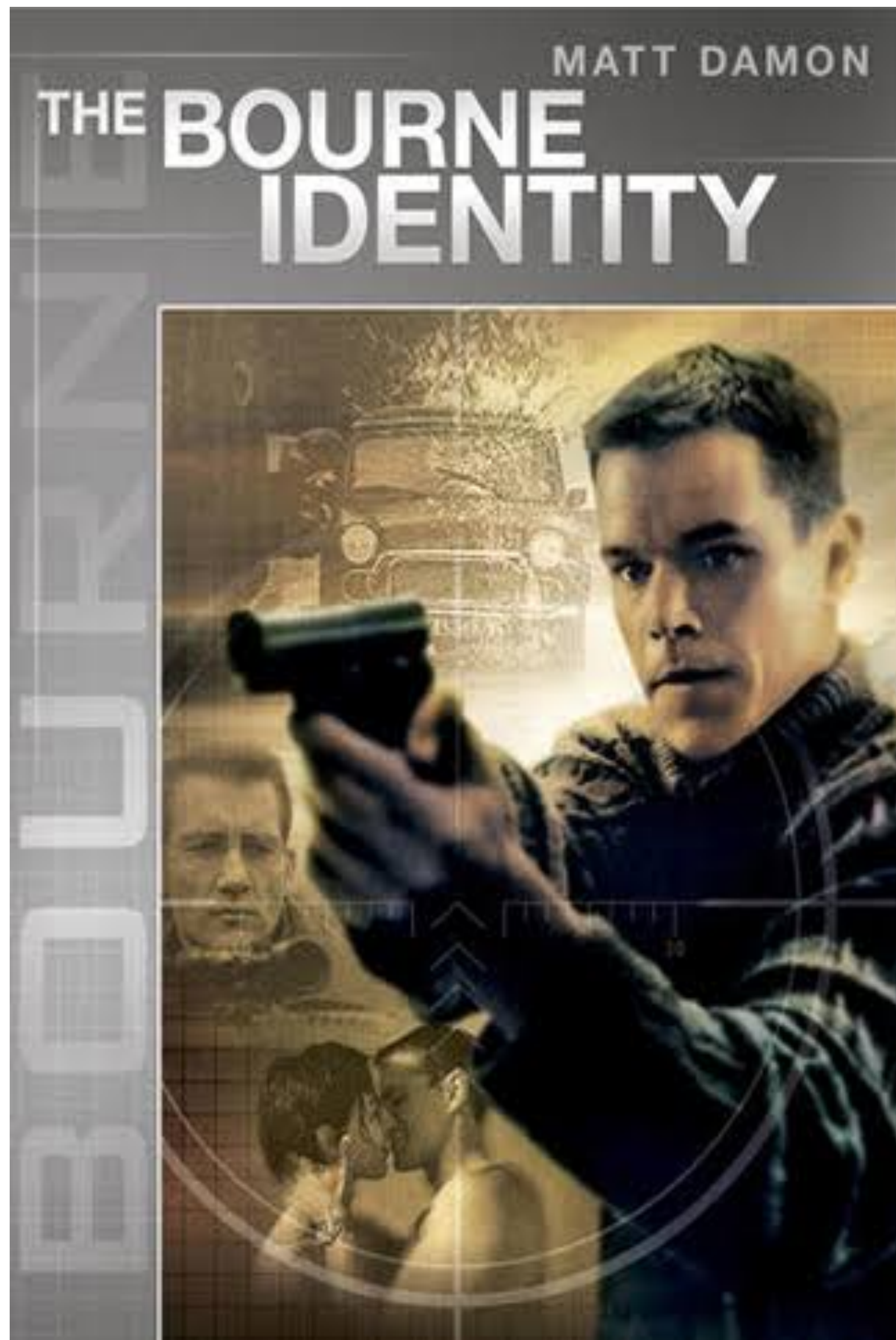
Source : Mastering Bitcoin

- A decentralised peer to peer network (the bitcoin protocol)
- A public transaction ledger (the blockchain)
- A set of rules for independent transaction validation and currency issuance (consensus rules)
- Proof of Work

Bitcoin Protocol

Source : Mastering Bitcoin

- http is hyper text transfer protocol (internet)
- One uses various browsers (Chrome, Safari, Firefox, Edge) to access the internet or interact with the internet
- “Bitcoin Wallet” can be thought of as an interface for the Bitcoin protocol





Receive BTC



Tapping the QR code may improve scanning

Amount:

0.00 BTC



i Address type

SegWit native (Bech32) ▾

Bitcoin Address:

bc1qzdasml952gpw52gq
37pzp1hnq2mcewxttkmwk



Share Address

Interesting things about Bitcoin Wallets / Addresses

- Free
- You can have as many as you want (applications)
- You can have as many addresses that you want
- No KYC
- If you lose your private key (something like a password), your bitcoin balance is gone forever
- You can create your own private key and bitcoin address using a paper and pen and some high level maths
- Front end of the wallet apps very similar to UPI stuff that we use

How to get Bitcoin in the wallet?

- Buy it for Rupees, US Dollars, Euros etc.
- Sell something of value (labour, goods & services, ransomware, drug deals and so on)
- “Mine” Bitcoin

How is the price of Bitcoin determined?

Public transaction Ledger (decentralised)

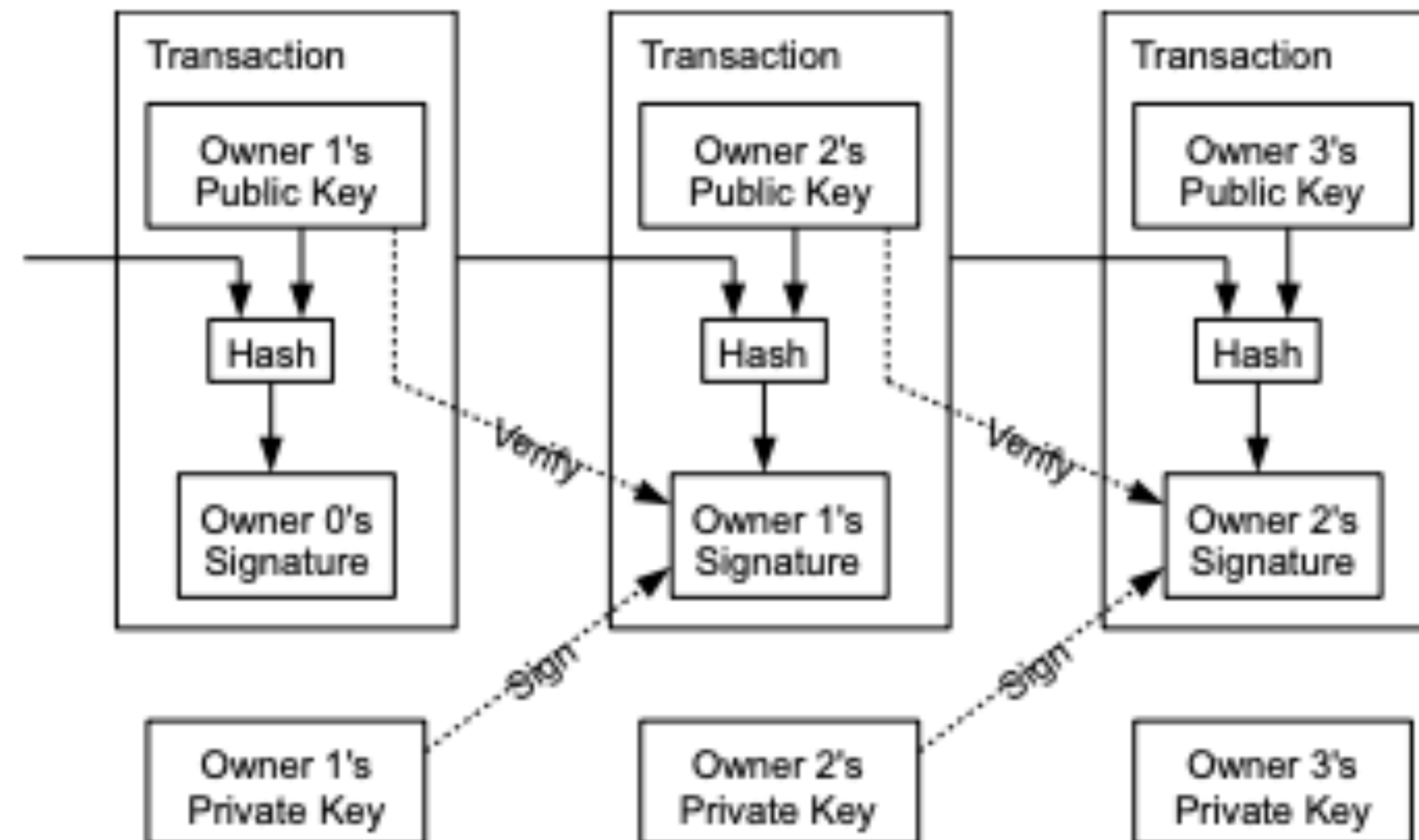


<https://katzsdelhi.wordpress.com/2013/06/17/indian-village-wedding/>

Blockchain

2. Transactions

We define an electronic coin as a chain of digital signatures. Each owner transfers the coin to the next by digitally signing a hash of the previous transaction and the public key of the next owner and adding these to the end of the coin. A payee can verify the signatures to verify the chain of ownership.



Various decentralised nodes “witness” all the transactions. Some or most may be miners as well.

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Bitcoin Blockchain Size

355.03 GB for Jul 17 2021

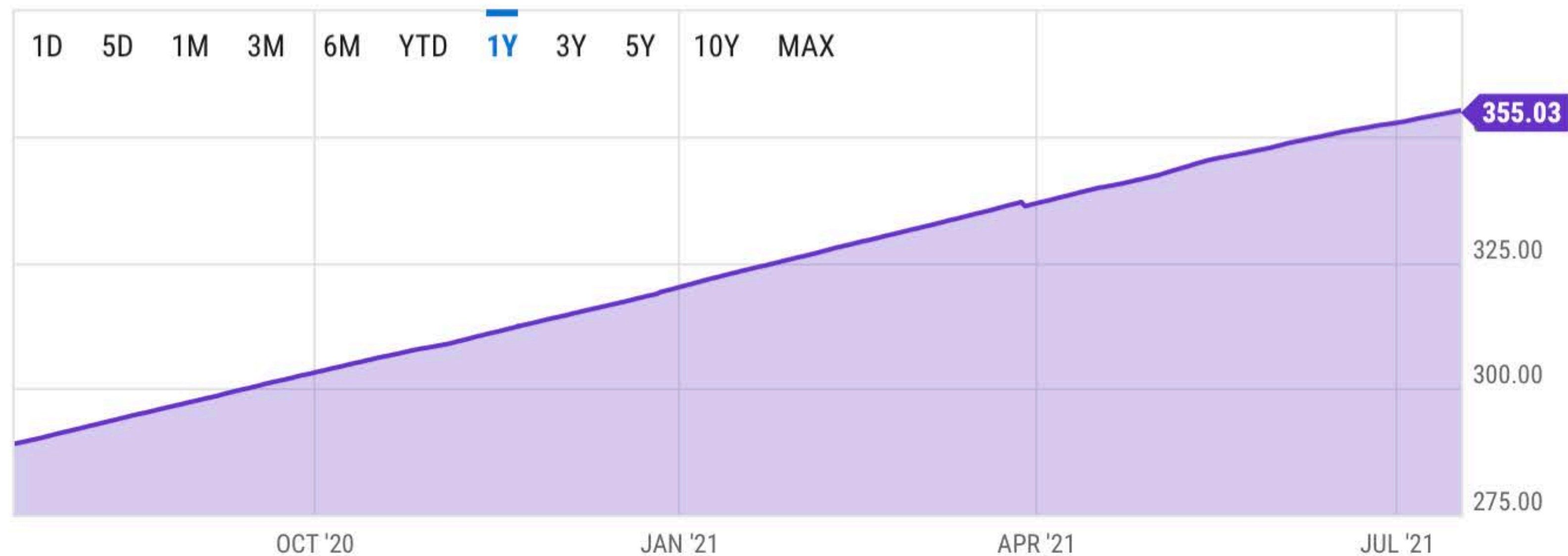
Overview

Interactive Chart

Level Chart

[VIEW FULL CHART](#)

1D 5D 1M 3M 6M YTD **1Y** 3Y 5Y 10Y MAX



Mining

Source : Mastering Bitcoin

- Analogy “Akin to a competition of solving a complex Sudoku puzzle”
- The winner gets the reward
- Once the puzzle is solved, it is very easy to verify
- Winner takes all (6.25+ bitcoins) and hence fierce competition. Specialised chips and servers to mine. Mining pools to share the risk and reward.

Block 691583 ⓘ

USD

BTC

This block was mined on July 18, 2021 at 7:53 PM GMT+5:30 by [Unknown](#). It currently has 1 confirmations on the Bitcoin blockchain.

The miner(s) of this block earned a total reward of 6.25000000 BTC (\$198,139.88). The reward consisted of a base reward of 6.25000000 BTC (\$198,139.88) with an additional 0.15325205 BTC (\$4,858.45) reward paid as fees of the 2530 transactions which were included in the block. The Block rewards, also known as the Coinbase reward, were sent to this [address](#).

A total of 4,006.49361266 BTC (\$127,015,382.98) were sent in the block with the average transaction being 1.58359431 BTC (\$50,203.71). Learn more about [how blocks work](#).

Hash	00000000000000000005b1b89cff52a00a4f0e8886afc70d75a37d083... 📄
Confirmations	1
Timestamp	2021-07-18 19:53
Height	691583
Miner	Unknown
Number of Transactions	2,530
Difficulty	13,672,594,272,814.15
Merkle root	1f02c647c51e6c50b4b00cb330c1017d21e06eb8b2be8883a1974cc30246...
Version	0x27ffe004
Bits	387,225,124
Weight	3,993,308 WU
Size	1,374,119 bytes
Nonce	566,801,756
Transaction Volume	4006.49361266 BTC
Block Reward	6.25000000 BTC
Fee Reward	0.15325205 BTC

Bitcoin pitch

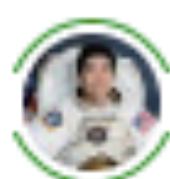
- Decentralised
- Safe
- Accessible the world over
- Anonymous (Pseudonymous)
- Great store of value
 - Only 21 million max Bitcoins will ever be there
- The original
- The future of money (you can buy Tesla with BTC you can't)

Current status

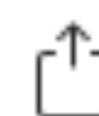
- Bitcoin has survived for more than a decade.
- More mainstream now than before
- The computer protocol and ecosystem seems to be in place

The Blockchain Scalability Problem & the Race for Visa-Like Transaction Speed

Yes, blockchain has a scalability problem. Here's what it is, and here's what people are doing to solve it.



Kenny L. Jan 30, 2019 · 14 min read ★

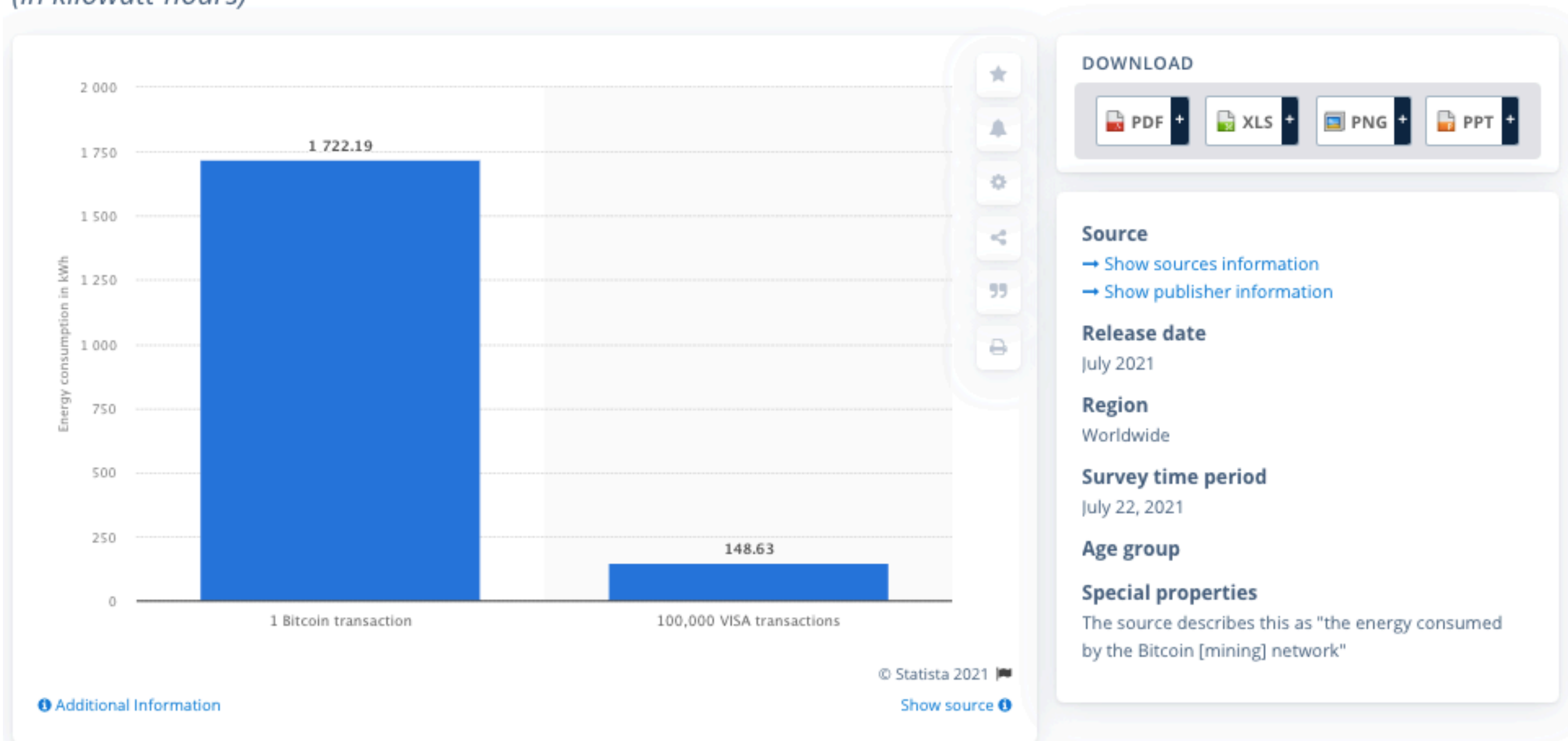


The battle for a scalable solution is the blockchain's moon race. **Bitcoin** processes 4.6 transactions per second. Visa does around 1,700 transactions per second on average (based on a calculation derived from the official claim of over 150 million transactions per day). The potential for adoption is there but is bottlenecked currently by scalability.

Finance & Insurance > Financial Instruments & Investments

Bitcoin average energy consumption per transaction compared to that of VISA as of July 22, 2021

(in kilowatt-hours)



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Source
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Release date
 July 2021

Region
 Worldwide

Survey time period
 July 22, 2021

Age group

Special properties
 The source describes this as "the energy consumed by the Bitcoin [mining] network"

[Additional Information](#)

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[Show source](#)

Transaction costs

- Decentralised does not mean free
- Transaction costs to convert to and from Fiat currency can be high
- Transactions even in BTC can be expensive
- Variable transaction fees and wait times for transactions to be confirmed/ congestion

But

- Mainly bought for price appreciation / speculation rather than as a medium of exchange for transactions
- Price is too volatile for being a unit of exchange, measure and store of value or unit of deferred payment
- Only 21 million BTC but no limit on Altcoins
- BTC only a “pocket calculator”?
- Forks and fights

BTC already outdated?



Enter Ethereum

- Bitcoin blockchain does only one thing - keeps ledger of Bitcoin transactions / ownership - say like a calculator
- Ethereum blockchain can do that but more as well - something like a smartphone which can also function like a calculator
- Ethereum is a protocol / world computer
- Ether ETH is the currency
- Smart Contracts
- Dapps - Decentralised apps / DeFi - Decentralised Finance
- “Gas Fees”

“Move fast and break things”

- Relating to Ethereum
- Not my words
- A lot of things keep changing and nothing is long dated here

DeFi - Decentralised Finance

- Decentralised Borrowing / Lending
- Decentralised Exchanges / Market Making / Derivatives
- Decentralised Insurance (seems flaky)

- Decentralised prediction markets aka betting / gambling









- Decentralised Indices, fixed yields, yield farming and other esoteric stuff

- General observation, it works well for collateralised money stuff aka escrow or margin funding.

Tethers / Stablecoins

- Linked mainly to USD but can be anything else
- Supposedly backed by assets but many questions raised



#	Name	Price	24h %	7d %	Market Cap <i>i</i>	Volume(24h) <i>i</i>	Circulating Supply <i>i</i>	
☆ 3	 Tether USDT	\$1.00	-0.03%	-0.04%	\$61,815,422,178	\$62,335,096,117 62,329,963,507 USDT	61,810,332,357 USDT	
☆ 8	 USD Coin USDC	\$0.9997	-0.03%	-0.09%	\$27,075,513,755	\$2,298,267,216 2,299,277,264 USDC	27,087,412,973 USDC	
☆ 10	 Binance USD BUSD	\$0.9997	-0.03%	-0.07%	\$11,845,742,104	\$5,276,376,444 5,278,196,617 BUSD	11,849,828,487 BUSD	
☆ 22	 Dai DAI	\$1.00	+0.01%	-0.02%	\$5,552,548,504	\$359,387,011 358,969,026 DAI	5,546,090,621 DAI	

Forks

- Jainism (Sthanakvasi / Deravasi), Buddhism (Mahayana / Theravada), Hinduism (Shaivism / Vaishnavism), Christians (Catholics / Protestants), Islam (Shia / Sunni)
- Bitcoin, Bitcoin XT, Classic Bitcoin, Bitcoin Cash, Bitcoin gold
- DAO and Ethereum Classic!

Altcoins

- 5767 coins of various forms are listed on coinmarketcap.com
- While Bitcoins may be limited to 21 million, there is no limit to the number and kinds of coins that can be introduced
- Remember, Google was not the first search engine, Facebook was not the first social network
- There is nothing proprietary about the blockchain technology
- The incentive to create ones own currency are huge

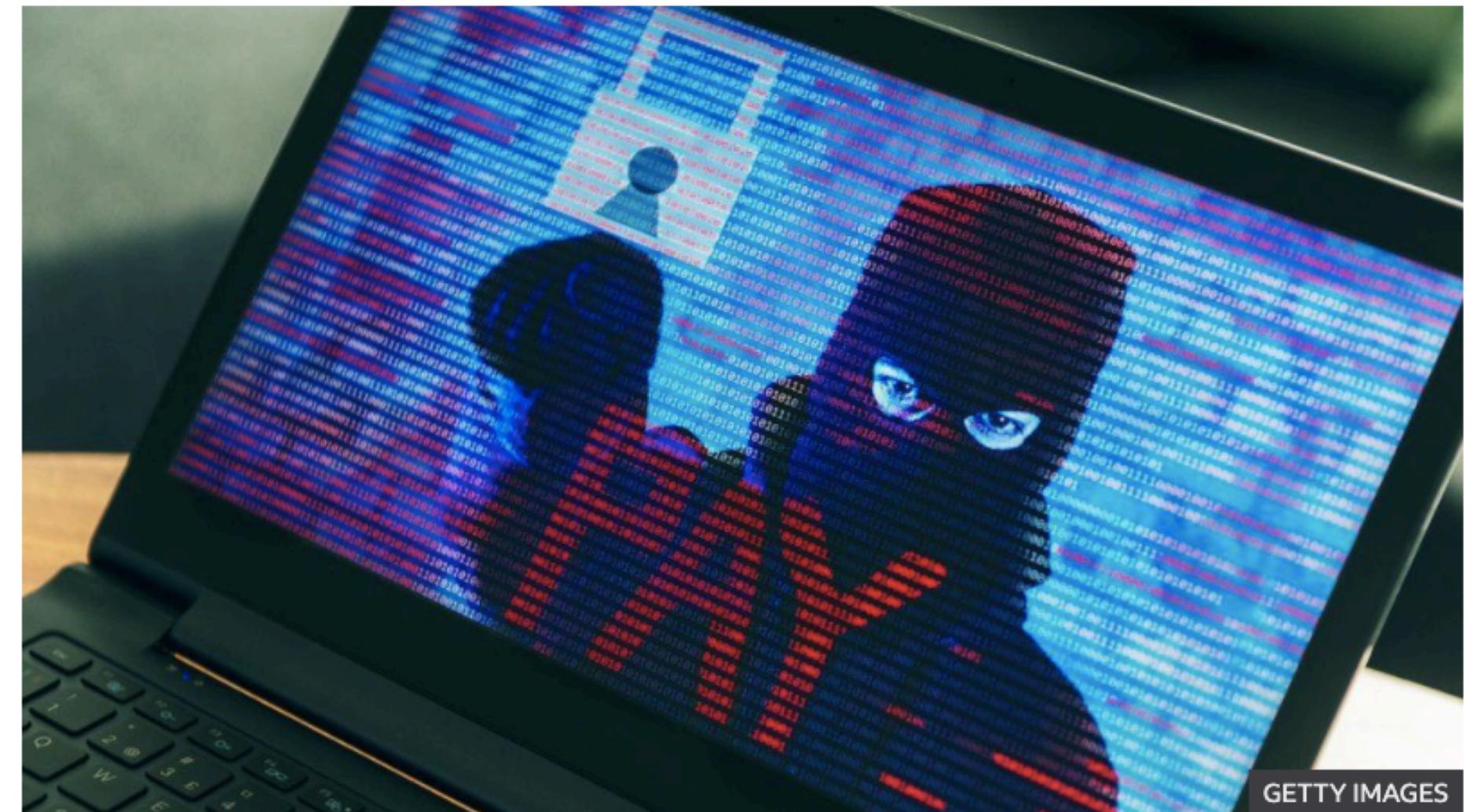
- **Central Banks backed Cryptocurrencies**

Cryptos and Illegal activities



#SilkRoad
Silk Road (2021 Movie) Official Trailer – Jason Clarke, Nick Robinson

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The gang behind a "colossal" ransomware attack has demanded \$70m (£50.5m) paid in Bitcoin in return for a "universal decryptor" that it says will unlock the files of all victims.

Cryptos vs Cash Vs Gold coins

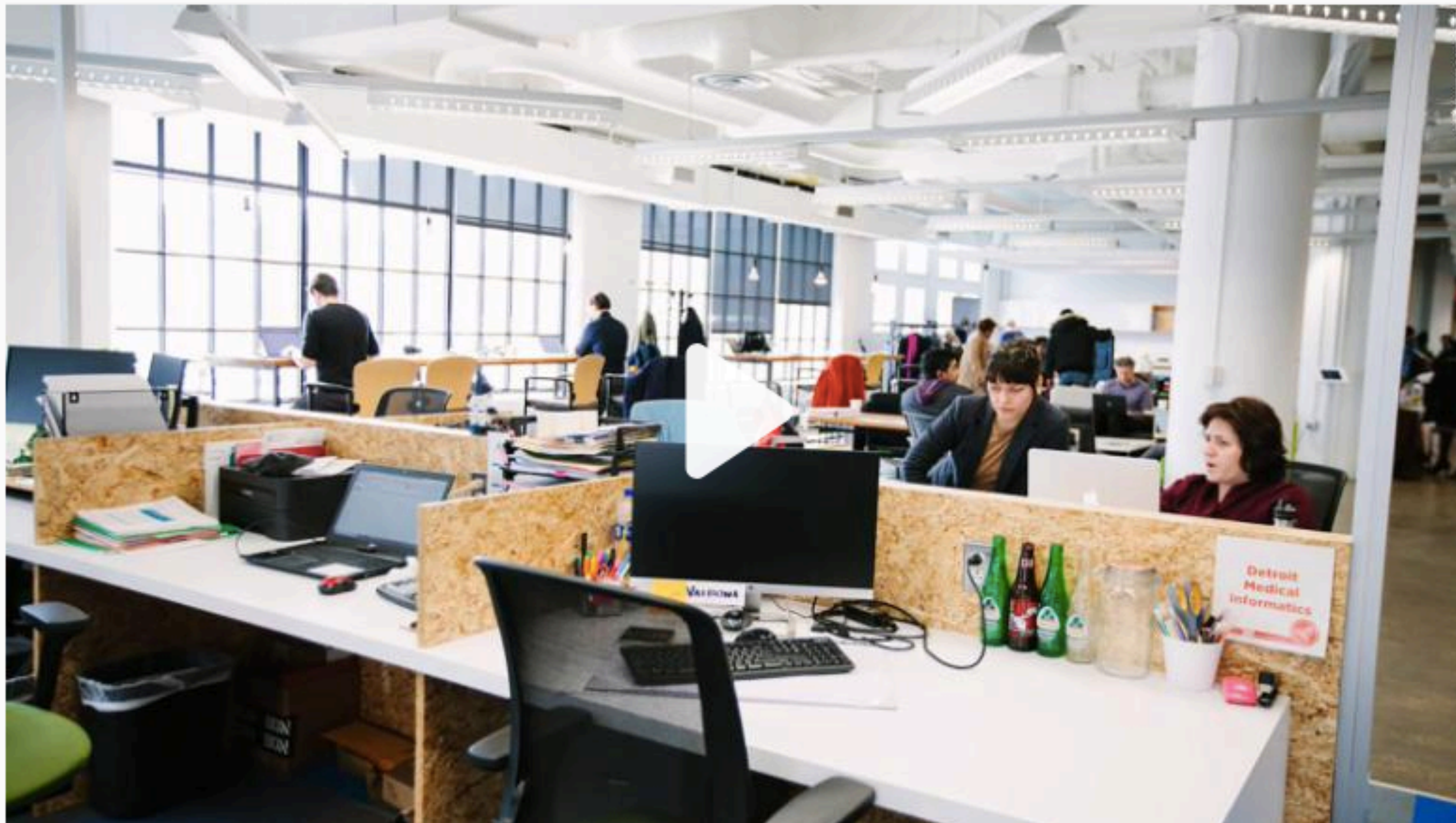
- Generally person to person transfers are opaque to law enforcement and taxation authorities
- Since cash and physical gold need transport, they are vulnerable to random searches and inspections say at the airport
- Cryptos can be tracked via addresses (but you do not know who is the owner of those addresses)
- All have a problem at the time of high value real world purchases (say buying a house or a car). The source of cash / gold / crypto needs to be explained. Money launderers required here as well.
- For receiving payment, people doing illegal stuff may prefer crypto as they don't need to be physically present.

Hacks & Scams

A crypto exchange may have lost \$145 million after its CEO suddenly died

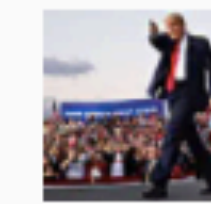
By Daniel Shane, [CNN Business](#)

Updated 0251 GMT (1051 HKT) February 6, 2019



JULIANNE LINDSEY


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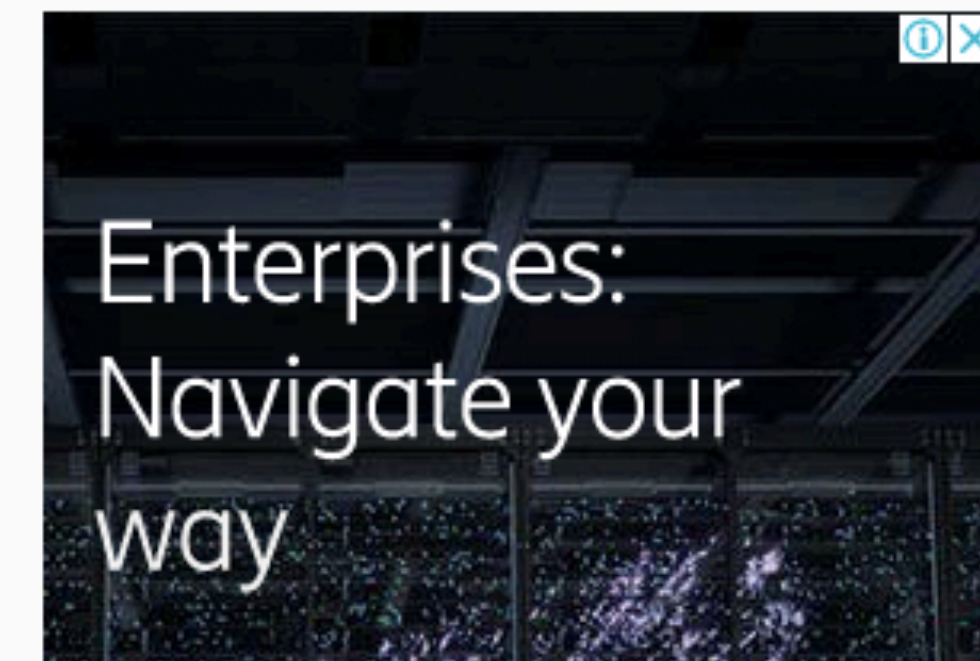


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Proof of Work vs Proof of Stake

- Current Bitcoin & Ether (Ethereum) protocol is Proof of Work
- Winner takes all, high energy consumption, arms race, expensive & slow transactions
- Proof of Stake to distribute rewards to persons having “Stake” without inciting an arms race

Problems of a deflationary currency

- Lot of money printing is a problem (Weimar Germany / Zimbabwe)
- However no money printing can also be a problem
- BTC will not be generated post 21 million
- Even existing BTC can be lost
- As the amount of goods and services in the economy increases, each BTC buys more
- Hence temptation to keep hoarding and not buy
- This ironically causes deflation and recession



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Facebook-backed crypto project Diem to launch US stablecoin

The project will also relocate from Switzerland to the US as it scales back its global cryptocurrency ambitions.

Andrew Morse May 12, 2021 6:45 p.m. PT



19

▶ LISTEN - 07:05

Resources

- Coinbase prospectus
- Books
 - Mastering Bitcoin - Andreas M Antonopoulos
 - Mastering Ethereum - Andreas M Antonopoulos & Dr Gavin Wood
 - How to DeFi
- Internet
- Documentaries
- Friends (Rishi, Pranesh, Rohit, Raunak)
- Check the Youtube description on PPFAS FOF video

Thank you

Questions?