# Part 2

- ✓ CBDC vs Bitcoin
- ✓ CBDC a Threat to Freedom
- ✓ Political implications
- ✓ Support & Resistance to CBDC
- ✓ China's role in CBDC
- ✓ Wholesale CBDC
- ✓ Retail CBDC
- ✓ Multi CBDC
- ✓ CBDC's role in the Metaverse

## **CBDC**

- Digital currency issued by the Central Bank
- Trust
  - Central government
  - Politicians
  - Promise of CBDC
- Central Bank in 100% control
  - Issuance
  - Management
  - Supply
- Mass Adoption
  - Compulsion by law
- No Hashing Algorithm
  - Can use or create new one
- No Incentive HODL
  - Price Stable
  - Demand vs Supply (Both are variable)

### Bitcoin

- Peer to Peer electronic cash system
- Trust less
  - Cryptography
  - Hashing Algorithm
  - Mathematics
- No one in control
  - Issuance
  - Management
  - Supply
- Organic
  - Cannot force (El Salvador legal tender)
- Secure Hashing Algorithm
  - SHA 256
- Incentive to HODL
  - Price Unstable
  - Demand vs Supply (Fixed)

### CBDC

- Centralized
- Not Open Source
- Need Permission to use (KYC / ID)
- Only within the country/ region
  - Launched Multiple CBDC for Cross Border
  - Easily be censored
  - Only officials can verify
  - No Mining (Official will update/ approve ledger)
  - Identity known
  - Big Data enabled (KYC)
    - Netflix use in China
    - Can use Zero knowledge proof?

## Bitcoin

- Distributed
- Open Source
- Permissionless
- Neutral
  - The value of using #BTC is the same
- Borderless
- Censorship resistant
- Publicly Verifiable
- Mining ( Updating of Ledger )
  - Miners cannot censor transactions
- Pseudonymous
  - Option by Individual to add KYC data
  - Option to show identity

## Central Bank Digital Currency

- Track & Monitoring
  - Track location & details of spending
  - Where, When, Why, What Where & How CBDC is spent
  - Taxation: Automatic
  - International taxation: Remote work
- Stopping Access
  - Ruling political party can stop access at any given time
  - Illegal transactions
  - Content creators for opinions
  - Against policies

Vaccination Passport

+

**CBDC** 

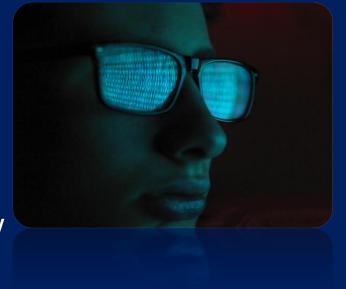
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**End of Freedom** 

## Central Bank Digital Currency

- Restrict Spending
  - Restrict spending
  - Loan repayment over personal spendings
  - Spending during pandemic #partygate
  - Authority to decide
- Closure of account
  - Political reasons
    - Opposition can chose to cancel a/c during political rally
    - MAGA rally could lead Democrats to close accounts
  - Social pressure
    - E.g. Joe Rogan , Alex Jones, Vaccination info
  - "Woke" mentality

- Zero Knowledge proof can solve all this
- Not a single CBDC is working on ZK



## Political Implications of CBDC

- Restrict speech & Cancel Culture
- Strict reporting on spending
- Socialist approach to money
- In Favor of CBDC
  - Comparison to China
- Restrictions on Bitcoin mining
  - Green energy
  - ESG
- Actively pushing for CBDC
  - Elizabeth Warren
    - Strong legislation for crypto
    - Force crypto platforms to cancel transactions
  - Jack Reed, MarkWarner, Jon Tester

- In favor of Freedom & Open speech
- Freedom to spend
- Capitalist approach to money
- Not in favor of CBDC
  - In favor of Bitcoin
- Welcomes Bitcoin mining
  - Network security
  - Mining profit to the city
- Ban on CBDC
  - Tom Emmer 12<sup>th</sup> Jan
  - "Not only would this CBDC model centralize Americans' financial information, leaving it vulnerable to attack, but it could also be used as a surveillance tool that Americans should never tolerate from their own government."
  - Ted Cruz, Sens Braun, Grassley
- Ban on China's Digital Yuan on App Store: Tom Cotton, Marco Rubio & Mike Brown.

## Political Implications of CBDC

- China: Ban on Bitcoin & Cryptocurrency (Love/Hate)
- Iran: Pro Bitcoin mining & cryptocurrency
- Russia: Pro cryptocurrency since sanctions
- UK governor: Detractor for Bitcoin, Advocate for Stable coins & CBDC
- UAE: Very proactive on Bitcoin & Cryptocurrency
  - Dubai Blockchain Strategy
- India: Hate for cryptocurrency, heavy taxation. Love for CBDC
  - Supreme Court in favor of Bitcoin & Cryptocurrencies
  - Reserve Bank not in favor of Cryptocurrencies
- USA: Mixed Red States vs Blue States
  - Blue States: NO for Crypto, Yes for CBDC
  - Red States: YES for Crypto, NO for CBDC



Financial Inclusion Bank the Unbanked

**CBDC- Smart Contracts** 

NFC payments (No internet)

Cross Border: MCBDC

# China is leading the CBDC race

- Launched in 2022
- Airdrop \$4.5M Shenzhen city (30M Yuan)
- Airdrop \$6.2M Beijing (Via lottery)
- More Airdrops in 2022

- China's CBDC can be used with ordinary phone QR code
  - Banked millions who were unbanked
  - TPS of over 500,000 per second
- Smart Contracts for Subscriptions, Remittances, Loans
- Can use it without the internet
  - NFC + Bluetooth
- MCBDC: More countries are going to be added in the list

### Retail CBDC

- Used by Individuals
  - Day to Day transactions
  - Stores
- Consumers & Businesses
- Medium of Exchange
- Linked to cards without the
  - Mastercard
  - Visa
  - American express
  - Apple Pay
- Transactions Per Second
  - 500,000

### Wholesale CBDC

- Used by Financial institutions
  - Banks
  - Financial institutions
  - Settle Interbank payments
- Cross border settlement
  - Europe
- Project Jura (Same currency)
  - France
  - Switzerland
  - Took 3 days for finality
- Project Helvetia
  - Six banks in Switzerland
  - Two phase

#### **Bank for International Settlements (BIS)**

### Multiple CBDC

- Multi-currency cross-border payments
  - Real time
  - Cost less than half
  - KYC/Compliance

### Bank for International Settlements (BIS

"M Bridge"

- Hong Kong Monetary Authority
- Bank of Thailand
- Digital currency institute Peoples Bank of China
- Central Bank of UAE 2019: \$730B

- 22 Banks

- 15 Business Use Case

### Bitcoin is Peer to Peer Electronic Cash System

- Instant international settlement
- Bitcoin can act as settlement layer & can provide an anchor for an entire ecosystem, with undeniable security as well as objective finality
- Lightning Network can process 1 million transactions per second
  - Second Layer Solution
- Liquid Network can be used provide faster and more secure Bitcoin transactions between individuals and institutions
  - Side Chain solution

### Bank for International Settlements (BIS)

### Multiple CBDC

- International Trade
  - Settlements
  - Programmable trade finance
  - Supply chain financing
  - Interoperability with digital trade finance platforms
- Capital market transactions
  - Atomic settlement of tokenized corporate bonds
  - Securitized FX spots futures and derivatives
  - Wealth Management connect
  - Digital native corporate bond issuance
  - Dual currency FX derivative
- Other
  - Insurance & Commercial payments
  - Commercial
  - Cross border low value aggregation service
  - Commercial border e-commerce

"We live in a world where having loads of information is not important. Having information from 1st source is."
-18181



- Role of Central Bank Digital Currency in the Metaverse
  - Medium of Exchange
  - Easy user on board
  - Native token to CBDC
  - Payments for Smart Contracts
  - Linked to Credit Score
  - · Link to Biometric log in
  - International transactions: Multiple CBDC

Why CBDC maybe better than using cryptocurrencies

- Scalability: Solved since genesis as centralized
- User experience: Easier for non tech
- Subscription: Monthly subscriptions
- Safety: Users feel safe as backed by govt
- Customer service: Queries & Concerns
- Hack: Get back funds or reimbursed

Bitcoin: Lightning Network + Liquid Network offers most of them