

CRYPTOCURRENCY, BLOCKCHAIN, AND THE FUTURE OF FINANCIAL SERVICES

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Crypto, Blockchain, and Credit Unions

What are the goals of credit unions?

- Member financial well-being
- Grow the business

How do crypto and blockchain fit into this picture?

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Technology

- Blockchain is a technology
- Crypto is an application of blockchain
- This makes crypto a form of technology

- Technology is neither good or bad

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Fintech

- Fintech is technology that is both a threat and a partner
- Crypto is fintech
- Crypto can be used to provide financial services
- CUs should assess the adoption of crypto

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A MAP for Cryptocurrency

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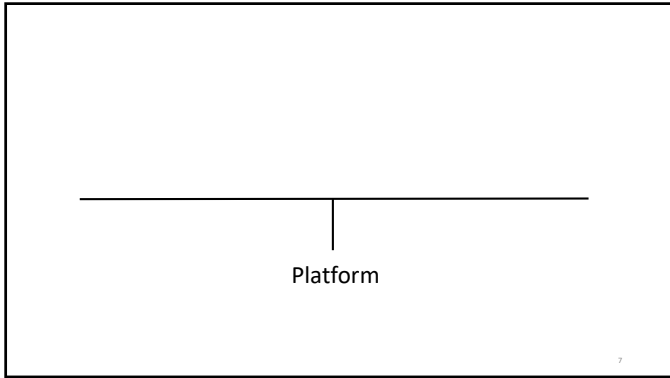
To begin, let's explore the following...

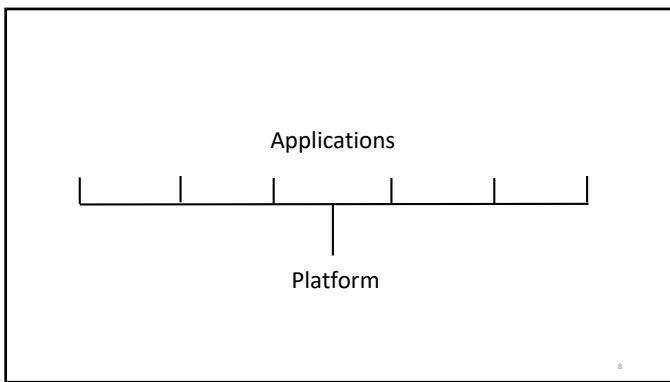
- Crypto as **Money** (M)
- Crypto as **Asset** (A)
- Crypto as **Platform** (P)

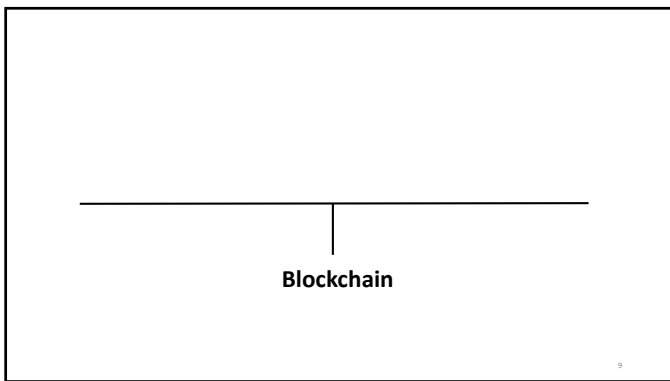
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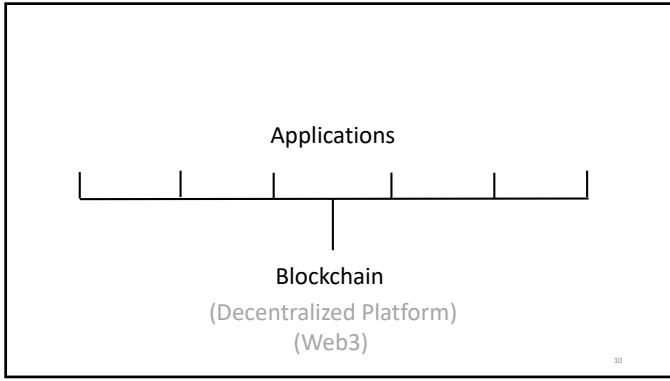
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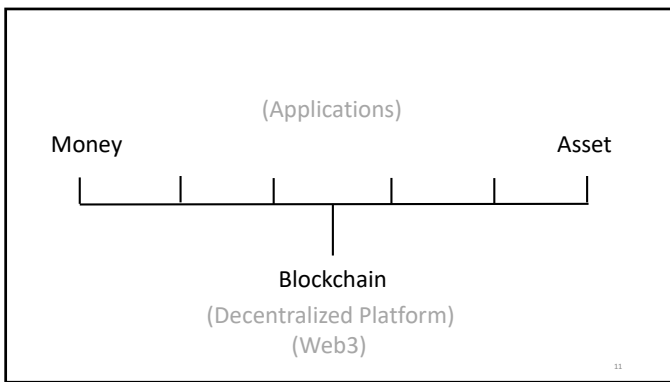
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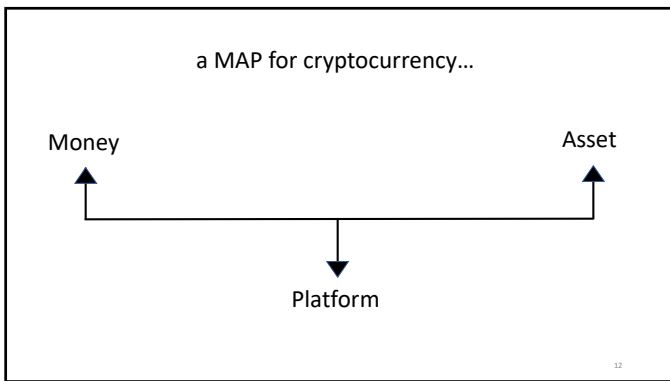


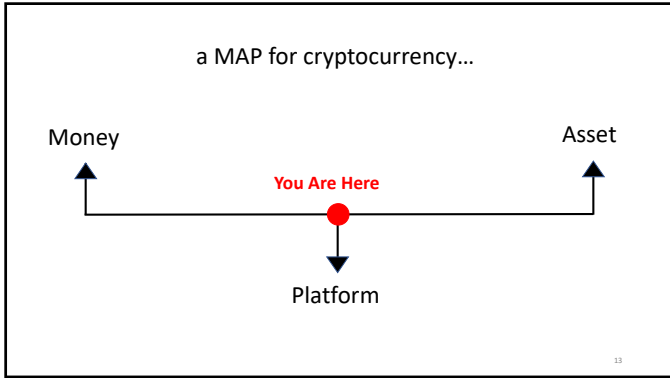




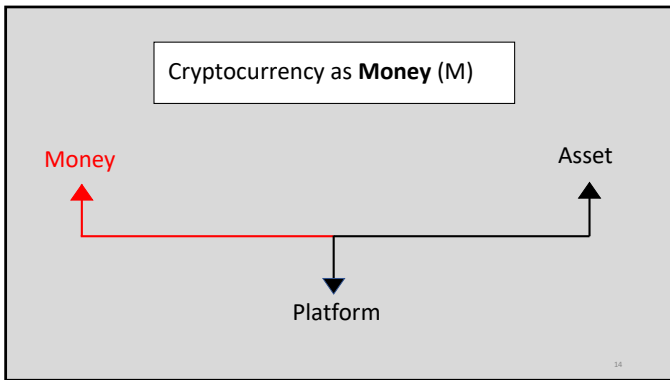








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Cryptocurrency as Money (M)

- We are comfortable with the U.S. Dollar
- Before the dollar, there was other money like gold
- The U.S. Dollar is “sovereign” currency. It is also “fiat”
- It is managed money

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Bitcoin (BTC)

- Bitcoin was a paradigm shift: “Peer-to-peer electronic cash”
- Digital cash
- How? Using blockchain to solve the double spend problem
- Money as data

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Stablecoins, Digital Dollar, and Regulation

- Stablecoins are cryptocurrency pegged to fiat currency
- Central banks are developing digital currencies (CBDCs)
- The Fed is researching a “digital dollar” (see white paper)
- Regulation is increasing and that’s good (“fiat on-ramps”, NCUA)

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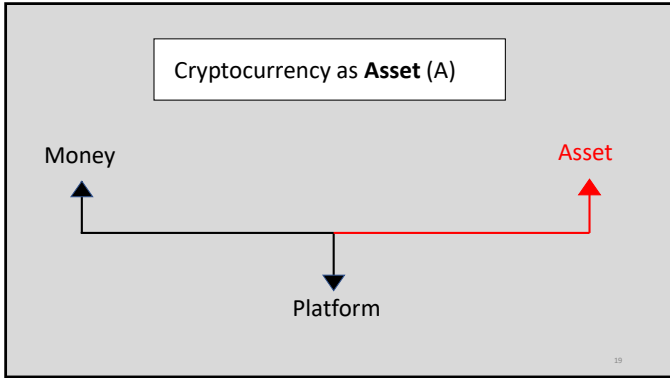
Crypto and Payments

- What is the future of crypto in payments?
- Rather than “cashless society,” a society of digital cash
- Cards that convert stablecoins into fiat at point of sale
- Crypto uses blockchain as a payment rail

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Cryptocurrency as Asset (A)

- “Crypto” today is more of an asset than a currency
- Something to own as an investment for financial well-being
- Buying crypto is easier than ever (Venmo, ATMs, Coinbase...)
- Crypto is a technology investment

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Digital and Physical Assets

- As money is digitizing, assets are digitizing (“tokenization”)
- Non-fungible tokens (NFT) are a digital record of ownership
- Most NFTs today are linked to *digital* assets (e.g., digital art)
- NFTs can also be linked to *physical* assets (e.g. title as NFT)

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The Role of CUs in Crypto Investing

- Credit union members are investing in crypto and NFTs
- Does your credit union want to discourage or facilitate this?
- You are a source of trust for “crypto curious” members
- This is an opportunity for member engagement

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Cryptocurrency as Platform (P)

Money

Asset

Platform

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Blockchain Is the Emerging Platform

- Blockchain is a system for shared record-keeping (acc., data)
- Blockchain is distributed (a distributed ledger technology: DLT)
- A “single source of truth” that does not require reconciliation
- Blockchain is decentralized (a network consensus mechanism)

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Secured Lending and Blockchain

- A good blockchain application has multiple parties sharing data
- What about home or auto lending as a blockchain application?
 - Buyer of asset
 - Seller of asset
 - Funder of asset
- Could we do secured lending on a blockchain?

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Ethereum and DeFi

- Ethereum is a public blockchain and ETH is the Ethereum crypto
- Ethereum is like a computer for running *smart contracts* as code for decentralized applications (dapps)
- Decentralized Finance (DeFi) is finance built on blockchain
- DeFi offers financial services like deposits and loans (e.g., Aave)

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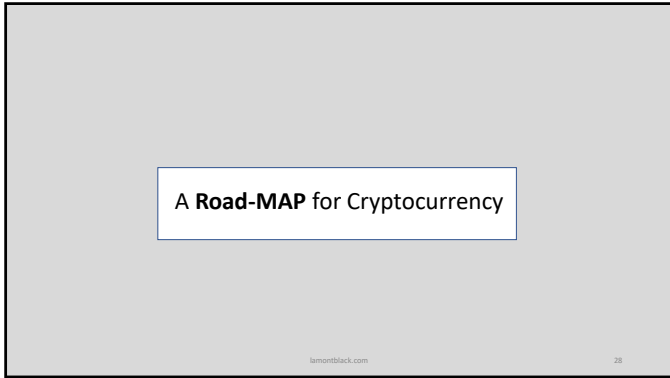
Potential Applications of Blockchain for CUs

- NFTs as record of ownership for physical assets (real estate, auto)
- DeFi for secured loans (real estate and auto loans)
- Digital Identity (e.g., Bonifii) and Web3
- Metaverse for member engagement (e.g., Decentraland)

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THE IDEA

**Virtual
Wallet**
(e.g., PNC)

Store money
Send & receive money
Earn USD rewards



**Digital
Wallet**
(e.g., Metamask)

Store crypto/NFTs
Send & receive crypto/NFTs
Earn crypto rewards

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Digital Wallet

USD

CBDC

USDC

BTC

ETH

NFT

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Digital Wallet

USD — Deposits/Cards

CBDC — Digital Dollar

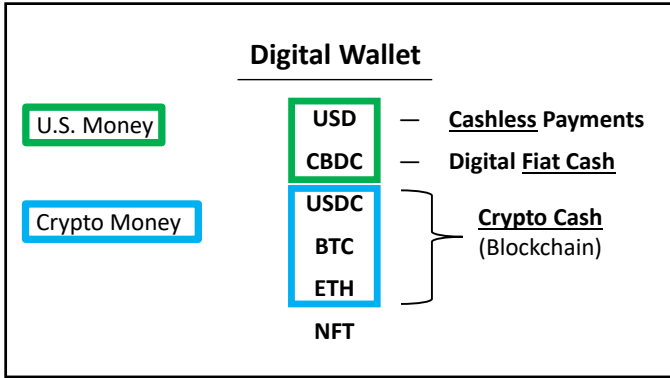
USDC — Stablecoin

BTC — Bitcoin

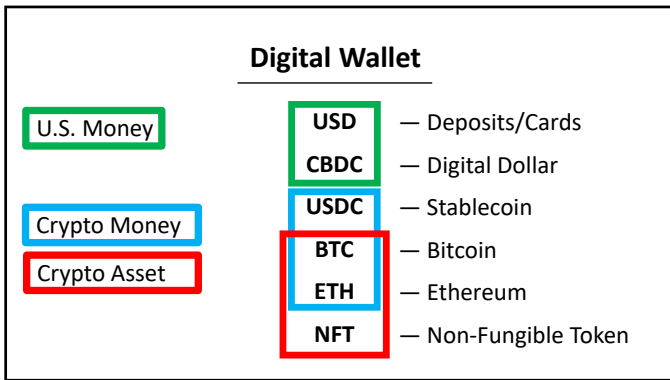
ETH — Ethereum

NFT — Non-Fungible Token

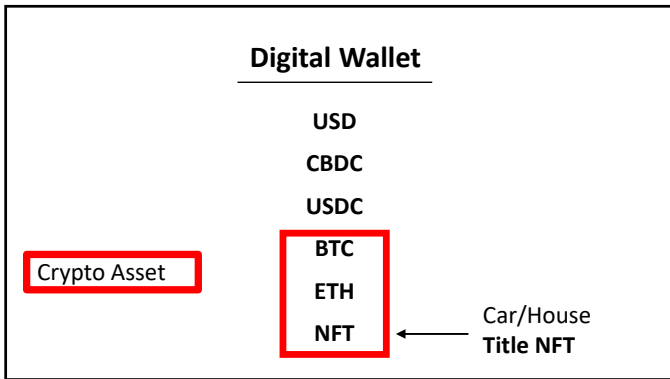
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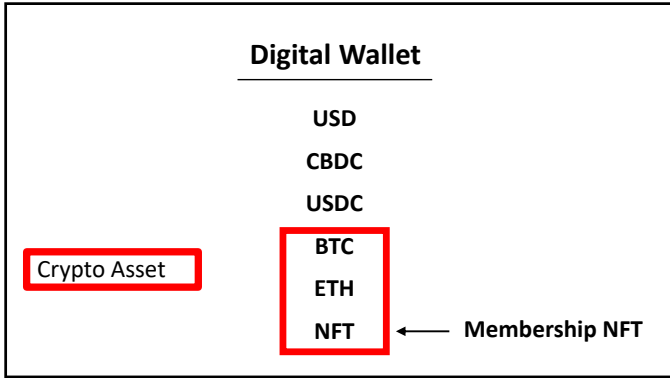
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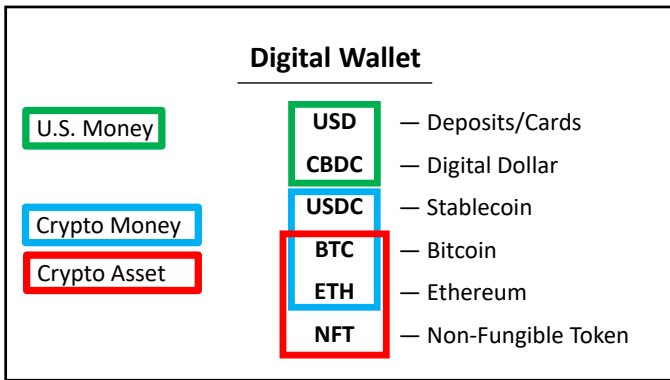
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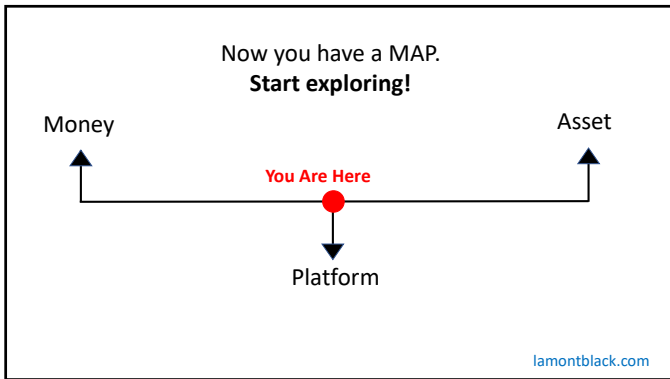
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Questions for the Roundtable Discussion

- What do you think of CUs offering **crypto** to their members?
- What do you think is the **future of digital currency** in payments?
- What do you think about **blockchain** and potential applications?

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