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Crypto Decrypted

Oregon Bankers Association
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INTERNET PROTOCOLS FOCUS ON
INFORMATION AND DATA

CRYPTO REPRESENTS A A SHIFT TO
AN INTERNET OF OWNERSHIP

SHOULDN'T SENDING MONEY BE
AS EASY AS SENDING AN EMAIL?

WHERE TO START?

BITCOIN

- Released as open source software in 2009
- Powered by users to clear and settle transactions (decentralized)
- Operates a global ledger of transactions which allows for the tracking and transfer of ownership

Since 2009, over 6,000 digital assets and DeFi applications have developed on top of this foundational blockchain technology.

WHAT DOES IT SOLVE?



Global payments



Settlement time



Bank control



Lack of access



Financial privacy



Inflation

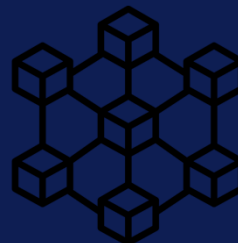
Blockchain Underlying architecture of Bitcoin

...system with the benefits of a centralized, shared infrastructure but without the centralized point of control: if the data and business logic is shared and replicated, no one firm can assert control, or so the argument goes.

- Richard Gendal Brown, Head of Technology, R3CEV

A **blockchain** is a shared, tamper-resistant ledger that facilitates the process of recording transactions and tracking assets in a network. Virtually anything of value can be tracked and traded on a blockchain, reducing risk and cutting costs for all involved.

At the heart of blockchain are its **user involvement** and **consensus mechanism**. Because of the lack of central authority, participant involvement and consensus is essential.



PUTTING IT IN CONTEXT

Decentralized Ledger



VISA - Manages a centralized ledger



Bitcoin decentralizes the tracking, input, verification power to users



In exchange for that 'work', bitcoins are awarded (miners)

REMEMBER THIS!



Connected computers



...reach agreement over...



...shared data

Types of blockchain networks

<p>Public: Any participant can view the network. Cryptocurrencies are often built on public networks.</p> <p>Ex: Bitcoin</p>	<p>Private: The network cannot be viewed publicly. Enterprise blockchains (banks!) are typically private and only accessible by network participants.</p> <p>Ex: Corda</p>
<p>Permissioned: Users of a private blockchain will generally set up a permissioned blockchain network. Network access is limited and often facilitated through a centralized authority such as an administrator.</p> <p>Ex: RippleNet</p>	<p>Permissionless: Anyone may access and participate on the blockchain.</p> <p>Ex: Bitcoin</p>

DISTRIBUTED LEDGER TECHNOLOGY

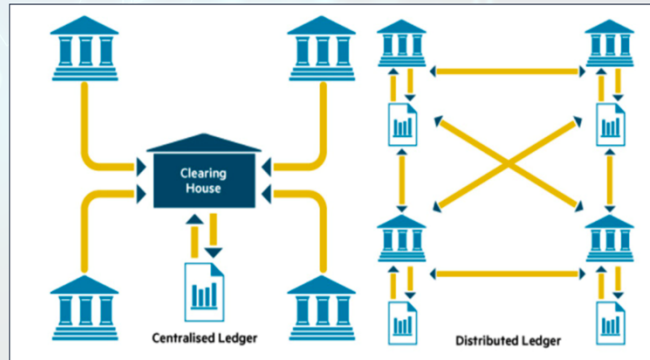
Distributed Ledger Technology (DLT) describes technologies using a shared, tamper-resistant ledger, used for recording and transmitting data across a network.

DLT is applicable across many industries, but most use cases have been in financial services and supply chain management.

A blockchain is a type of DLT.

Distributed Ledger Technology (DLT)

A distributed ledger is a network that records ownership through a shared registry



DISTRIBUTED LEDGER TECHNOLOGY

BLOCKCHAIN

BANKS BITCOIN ETHEREUM OTHER CRYPTOS

CRYPTO UNIVERSE

Bitcoin Market Cap: ~\$1T

All Crypto: ~\$2.5 Trillion

December 2, 2021 - messari.io

What does the industry look like?

- Protocol developers
- Miners
- Wallet providers
(hardware, software, web)
- Brokerages/exchanges
- Other service providers



A (few) types of Crypto companies...

Protocol companies: the people building the blockchain tech

- Ethereum foundation, Tezos, etc.

Centralized exchanges: allow users to buy, sell, and trade crypto

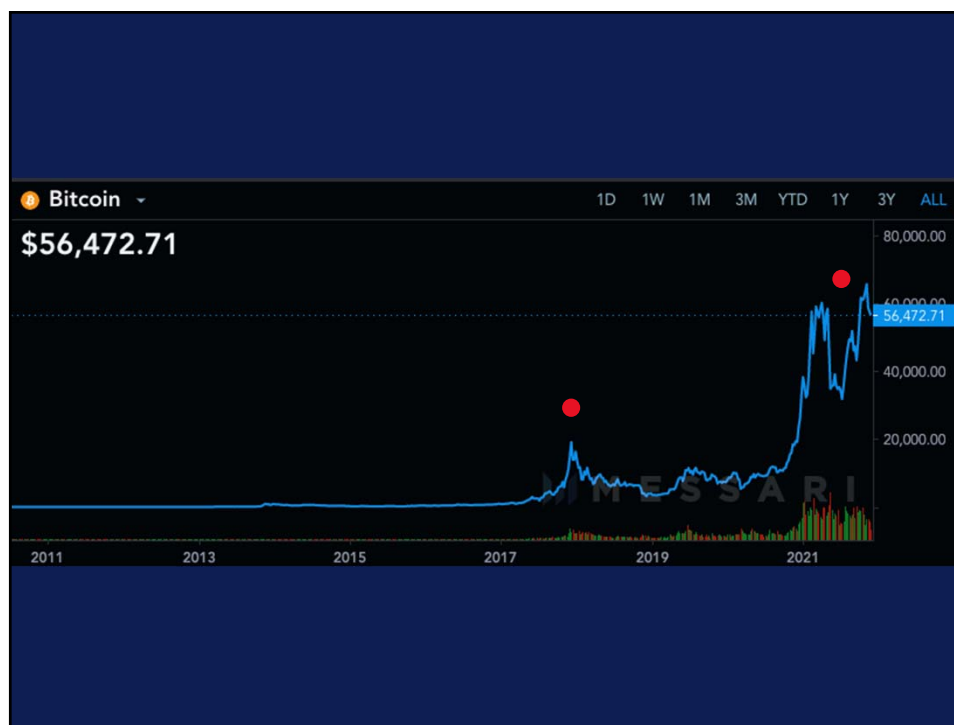
- Coinbase, Kraken, Gemini, etc.

Investors & VCs: money supply for these companies to grow

- A16z, Polychain, Paradigm, Framework

Wallet providers: allow users to store & send their crypto

- Ledger, MyEtherWallet





MARKETS

Coinbase files for direct listing after revenue more than doubles in 2020

PUBLISHED THU, FEB 25 2021-8:20 AM EST | UPDATED THU, FEB 25 2021-8:58 AM EST

Digital Asset Regulation

Digital assets are regulated by several agencies at the Federal level

- Digital assets are regulated by the CFTC, SEC, Treasury, Federal Reserve, and the IRS depending on their unique attributes and applications.
- Digital assets are also regulated at the state level. Some states have unique frameworks for digital assets, but most focus on regulating money transmission and consumer protection.



US Regulatory Agencies: SEC,
USDT, CFTC

ACTIVITY DRIVERS

1. FINANCIAL CRIME

Focus on exchanges and certain
token platforms

2. THE SEC

Finding the signal in the
noise – cryptos and the
markets they are sold in

3. TAXES

Many questions remain but it's clearly on the agenda of the federal government and Congress

4. ENERGY USE

Providing consensus and security for these networks is extremely energy intensive

5. STABLECOINS

Friend or Foe?

Future of Payments

Two forks in the road for digital currencies

Graph 2



Source: Adapted from R Auer and R Böhme, "The technology of retail central bank digital currency", *BIS Quarterly Review*, March 2020, pp 85-100.

<https://www.bis.org/speeches/sp210127.pdf>

THE FUTURE?...

THE “MIND BLOWING” STUFF

DECENTRALIZED FINANCE (DeFi)

DeFi is an umbrella term for peer-to-peer financial services on public blockchains, primarily Ethereum.

With DeFi, you can do most of the things that banks support — earn interest, borrow, lend, buy insurance, trade derivatives, trade assets, and more — but it's faster and doesn't require paperwork or a third party.

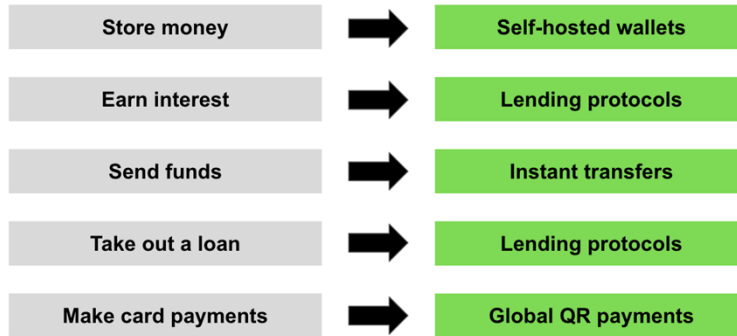
As with crypto generally, DeFi is global, peer-to-peer (meaning directly between two people, not routed through a centralized system), pseudonymous, and open to all.

DeFi takes the basic premise of Bitcoin — digital money — and expands on it, creating an entire digital alternative to Wall Street, but without all the associated costs (think office towers, trading floors, banker salaries) and middlemen.

In one year... \$686mm to \$15.6b

DECENTRALIZED FINANCE (DeFi)

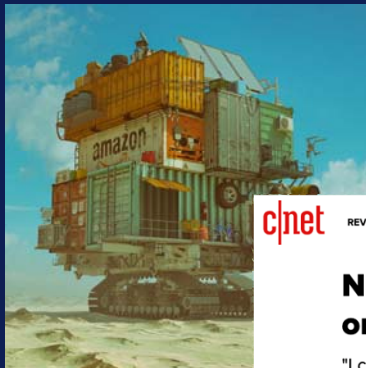
DeFi in Action



NON-FUNGIBLE TOKENS (NFTs)

Beeple Brings Crypto to Christie's

The artist's brash riffs on the news have whipped up a frenzy of interest within the cryptocurrency scene.



REVIEWS - NEWS - TECH - MONEY - WELLNESS - HOME - CARS - DEALS

NFTs: Why people spend millions on JPEGs

"I could just right click and save that NFT" isn't an argument anymore.

NFT Use Case: Pudgy Penguins

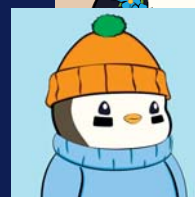
An example of an NFT are the Pudgy Penguins

•Pudgy Penguins are a “community” NFT project. Where a limited number of unique jpegs are sold.

•These unique assets can be held in hard or digital wallets.

•They can be sold and traded on the open market.

•Ownership of a “Pudgy Penguin” or other types of community NFT’s can entitle the owner to special privileges like access to owner only events.

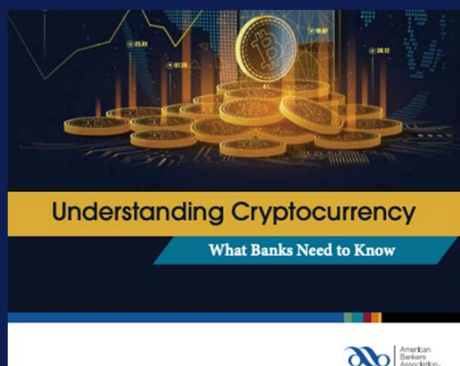


How to think about all of this?

- Open protocols = limitless potential
- Sector will get larger
- Assets will appreciate (and depreciate)
- Increased institutionalization
- Payments will radically change
- DeFi will eat the world
- NFTs increase in a virtual environment

Recommended Reading

Understanding Cryptocurrency” American Bankers Association



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QUESTIONS?

Recommended Reading: Understanding Cryptocurrency”, American Bankers Association

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