

CRYPTOCURRENCY 101



Presenter



Cary Ayers
Senior Vice President,
Atlantic Union Bank

Covered in Today's Presentation...

- What is Cryptocurrency
- How does Crypto Technology Work
- Different Types of Cryptocurrencies
- Current Regulatory Environment
- The Future as it Relates to the Financial Industry

**I DON'T KNOW
HOW BITCOIN WORKS**

**AND AT THIS POINT
I'M TOO AFRAID TO ASK**

Crypto: What is it?



Cryptocurrency aka Digital Assets

- “Crypto” = Cryptography: The study of secure information and communication techniques; derived from mathematical concepts.
- “Cryptography” closely aligned to “encryption”.

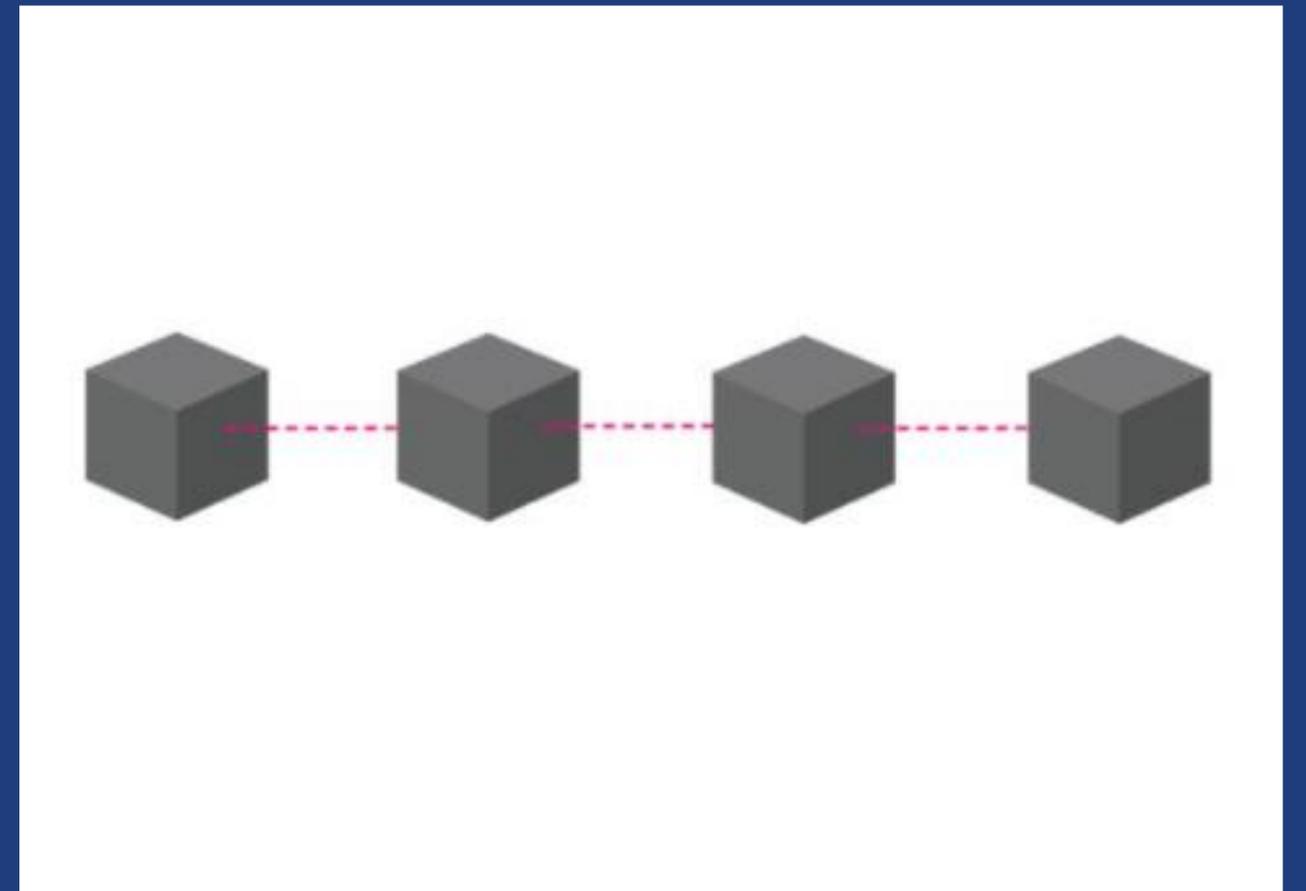
Crypto: What is it? (cont.)

- 1. Confidentiality.** The information cannot be understood by anyone for whom it was unintended.
- 2. Integrity.** The information cannot be altered in storage or transit.
- 3. Non-repudiation.** The creator/sender cannot deny at a later stage their intentions in the creation or transmission of the information.
- 4. Authentication.** The sender and receiver can confirm each other's identity and the origin/destination of the information.

Crypto: What is it? (cont.)

Decentralized Blockchain: a digital ledger of transactions that is duplicated and distributed across a network of 1,000's of computer nodes.

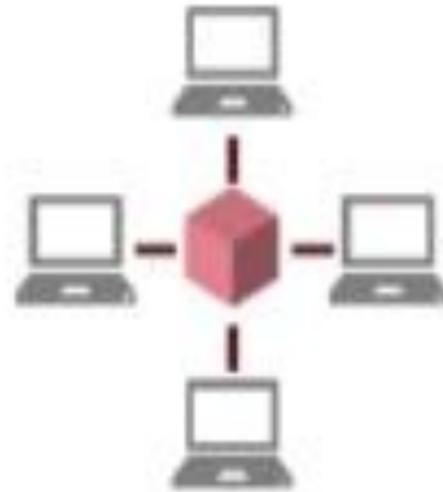
The nodes serve the Blockchain by validating, confirming, securing, and writing blocks to the chain.



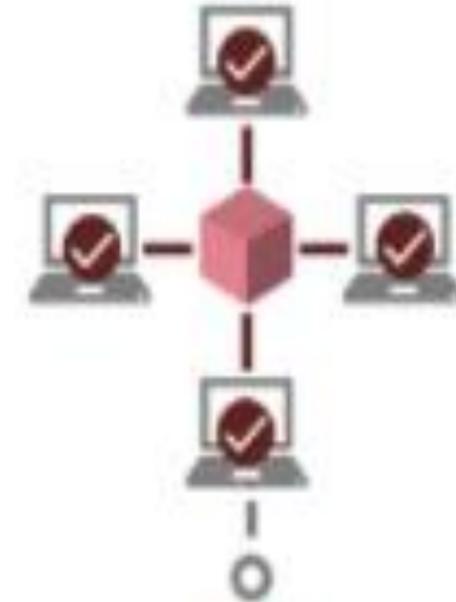
Someone in a network requests a transaction



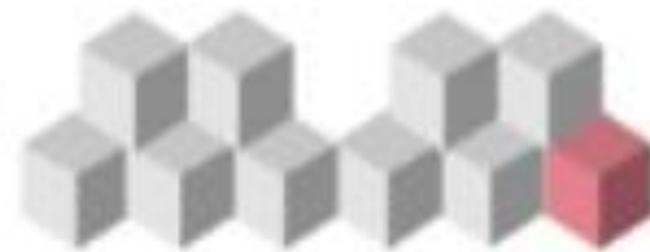
The transaction is **broadcast to other computers** (nodes) in the network



The network of nodes **validates the transaction** using agreed algorithms



The **transaction** is complete



The new block is **added to the network's blockchain**, in a way which is permanent and unalterable



The verified transaction is combined with other transactions to **create a new block of data for the ledger**

questions



Crypto Facts:

19,000+

different cryptocurrencies being traded. 18,500 will likely go to zero in time. The space is incredibly volatile and ripe with speculation, scammers, and some of the most brilliant engineers in the world.

\$911B

As of June 2022:
Cryptocurrencies hold a collective market cap of \$911 Billion. Of this, \$410 Billion is Bitcoin and \$135B is Ethereum.

2021

A November 2021 study released by Pew Research Center found:

- 16% of Americans have invested, traded, or used a cryptocurrency.
- 14% of Americans hold direct stock investment. (52% exposure to stocks via 401k)

Cryptocurrencies: Many Use Cases (Types)

Currency: The original use case, intended as an alternative to fiat currency for daily transactions. Ironically, this use case still has a meaningful way to go due to volatility, merchant adoption, and tax treatment.

Exception; El Salvador, and countries with weak fiat (i.e. Turkey, Zimbabwe).



Bitcoin



Litecoin



Ripple

Cryptocurrencies:

Stable Coins: Coins pegged to a specific fiat currency, mostly USD. These are used as an on and off ramp into the crypto market and provides a path to liquidity 24/7, in keeping with the crypto market which trades 24/7.



Tether



US Dollar Coin



Terra

Cryptocurrencies:



Central Bank Digital Currency: Digital Currencies issued by central banks.

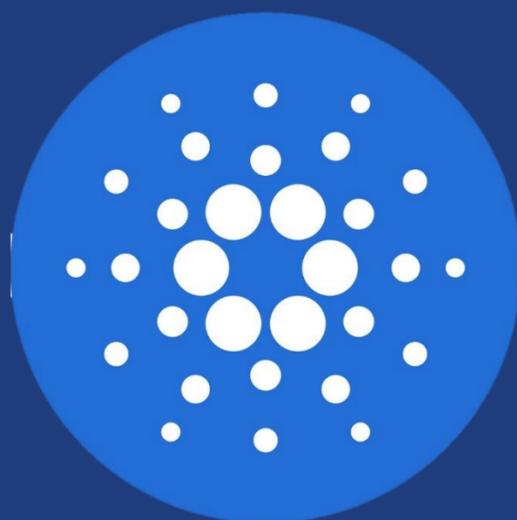
- Simplifies the implementation of monetary policy and government functions.
- Will reduce counterfeiting and make money laundering more difficult.
- Users will have to give up meaningful degree of privacy and control.

Cryptocurrencies:

Layer 1 Protocols: These coins are increasingly referred to as “web3”, they provide the network on which many other applications and cryptos run. i.e. a Decentralized alternative to Amazon Web Services.



Ethereum



Cardano



Solana



Binance SC

Cryptocurrencies:

Applications: Application tokens running on different Blockchains.



Gaming



Oracles



NFTs



Storage
(File)



DeFi



Gaming: Emerging trend of video games played on the blockchain. Many of these games involve an avatar and virtual world in which the user plays to earn additional tokens.



“Axie Infinity”; \$1.3B Market Cap



“Decentraland”



NFTs: Non-fungible tokens; often thought of as “digital art”.

- Initially gained traction with sports photos, evolved to memes, then jpeg artwork.
- Eventually will support accessories in the Metaverse.

Examples...

**“Disaster Girl”; likely seen on
Facebook, etc.**



Original “Disaster Girl”: SOLD \$400,000



Bored Ape Yacht Club: 10,000 variations

Recent Bored Ape Yacht Club sales



[Bored Ape Yacht Club sold for \\$1.1M 12 days ago](#)



[Bored Ape Yacht Club sold for \\$725.7k 17 days ago](#)



[Bored Ape Yacht Club sold for \\$679k 16 days ago](#)



[Bored Ape Yacht Club sold for \\$604.7k 16 days ago](#)

Meta reportedly plans to integrate NFTs on Facebook and Instagram profiles

Meta reportedly plans an integration to allow social media users to display their NFTs on Facebook and Instagram.

Web3 Founders Welcome Walmart and Its NFTs to the Metaverse

Crypto executives tell Decrypt that Walmart's metaverse play may be different from Facebook's.

Business

Prada, Adidas Launch NFT Project on Polygon

The latest high-fashion foray into Web 3 includes a metaverse angle as well.

NIKE ACQUIRES RTFKT, SETTING THE STAGE FOR SWOOSH-CERTIFIED NFTS

questions



Regulatory Environment; The Future of Crypto

Global Government Dynamics:

As a currency, most world governments have a vested interest against cryptocurrencies developed as means of payment as they compete against fiat currencies (which they can control). Most are navigating the legal framework to live with crypto.

In the United States:

The US, has so far hesitated to stifle innovation, but desires strong consumer protections. Also a strong focus on transaction reporting for tax purposes. Meaningful regulation on the horizon, largely welcomed by the industry.

Regulatory Environment; The Future of Crypto

- Security and Exchange Commission has communicated its belief that most cryptocurrencies are securities and should be subject to additional regulation.

<https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/usa>

- Presently treated as *intangible asset* on balance sheet. Measured using either revaluation model or cost model depending on if there is an active market for the specific digital asset.

Regulatory Environment; The Future of Crypto

Stable Coins

- Active regulatory focus on (privately issued) Stable Coins and the risks that they may pose to investors or the overall financial markets. (\$150B presently)
- These coins are kept “stable” via either collateralized means or via algorithmic means. Algorithmic methodology major set back.
- Possible opportunity for banks to participate?

Crypto

Terra's Luna Crypto Crash: How UST Broke and What's Next



Daniel Van Boom 

May 18, 2022 12:25 a.m. PT

8 min read



US Banks Form Group to Offer USDF Stablecoin

Founding members of the USDF Consortium include New York Community Bank, FirstBank and Sterling National Bank.

By Jamie Crawley · 🕒 Jan 12, 2022 at 8:34 a.m. EST · Updated Jan 13, 2022 at 11:29 a.m. EST ·

A group of U.S. banks plans to offer its own stablecoin, called USDF, in a move to tackle concerns about the reserves behind nonbank-issued equivalents.

- The group – which is made up of institutions backed by the Federal Deposit Insurance Corp. (FDIC), one of the industry's key regulators – said the coin "addresses the consumer protection and regulatory concerns of nonbank issued stablecoins," [according to an announcement Wednesday](#).
- Founding members of the USDF Consortium include Synovus (the [48th largest](#) bank in the U.S. by assets, according to MX Technologies), New York Community Bank (No. 45), FirstBank of Nashville (No. 144) and Sterling National Bank (No, 77). The consortium wants more financial institutions to join.

The Future as it Relates to Finance

Peer to Peer, and Company to Company: Leveraging crypto wallets, transfers are made quickly, safely, and inexpensively, especially as compared to Credit Card, Western Union, or International transfers.

Final Settlement: For Real Estate and other large payments. Replacement for wire transfers. Faster, cheaper, but who carries the risk?

The Future as it Relates to Finance

Staked Coins: Offer your coins to be used as part of transaction validation process, and be paid a share of transaction fees in return. Think dividend paying stock.

Liquidity Pools: Delegate your coins to a DeFi liquidity pool, providing the capital to fund loans, earn share of the interest paid. Akin to banks use of CDs to fund lending.

Savings/ Money Market trend: Competition from Stablecoins as a savings account or means of diversification away from fiat dollars.

The Future as it Relates to Finance

Replacement of Retail Banking: Younger generations embracing technology at rapid pace.

Emerging crypto “Smart Wallets” and other applications allowing users one smart phone based portal for all things finance.

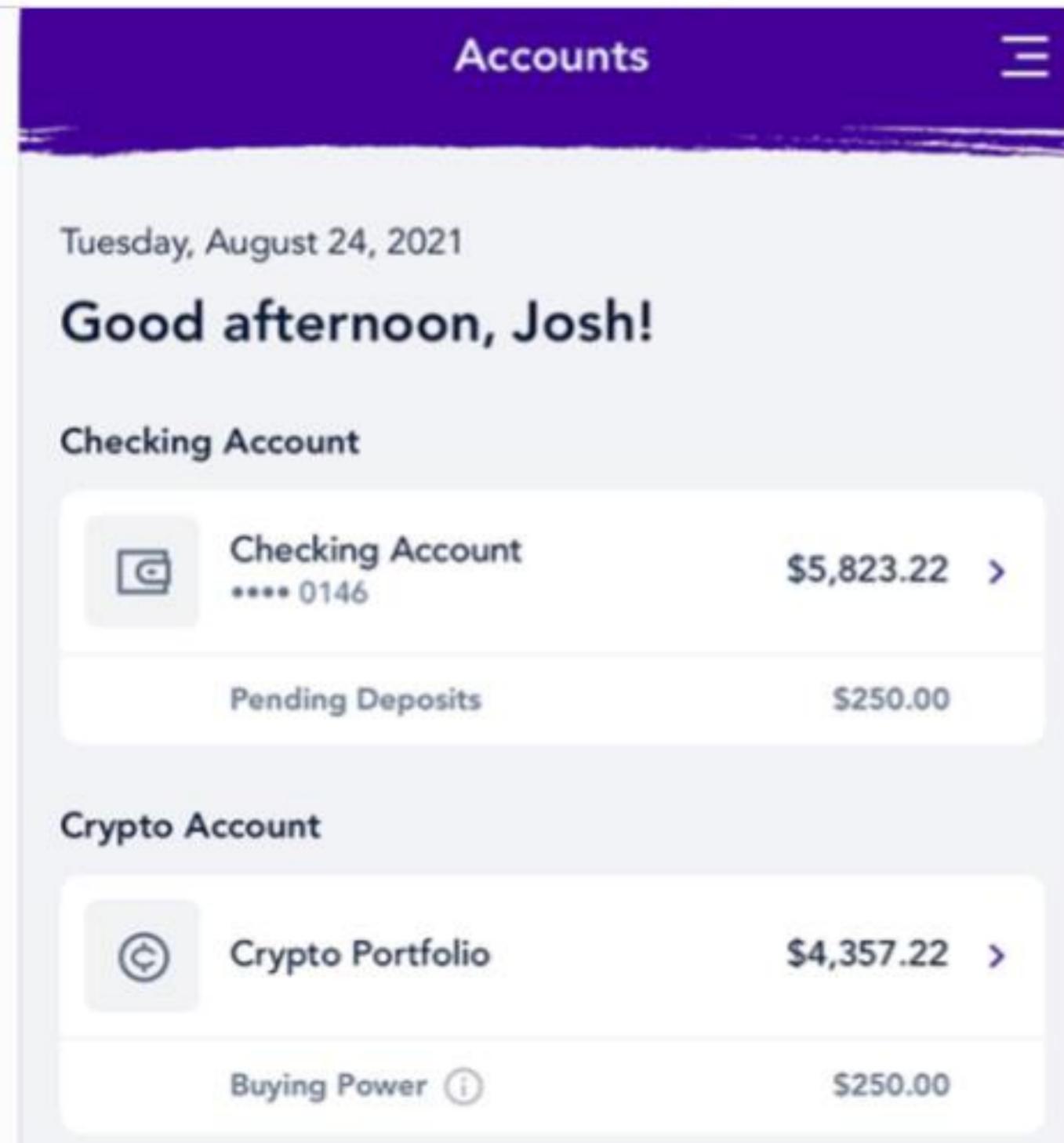


Vast Crypto Banking

We've taken the complexity and anxiety out of owning crypto.

Vast Bank is the first nationally chartered U.S. bank that allows you to buy, sell, and hold cryptocurrency assets through your mobile banking app.

Start building your crypto portfolio today!



questions



**So, what's the
takeaway?**

The Takeaway

When we reference the “internet” today, what does it encompass?

- Streaming video
- Wikipedia/ Education
- Maps/ Navigation
- Advertising
- Email
- VOIP
- Internet of Things (connected fridges, thermostats, cars)
- Online Shopping
- Data Storage
- Social media

The Takeaway

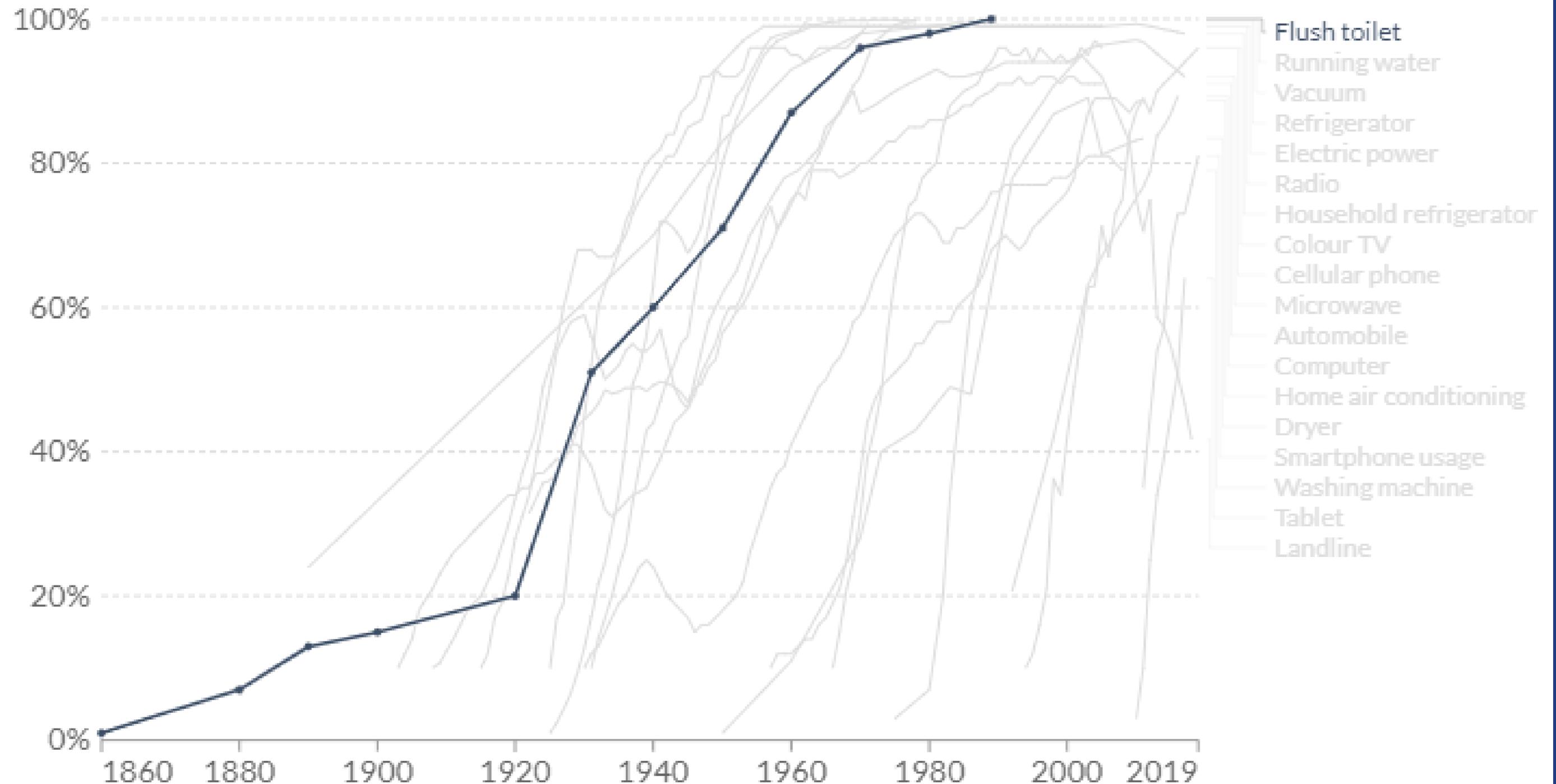
When you hear “cryptocurrency”....it is less about transactional currency, and more about the rise of decentralized applications, B2B and P2P payments, and a mental shift to ascribe real world value to this new class of digital assets.

How long until it is part of everyone’s everyday life?



Share of US households using specific technologies, 1860 to 2019

[+](#) Add technology

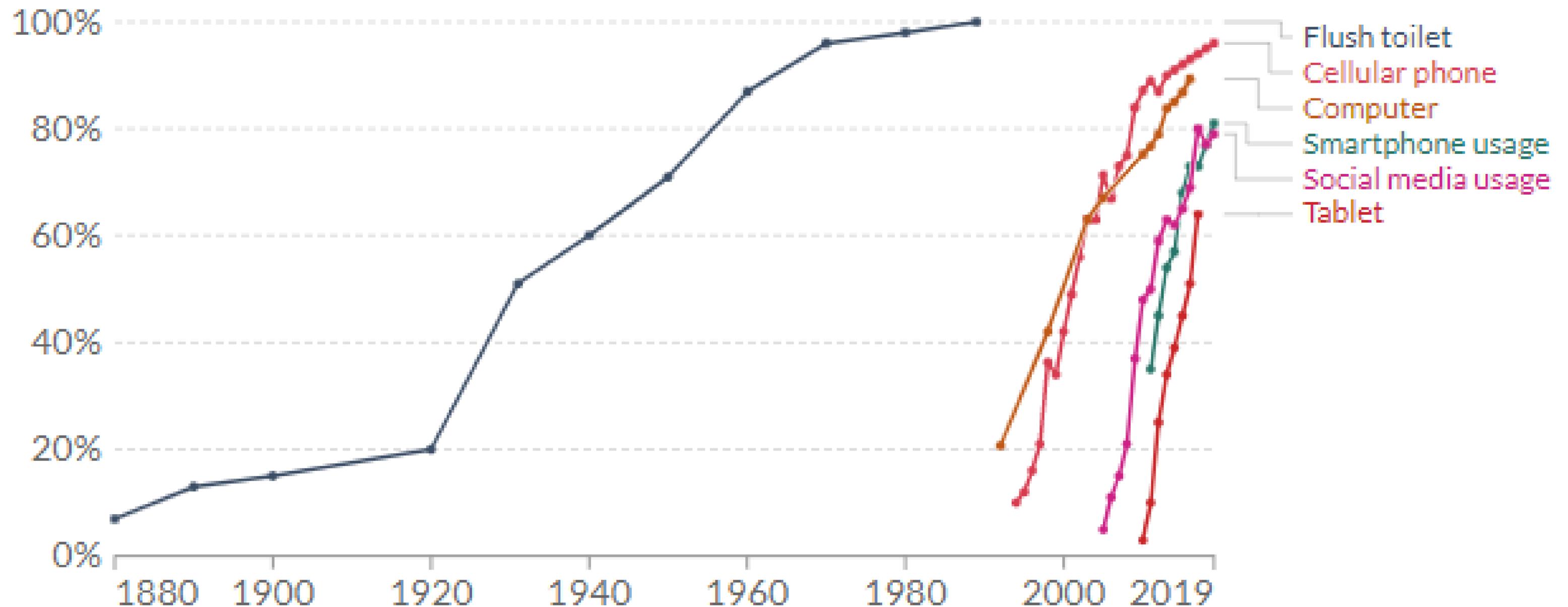


Source: Comin and Hobijn (2004) and others
Note: See the sources tab for definitions of adoption rates by technology.

Share of US households using specific technologies, 1880 to 2019

Our World
in Data

+ Add technology



questions

