

Cryptocurrency 101

An Introduction



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Disclaimer

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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 Banking Industry

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

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

When your boss thanks you for staying late to work but you were just watching the price of Bitcoin and lost track of time



Crypto: What is it?



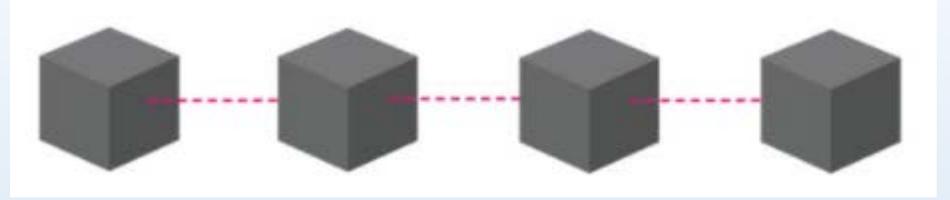
Cryptocurrency aka Digital Assets

- “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.

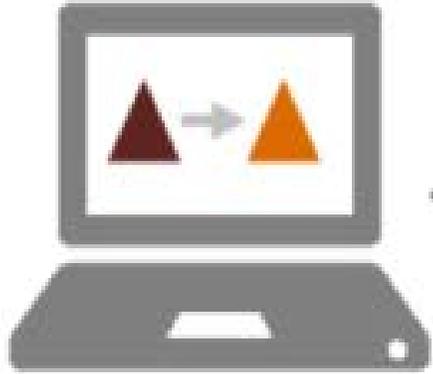
Crypto: What is it? (cont.)



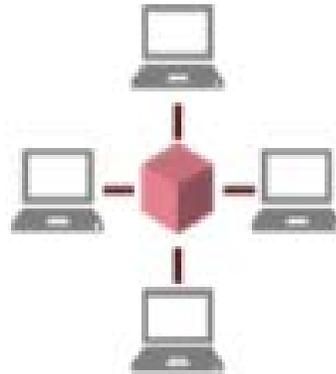
Decentralized Blockchain: a digital ledger of transactions that is duplicated and distributed across a network of 1,000's of computer nodes.

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

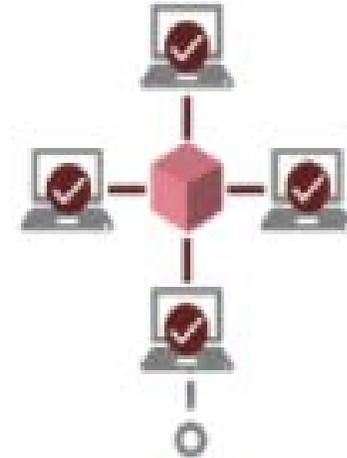
Someone in a network requests a transaction



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



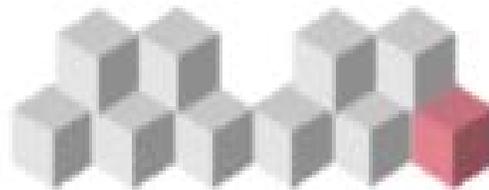
The network of nodes **validates the transaction** using agreed algorithms



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:

- 15,000+ different cryptocurrencies being traded. 14,600 will likely go to \$0 in time. The space is incredibly volatile.
- As of January 2022: Cryptocurrencies hold a collective market cap of \$1.8 Trillion. Of this, \$700 Billion is Bitcoin and \$300B is Ethereum.
- 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 and merchant adoption.

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.

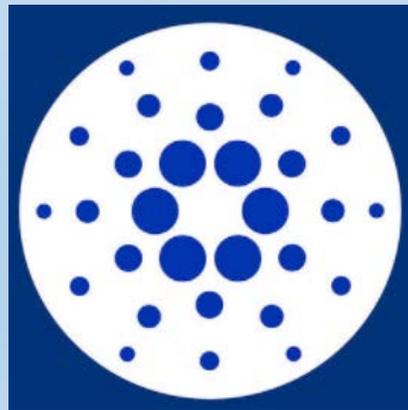
- Simplifies the implementation of monetary policy and government functions.
- Will reduce counterfeiting and make money laundering more difficult.
- Users will have to give up some degree of privacy.

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**
- **Many, many others...**

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”; \$3.5B Market Cap



“Decentraland”



“Incarnate” by Vulcan Forged

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



Beeple: “First 5000 Days” SOLD \$69MM

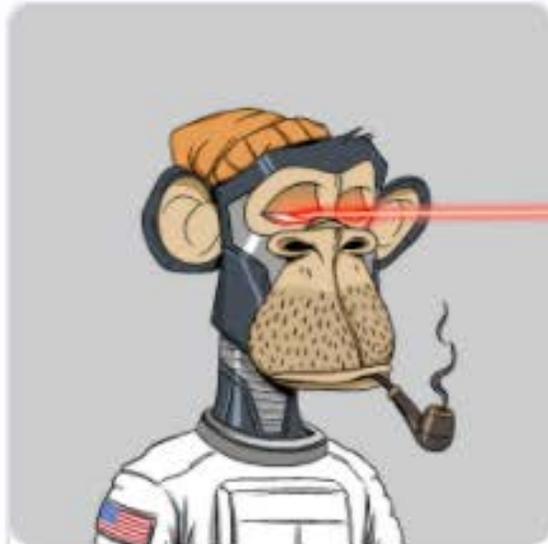


Bored Ape Yacht Club: 10,000 variations

Recent Bored Ape Yacht Club sales



[Bored Ape Yacht Club sold for \\$1.6M 9 days ago](#)



[Bored Ape Yacht Club sold for \\$1.4M 25 days ago](#)



[Bored Ape Yacht Club sold for \\$841k 3 days ago](#)



[Bored Ape Yacht Club sold for \\$838.5k 28 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

Business Applications for NFT's i.e. deeds, titles, fractional real estate ownership, personal identity.

- Real Estate: In 2020, Black Manta Capital Partners undertook a Real Estate Token Offering (RETO) for Berlin real estate worth \$12 million. As part of the RETO, private and institutional investors were able to invest in prime Berlin real estate for as little as \$500.
- Supply Chain: NFTs in the supply chain will be used to ensure products are what they claim to be. Fish, for example, could be traced from where they were caught all the way through processing and supply and on to the end consumer.

Questions?

Regulatory Environment; The Future of Crypto

Global Government Dynamics:

As a currency, 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 frame work 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.

Regulatory Environment; The Future of Crypto

- Crypto Exchanges (buy, sell, trade crypto) are viewed by FinCEN as Money Center Businesses and must be registered, additional reporting.
Many banks will not open accounts for businesses associated with “virtual currency”. Risk/Reward dynamics at play.
- IRS considers crypto taxable property.
- 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>

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.
(\$156B presently)
- These coins are kept “stable” via either collateralized means or via algorithmic means.
- Possible opportunity for banks to participate? Already happening...

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.

Questions?

The Future as it Relates to the Banking Industry

DeFi; Decentralized Finance = Using decentralized applications and blockchain technology to replace legacy banking systems, payment channels, and processes.

The Future as it Relates to the Banking Industry

DeFi Lending: Uses smart contracts to determine the terms of the loan. Able to apply, receive, repay loan all without human or centralized interaction.

Pros:

- Attractive rates and flexible terms
- Minimal “underwriting”, fast
- High degree of privacy (KYC, AML on the Horizon)
- Based on an “over collateralized” structure

Cons:

- Based on over-collateralized structure.
- Live/ Die by code (little room for grey)
- Requires degree of tech savvy

Elizabeth Warren: DeFi Is 'One of the Shadiest Parts' of Crypto

Senator Elizabeth Warren demands more regulation for DeFi, specifically stablecoins, arguing that it poses risks to consumers.



By [Andrew Asmakov](#)

📅 Dec 15, 2021

🕒 3 min read



The Future as it Relates to the Banking Industry

Payments: Alternatives to legacy payment channels which generate \$60 Billion a year in fees.

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 the Banking Industry

Competition for Deposits: Crypto offers superior returns, but with risk.

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

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 the Banking Industry

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.



SoFi Receives Regulatory Approval to Become a National Bank

January 18, 2022 06:01 PM Eastern Standard Time

SAN FRANCISCO--(BUSINESS WIRE)--SoFi Technologies, Inc. ("SoFi"), the digital personal finance company, today announced that the Office of the Comptroller of the Currency (OCC) and the Federal Reserve have approved its applications to become a Bank Holding Company through its proposed acquisition of Golden Pacific Bancorp, Inc., and operate its bank subsidiary as SoFi Bank, National Association. SoFi expects the acquisition to close in February, subject to completion or waiver of the remaining customary closing conditions.

"This incredible milestone elevates our ability to help even more people get their money right and realize their ambitions"

 [Tweet this](#)

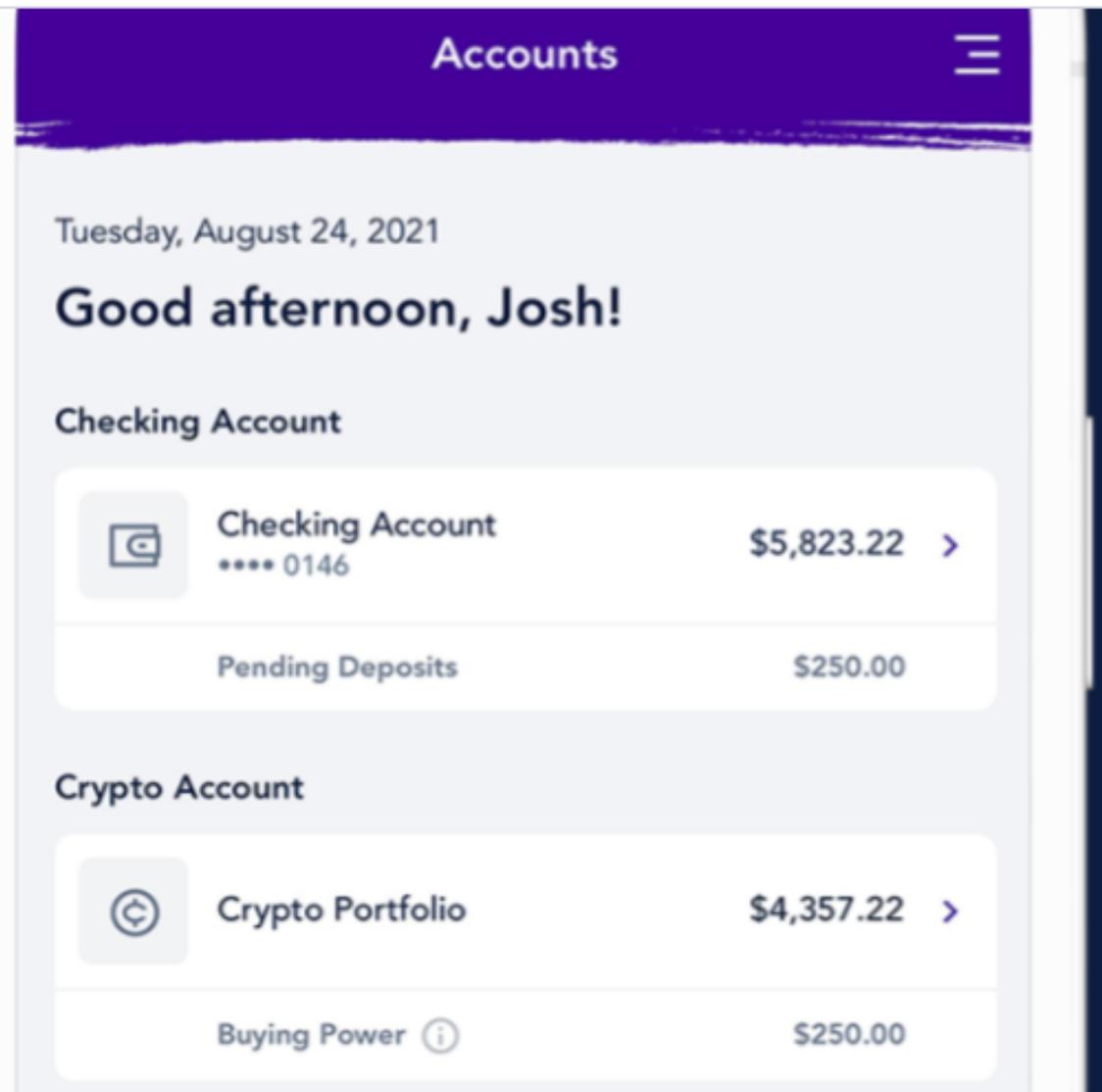
"This incredible milestone elevates our ability to help even more people get their money right and realize their ambitions," **said Anthony Noto, CEO of SoFi.** "With a national bank charter, not only will we be able to lend at even more competitive interest rates and provide our members with high-yielding interest in checking and savings, it will also enhance our financial products and services to ensure they efficiently meet the needs of our members, business partners, and communities across the country, while continuing to uphold a high bar of regulatory standards and compliance. This important

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!



The Future as it Relates to the Banking Industry



“Argent is the most simple and secure smart wallet for crypto. It does everything you'd expect from a bank (and more). Without the bank. Earn interest and invest; borrow, store and send. Access DeFi and Dapps in a few taps.”



argent



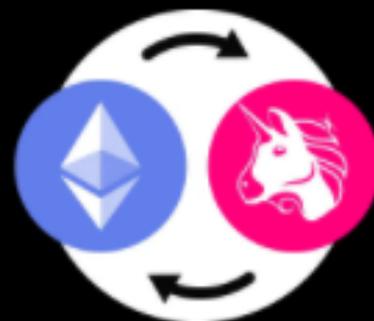
Earn 5% by
staking ETH



Earn up to 15%
on USDC and DAI



Buy with card or
bank transfer



Trade tokens in a
tap



BTC up to

8.5%

p.a.



ETH up to

8.5%

p.a.



USDC up to

14%

p.a.

See how much you can earn
See how much you can earn

BLOCKFI INTEREST ACCOUNT

Earn more from your crypto

Your crypto can earn up to 9.5% APY in crypto with a BlockFi Interest Account (BIA). Interest accrues daily and is paid monthly. There are no hidden fees, no minimum balances, and no reason to wait.

[Open your account](#) →

 USDC

Crypto

50,000

Crypto Amount

1 years



\$ **4,396.11**

USD Interest per year

 **4,396.11**

Total Crypto Earnings

\$ **4,396.11**

Total USD Interest over 1 years

Best High-Yield Online Savings Accounts

Bank/Institution	NerdWallet Rating [?]	APY	Bonus
 <p>Marcus by Goldman Sachs Online Savings Account</p>	★ 5.0 /5	0.50% [?] With \$0 minimum balance	N/A
 <p>Discover Bank Online Savings</p>	★ 5.0 /5	0.40% [?] With \$0 minimum balance	\$200 [?] Requirements to qualify
 <p>Synchrony Bank High Yield Savings</p>	★ 4.5 /5	0.50% [?] With \$0 minimum balance	N/A

Questions?

So, what's the take away?

1994



2:12



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....

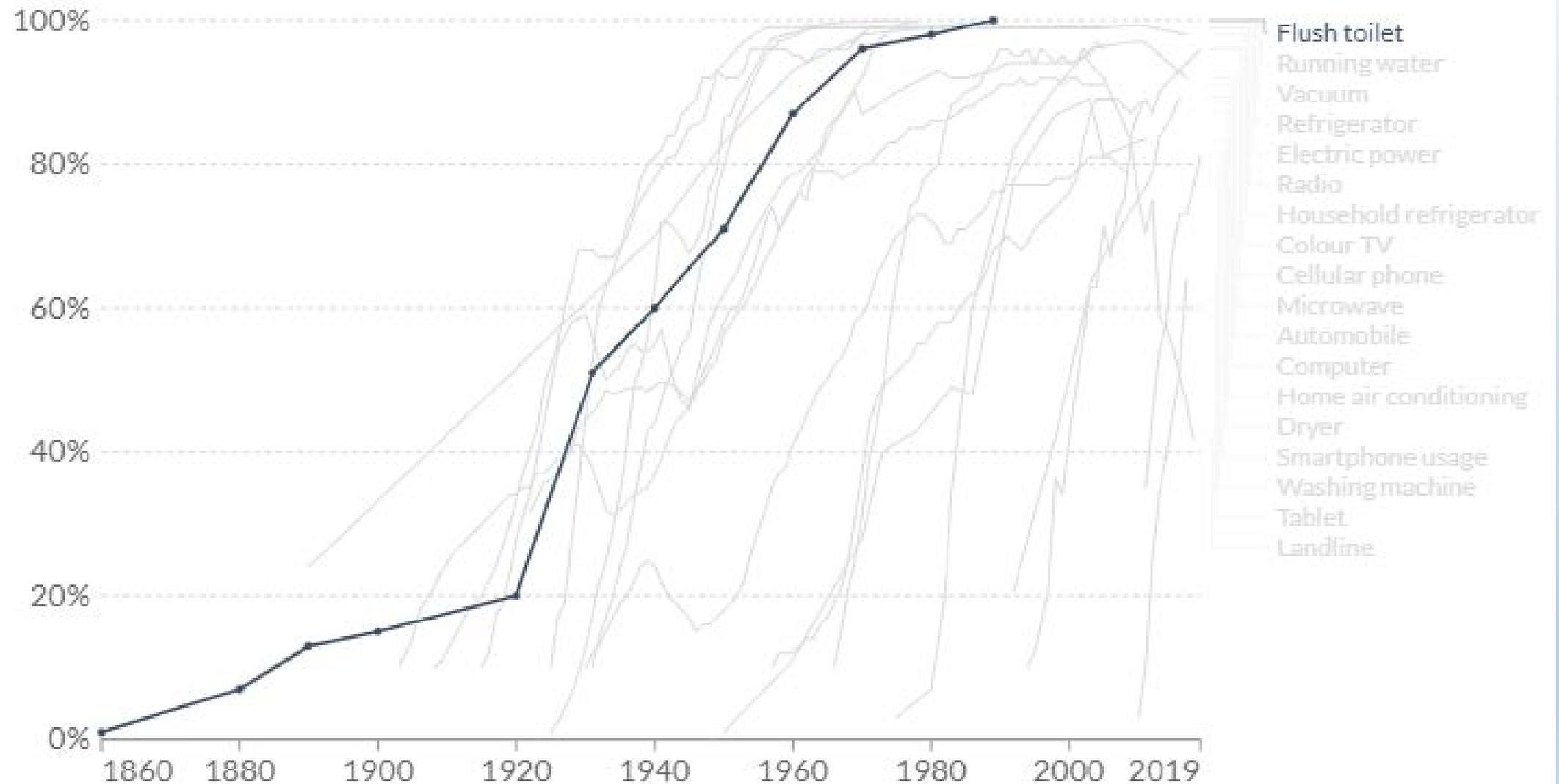
When you hear “cryptocurrency”it is less about transactional currency, and more about the rise of decentralized applications, B2B and P2P payments, and a mental shift to ascribe real world value to this new class of digital assets.

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



Share of US households using specific technologies, 1860 to 2019

+ Add technology



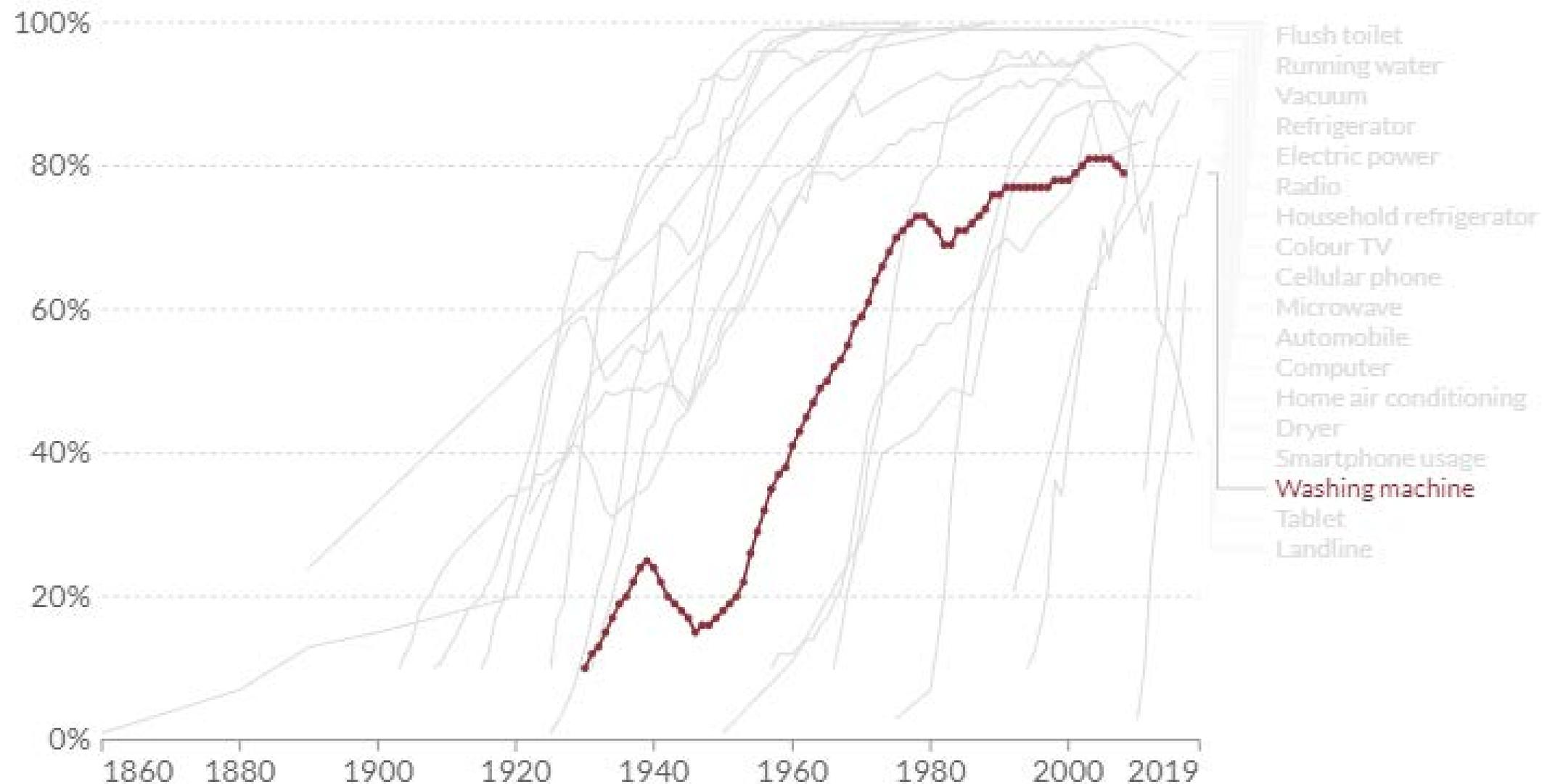
Source: Comin and Hobijn (2004) and others

Note: See the sources tab for definitions of adoption rates by technology.

OurWorldInData.org/technology-adoption/ • CC BY

Share of US households using specific technologies, 1860 to 2019

[+](#) Add technology



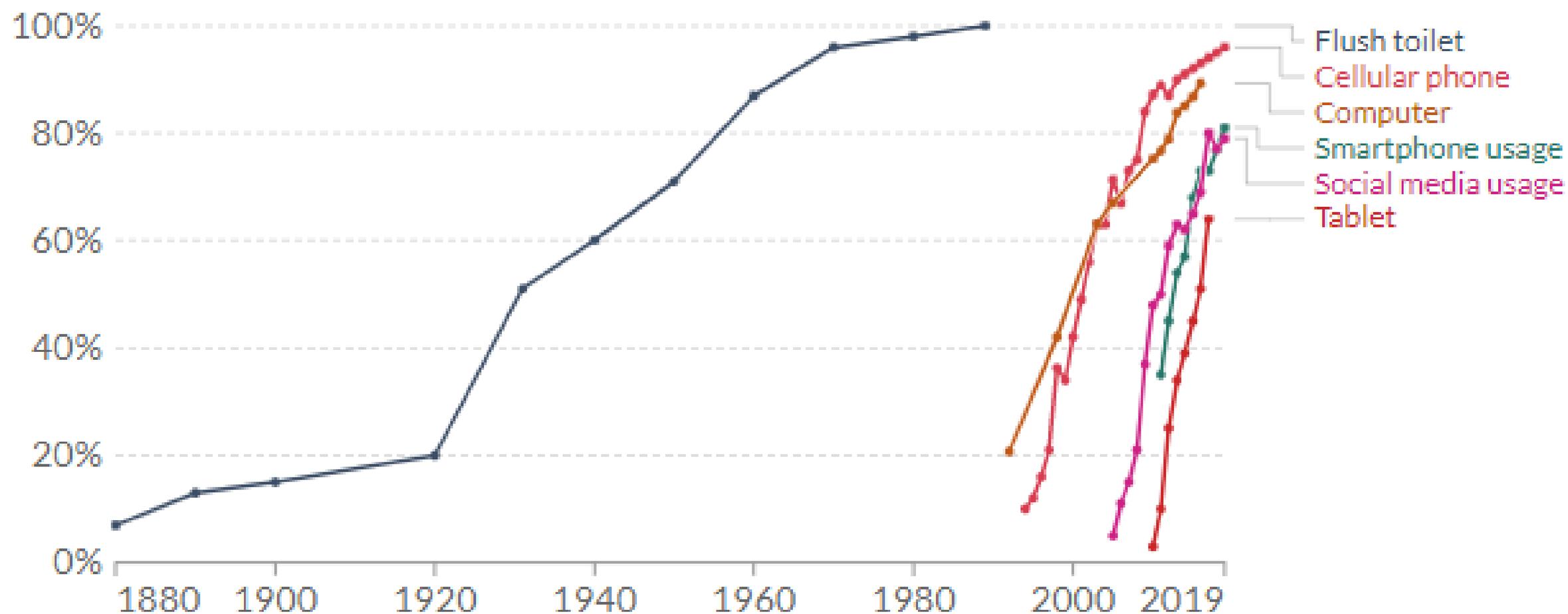
Source: Comin and Hobijn (2004) and others

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Share of US households using specific technologies, 1880 to 2019

[+](#) Add technology



Questions?

The End