



BLOCKCHAIN
RESEARCH
INSTITUTE

Digital Asset Revolution

How Blockchain is Revolutionizing Money,
Markets and More

MASIC Annual Investment Forum 2022

Riyadh, Saudi Arabia

Sunday, February 6th, 2022

Alex Tapscott | Twitter: @alextapscott

TECHNOLOGIES OF THE SECOND ERA OF THE DIGITAL AGE



Machine
Learning



Animating the
Physical World



Autonomous
Vehicles



Distributed
Energy



Technology in
our Bodies



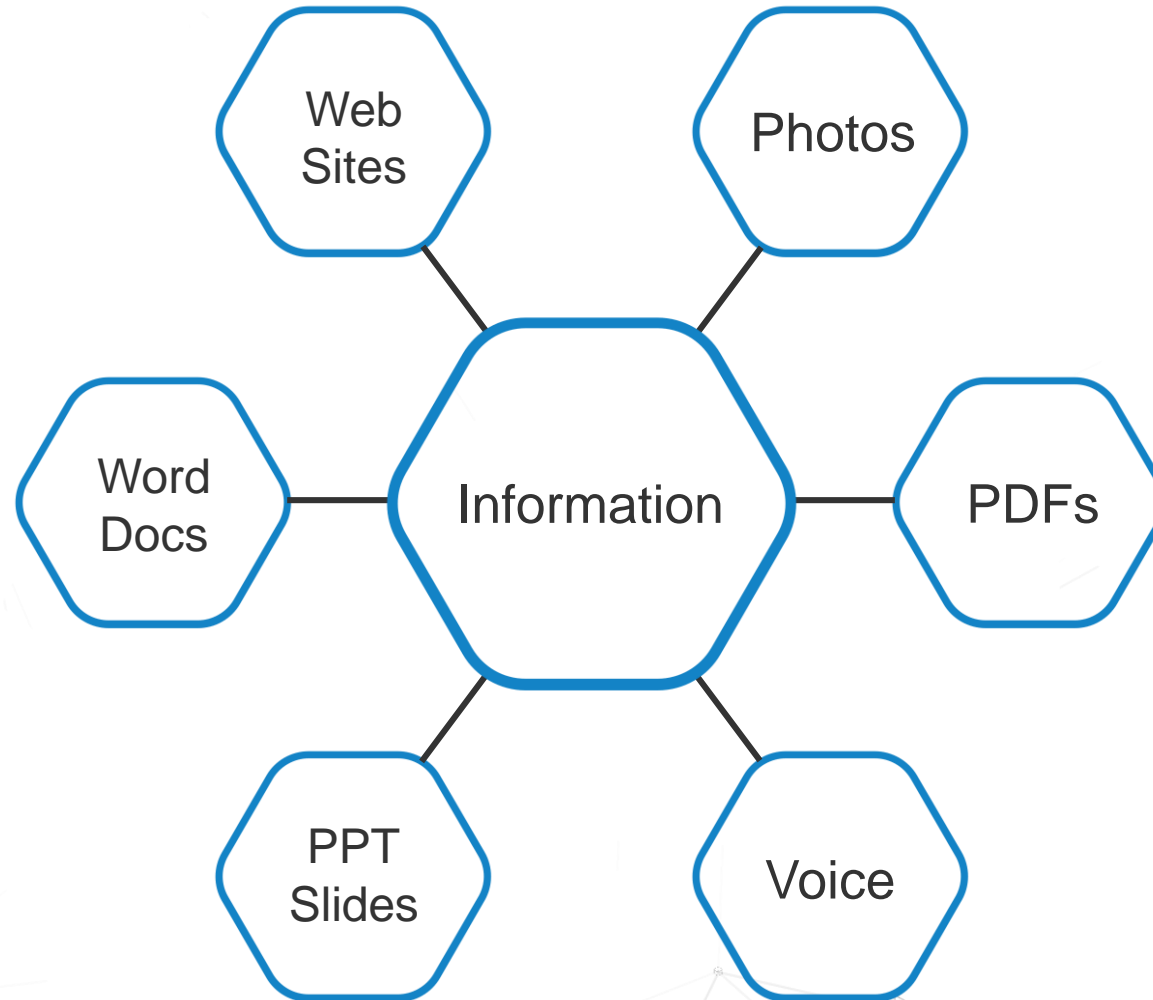
VR and AR



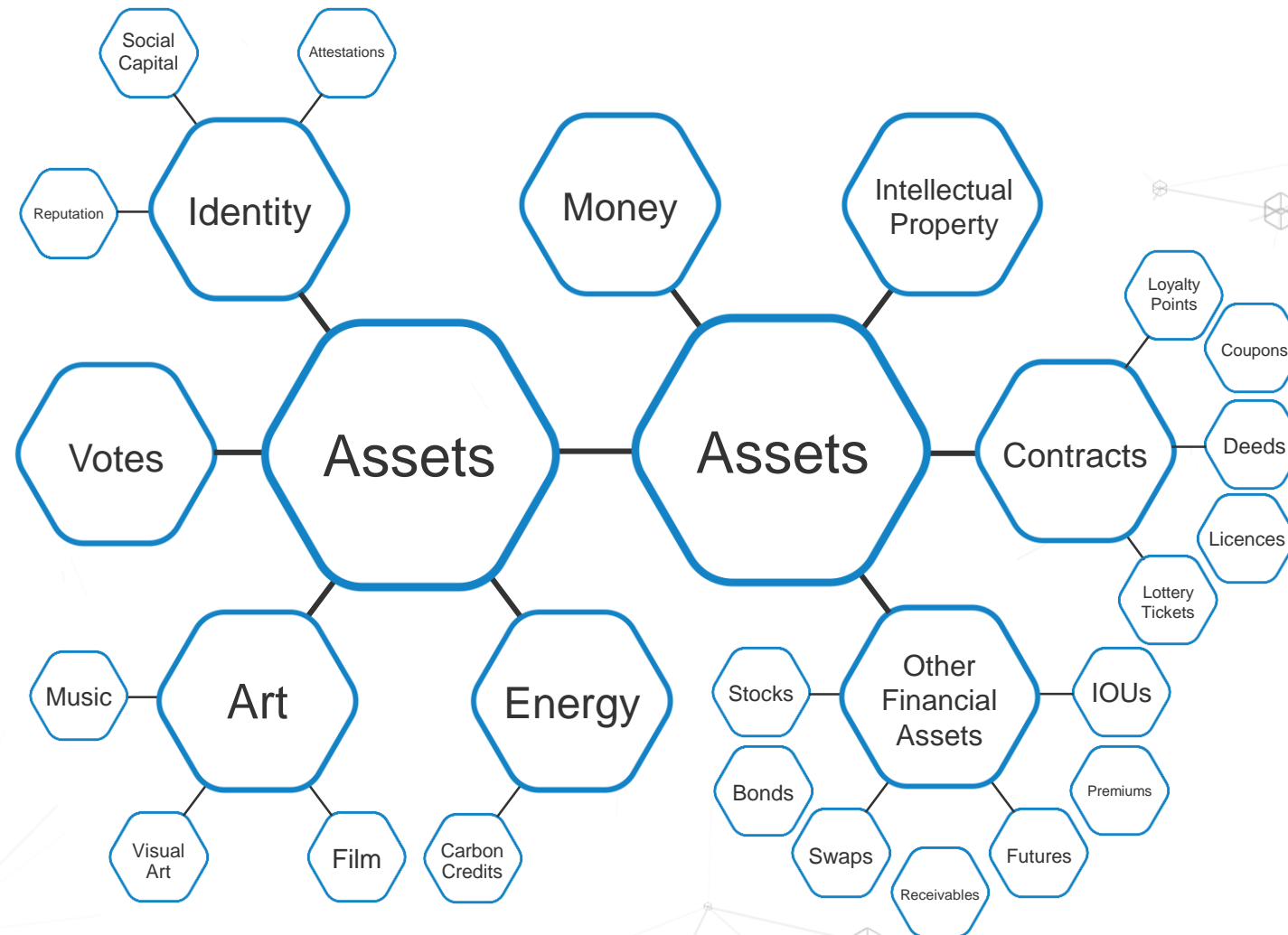
Drones &
Robotics

BLOCKCHAIN

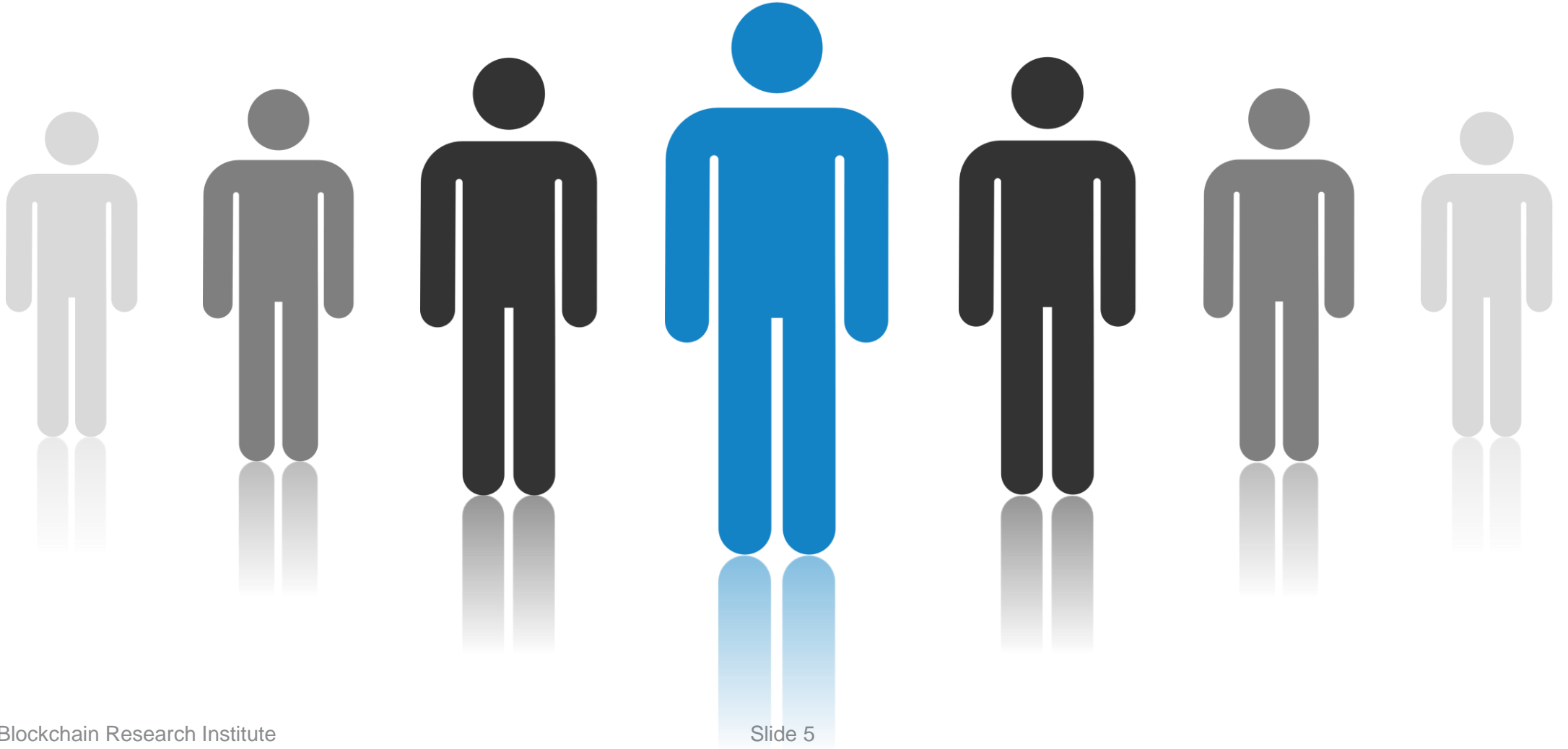
THE INTERNET OF INFORMATION



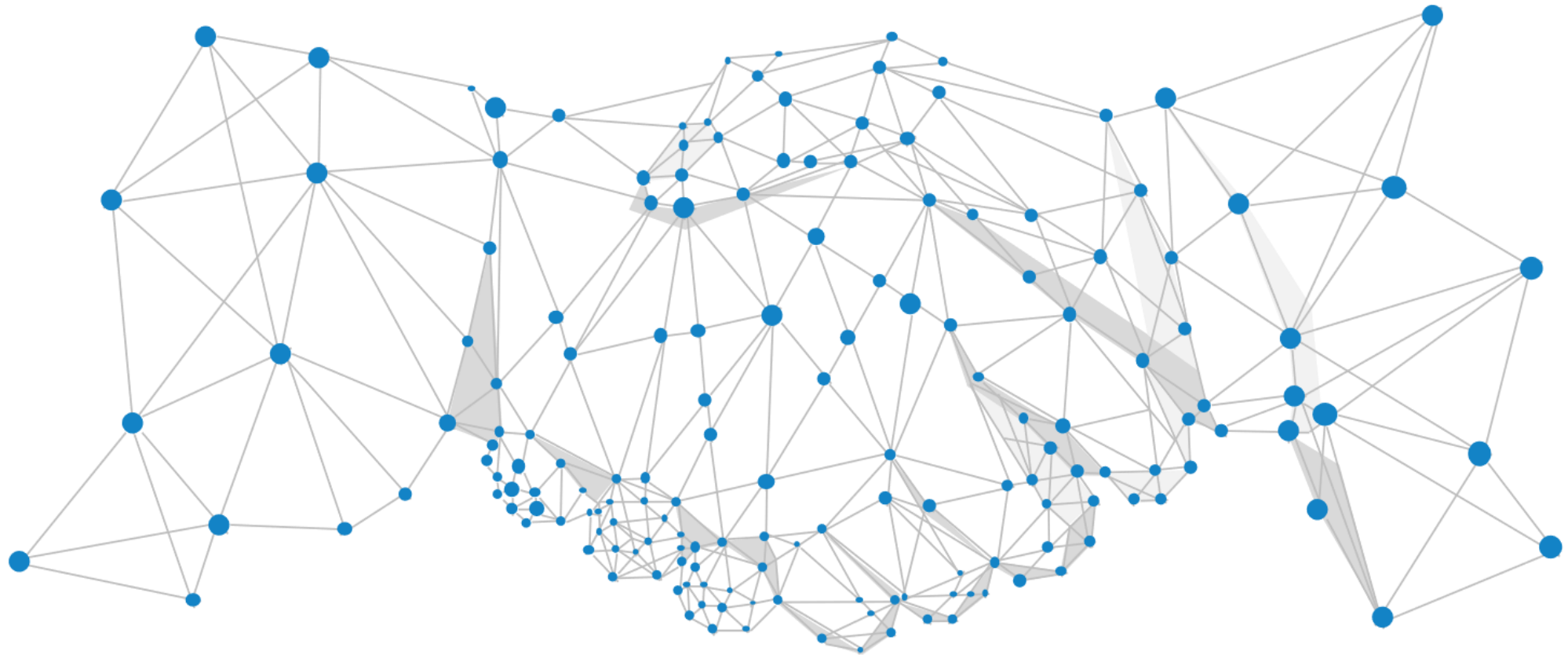
THE INTERNET OF VALUE



THE MIDDLEMAN



WEB3: THE TRUST PROTOCOL



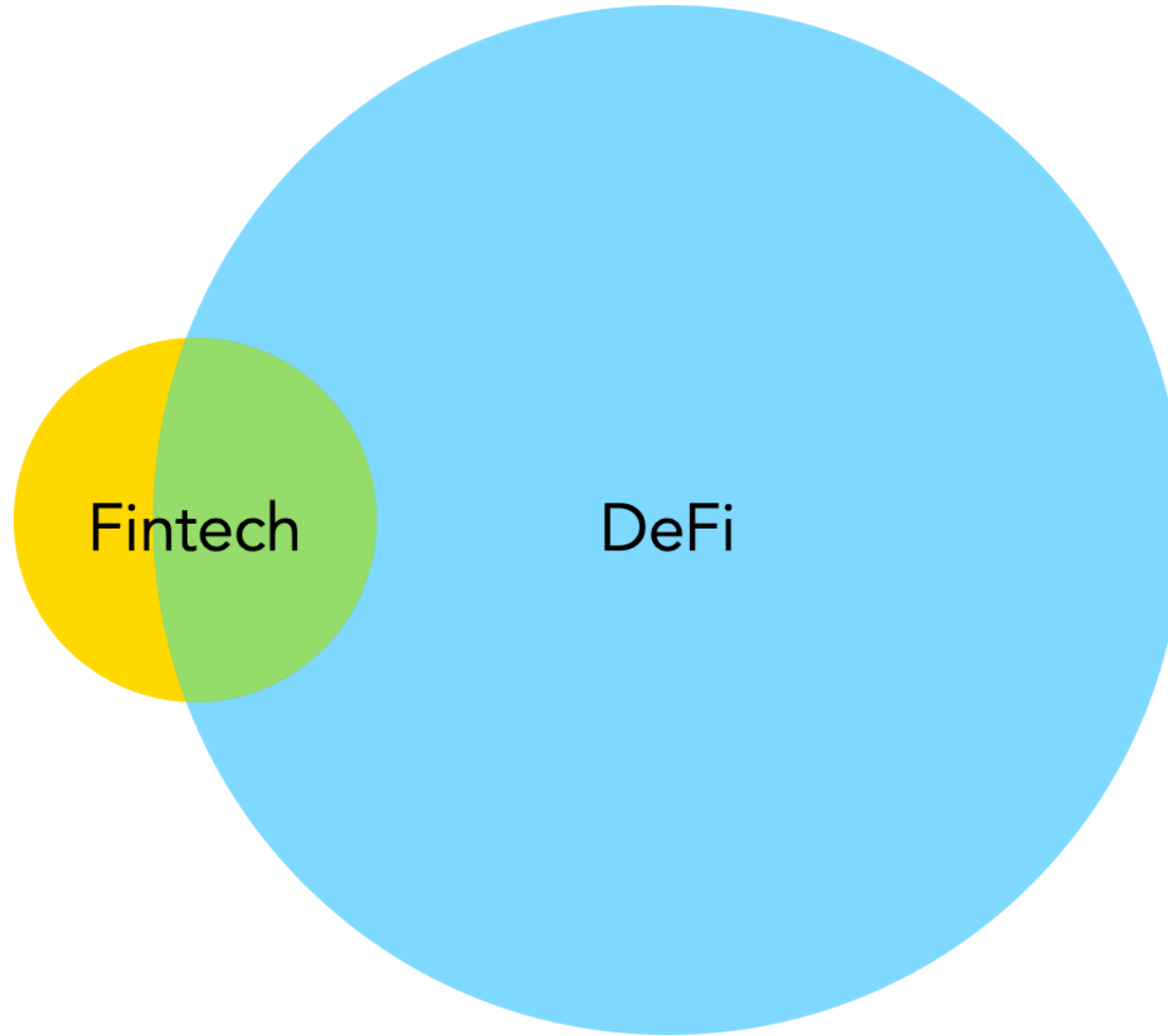
“The Blind Men and the Elephant”



RETHINKING THE FINANCIAL SERVICES INDUSTRY



DECENTRALIZED FINANCE (DEFI) WILL ECLIPSE FINTECH



SMART CONTRACTS

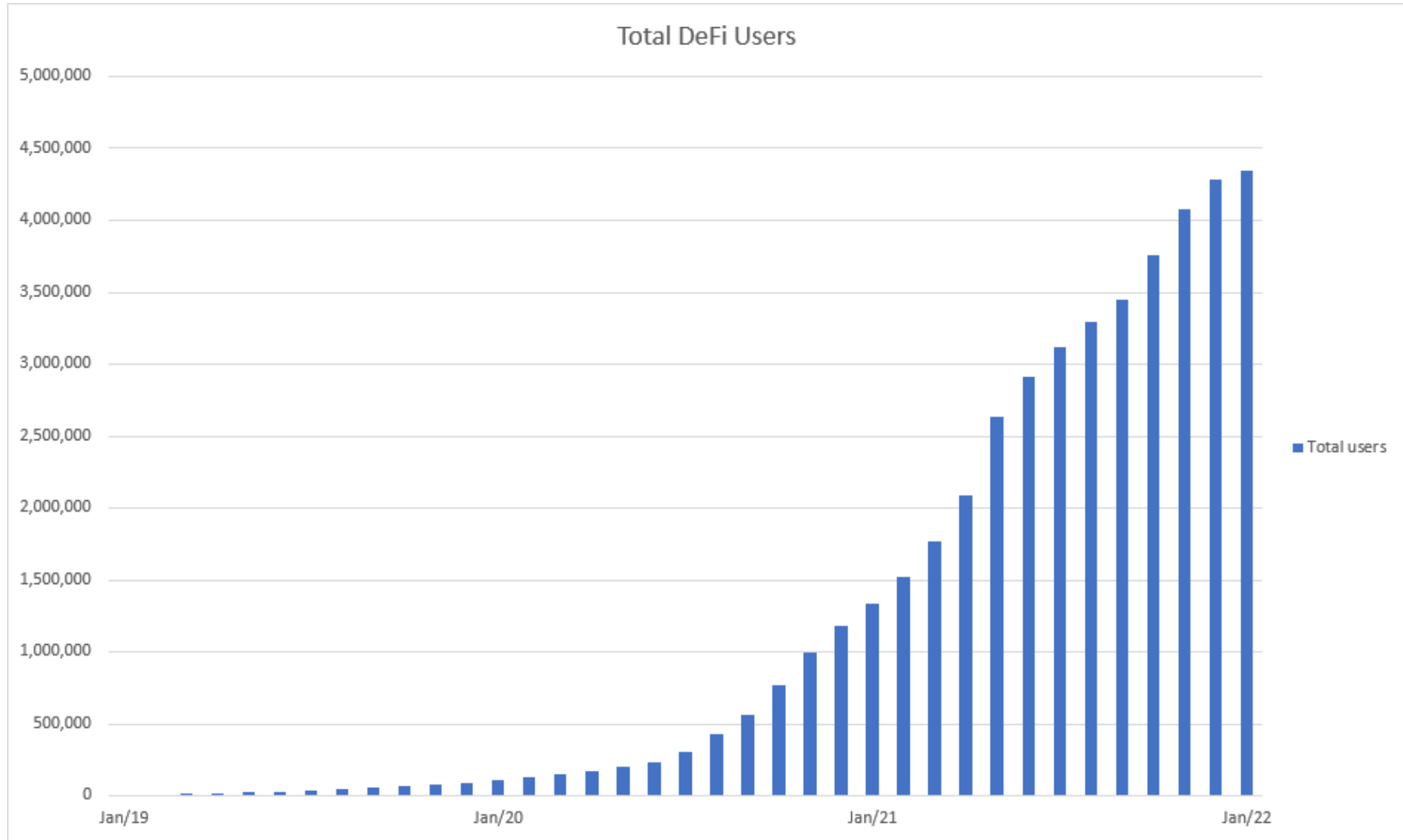


PARTY A

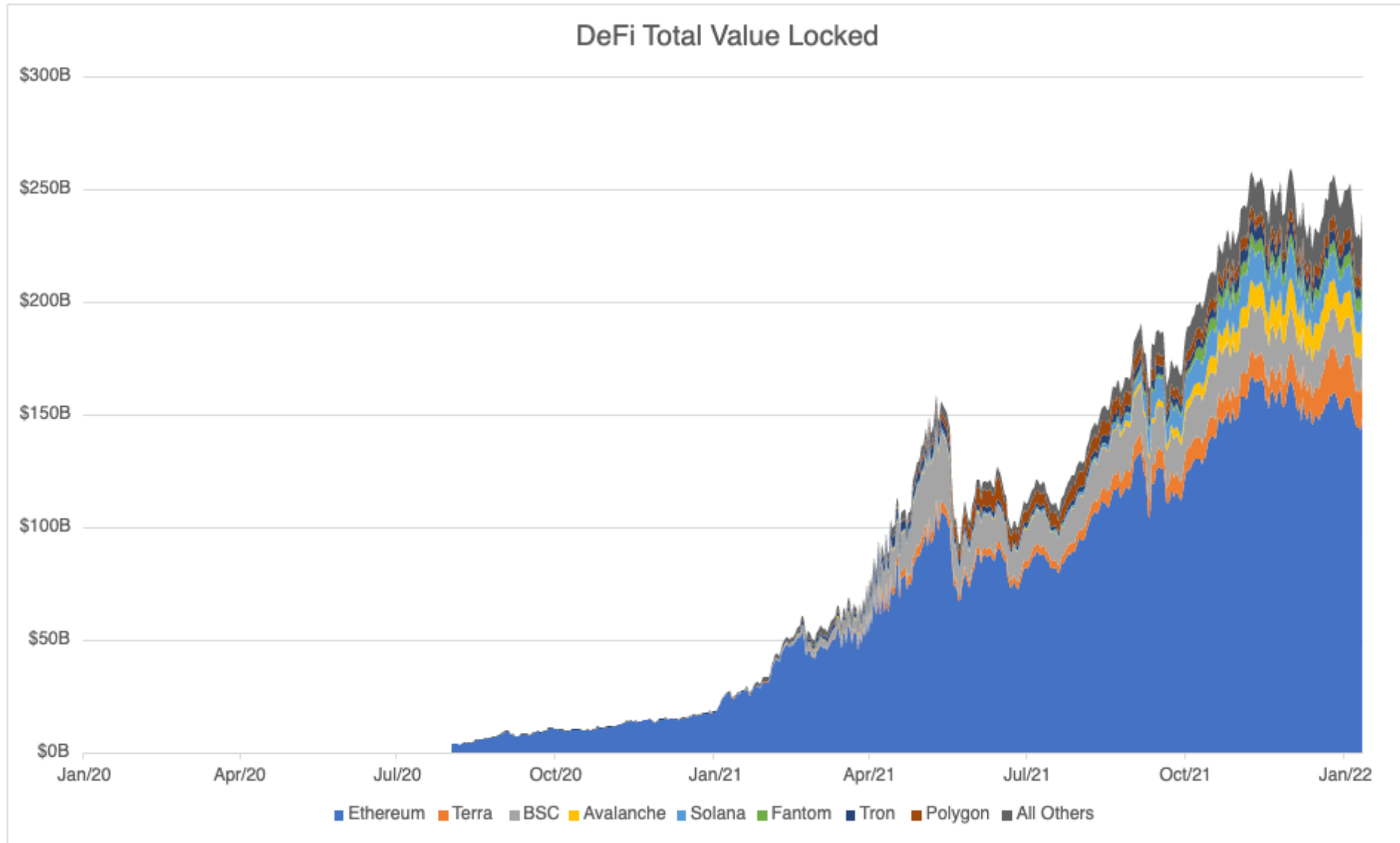


PARTY B

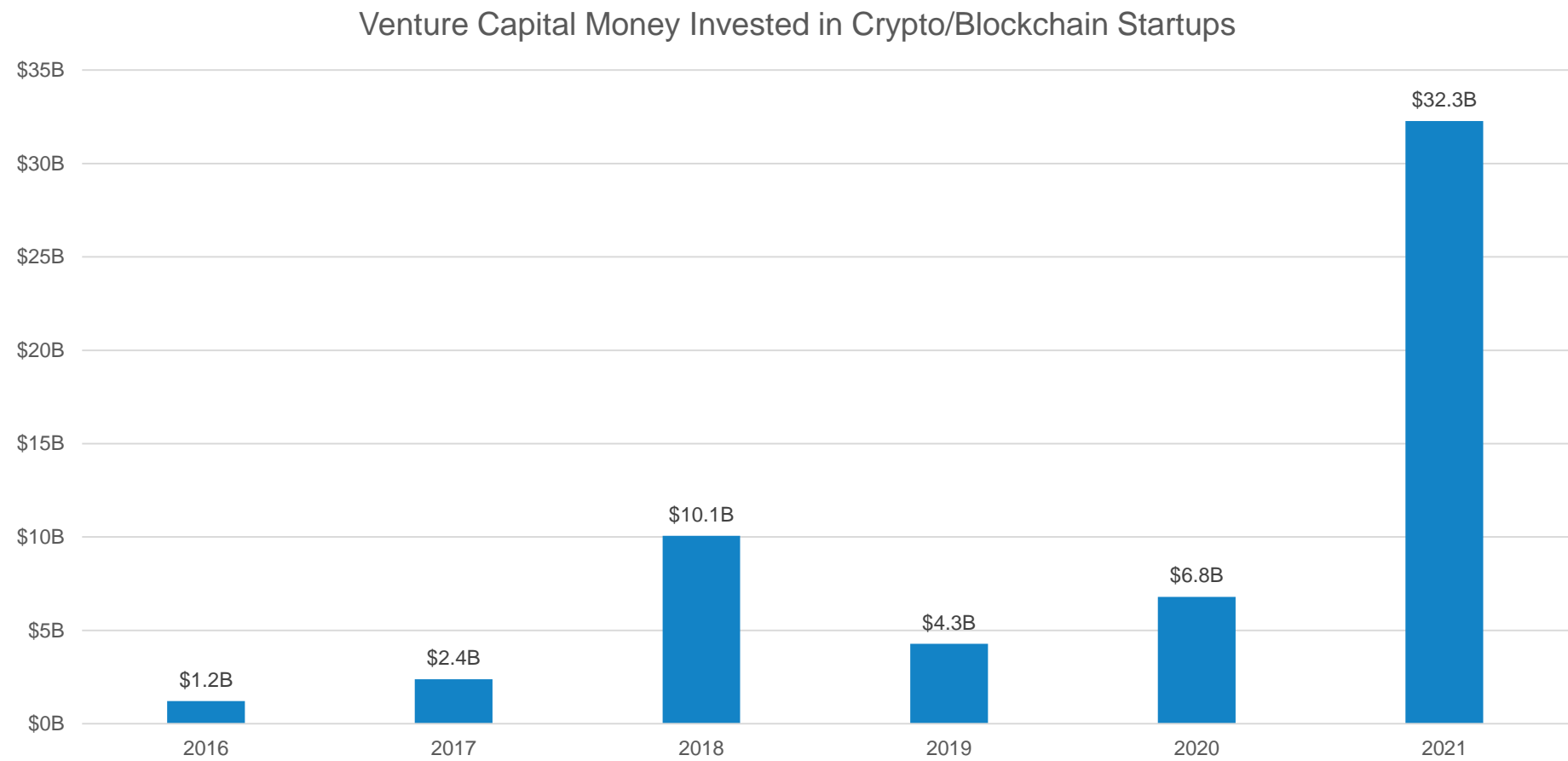
2021 in Review: DeFi User Growth Explodes



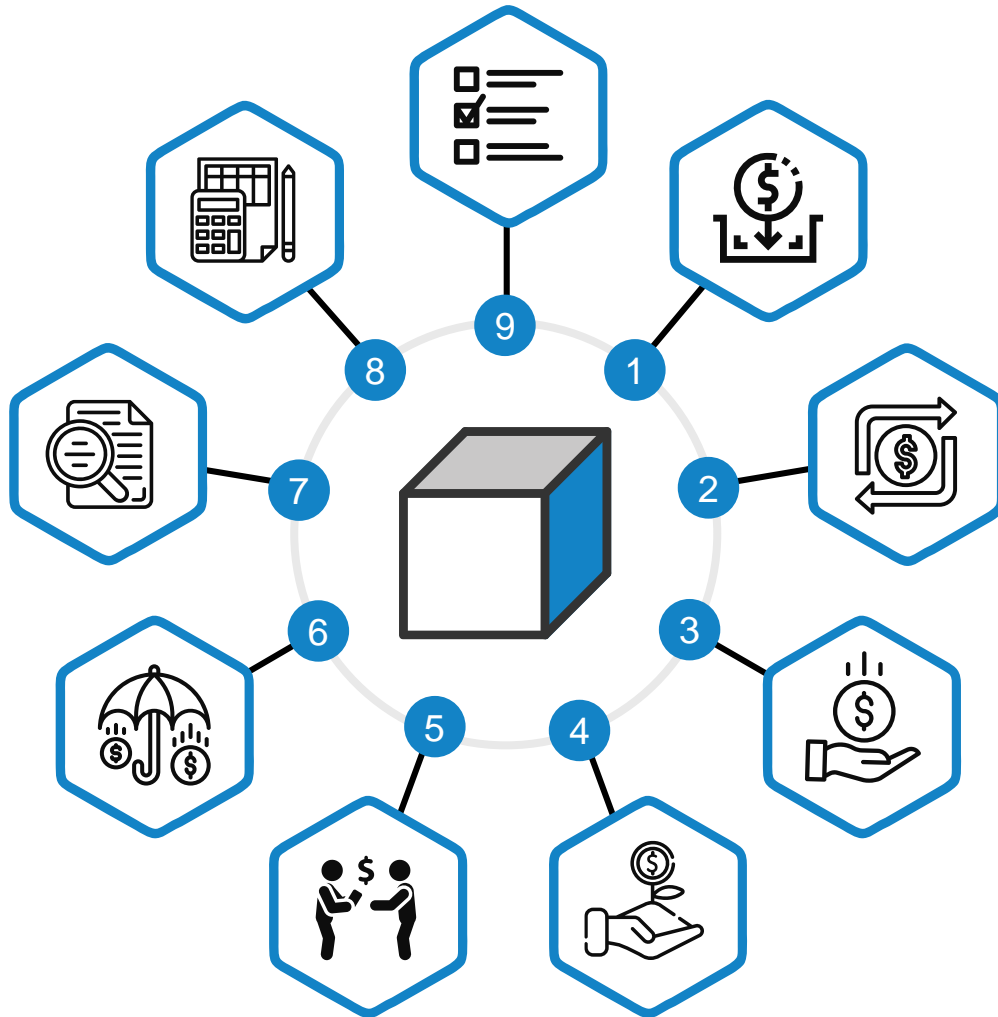
Billion USD



2021 in Review: VC Investment in Crypto Smashes Records

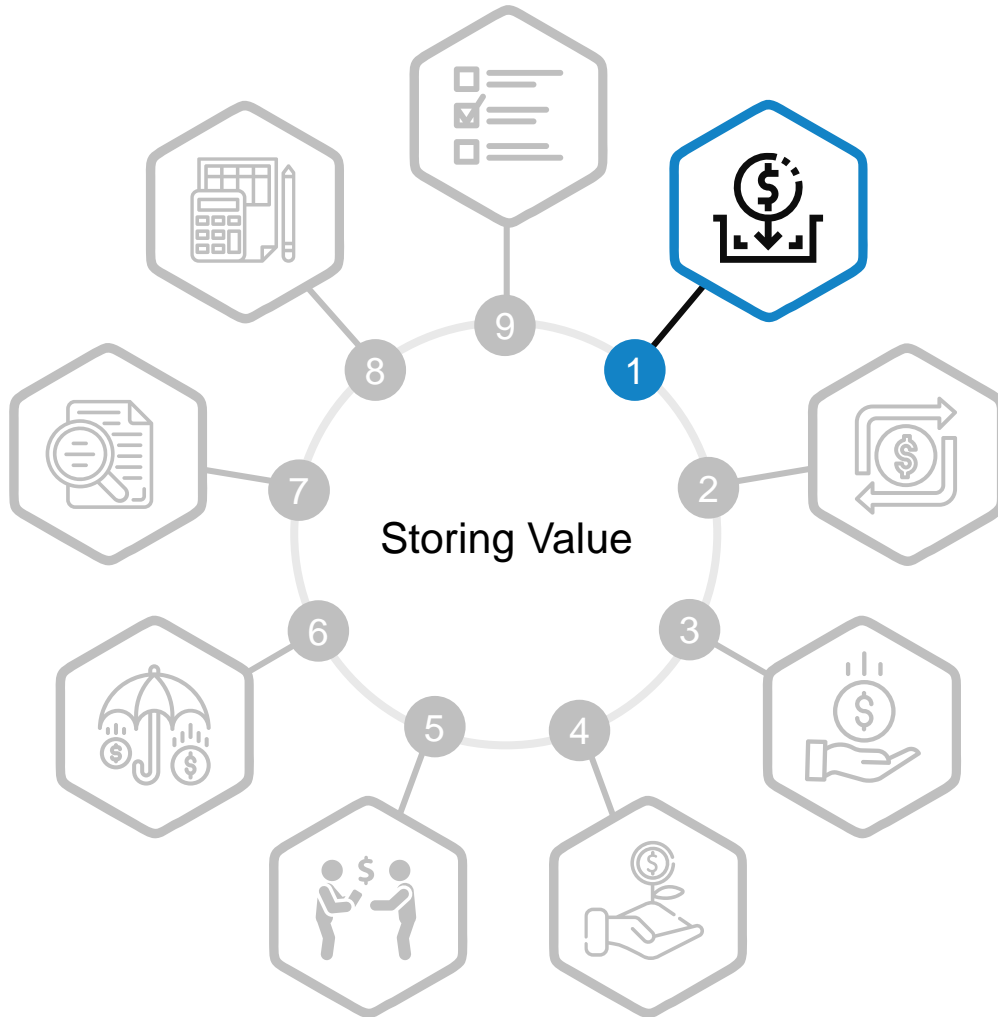


THE GOLDEN NINE: DeFi Transformations to Financial Services



1. Storing value
2. Moving value
3. Lending value
4. Funding and investing
5. Exchanging value
6. Insuring value and managing risk
7. Analyzing value
8. Accounting for and auditing value
9. Authenticating identity

1. STORING VALUE



BLOCKCHAIN IMPACT

Multi-signature capability for institutions. Non-custodian wallet to access DeFi. Hardware wallets let individuals be their own bank. Trillions of Dollars are held these ways

EXAMPLES

- Gnosis safe
- Hardware wallets (e.g. Ledger)
- DAO treasuries

STORING VALUE

DIGITAL WALLETS FOR DIGITAL ASSETS

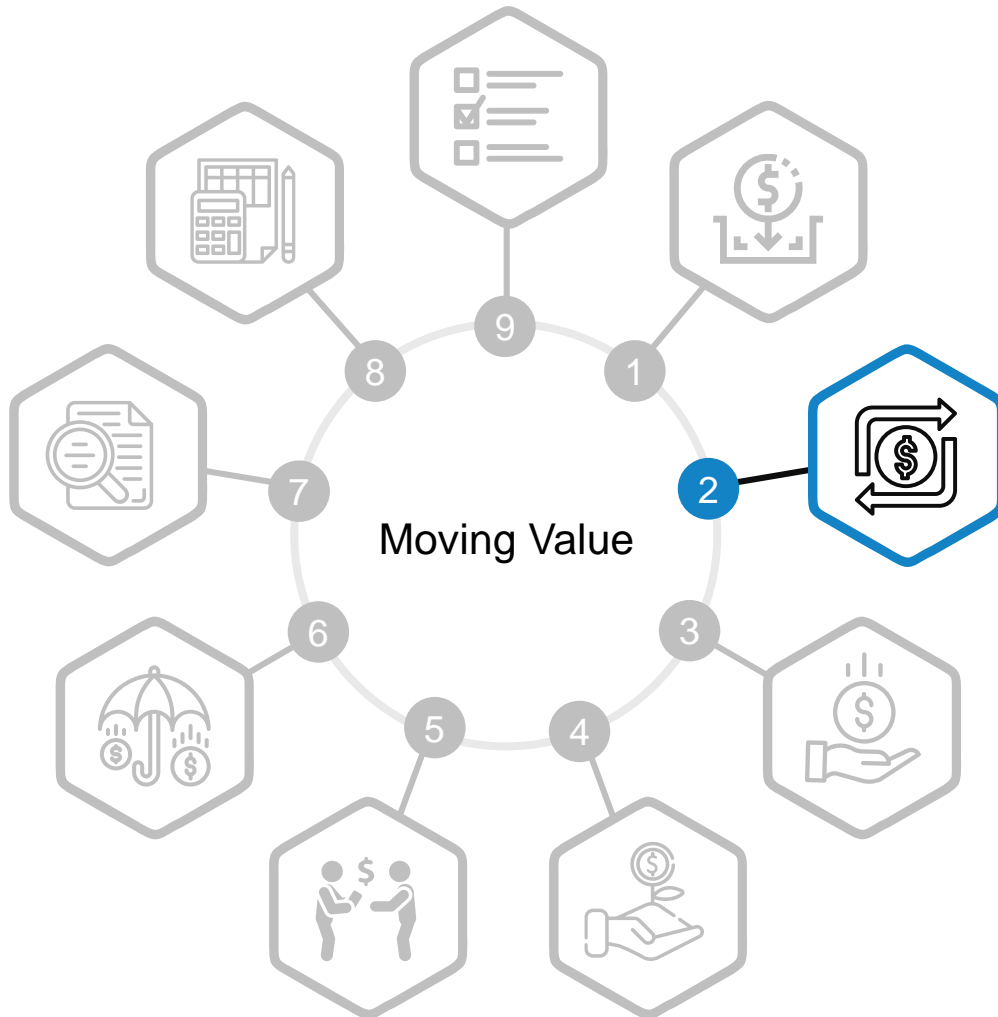


Image Source: Daily Fintech
<https://dailyfintech.com/2020/02/10/50176/>

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Slide 16

2. MOVING VALUE



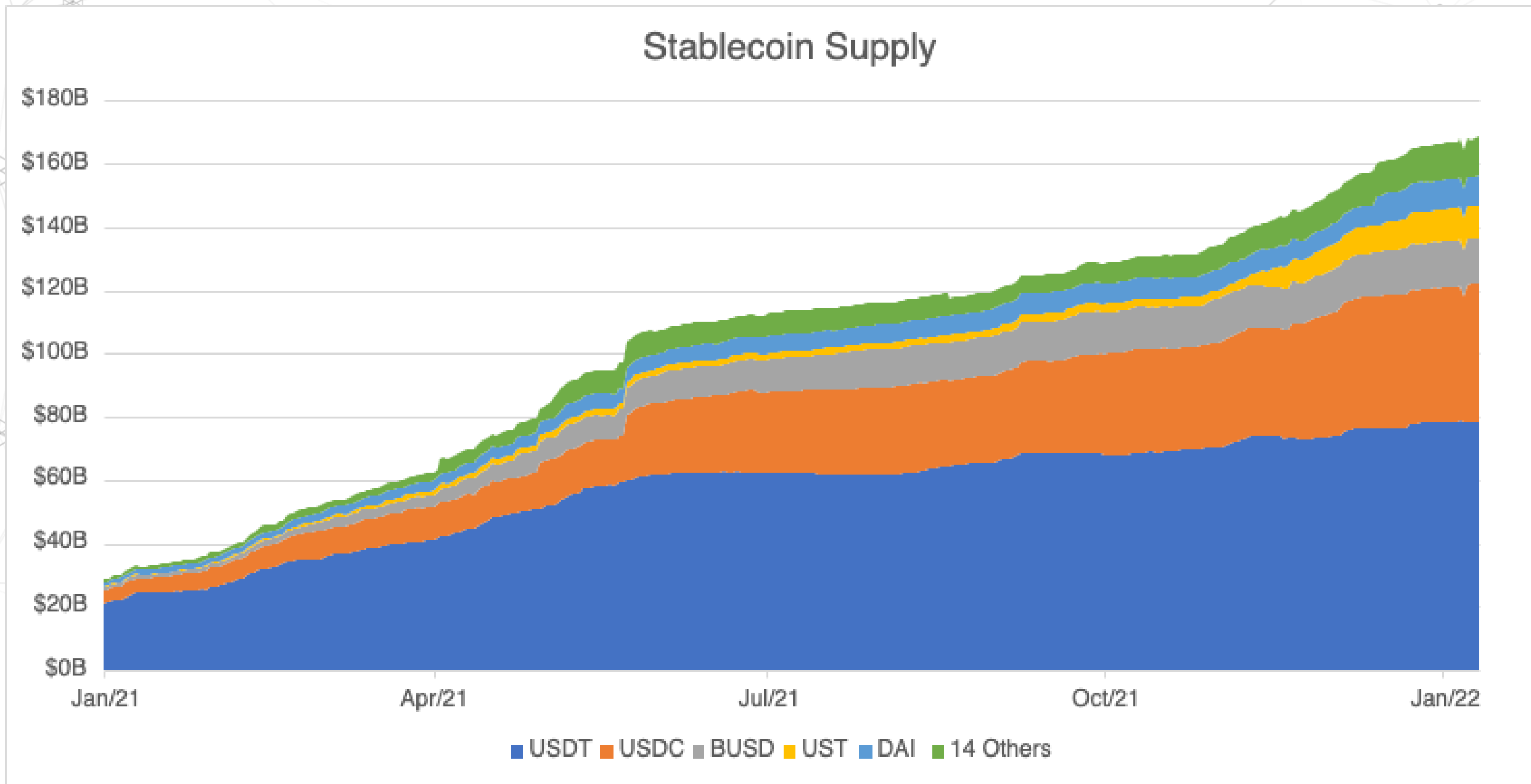
BLOCKCHAIN IMPACT

Stablecoins, cryptoassets and blockchain-enabled payment apps will completely bypass banks, Venmo, SWIFT, and other interbank settlement systems.

EXAMPLES

- MakerDAO's DAI
- Terra Luna's UST
- Bitcoin
- USDC
- USDT

In 2021, the Stablecoin Market Grows 5x+



2. MOVING VALUE

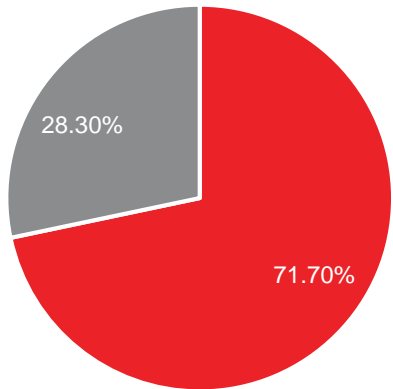
ESCAPING
FIAT
CURRENCY
DEVALUATION

"Turks Pile Into Bitcoin and Tether to Escape Plunging Lira" – Wall Street Journal, January 12th, 2022

Global crypto adoption, led by Vietnam, India, Pakistan, Ukraine, and Kenya, rose by **881%** in 2021.

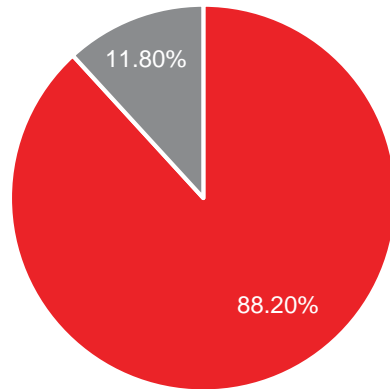
Regional Levels of Financial Inclusion

Saudi Arabia



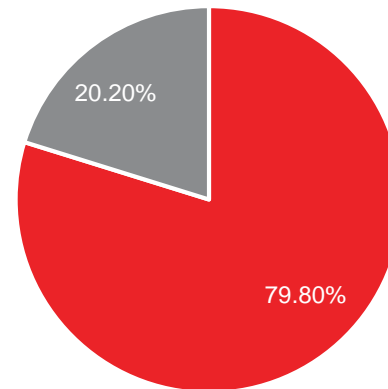
■ Bank Account ■ No Bank Account

United Arab Emirates



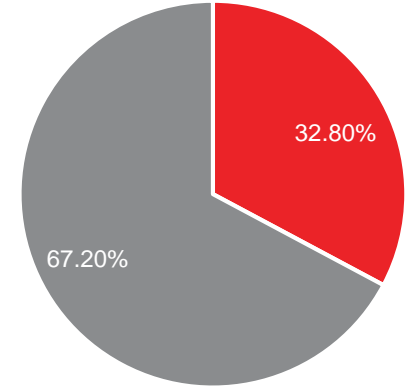
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Kuwait



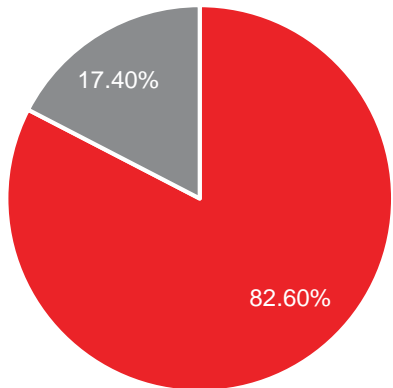
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Egypt



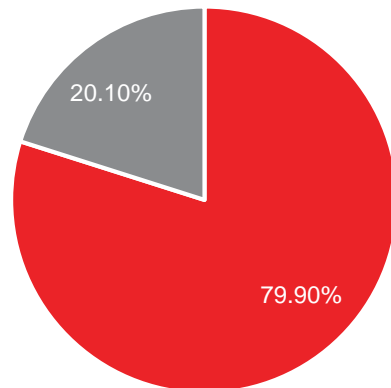
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Bahrain



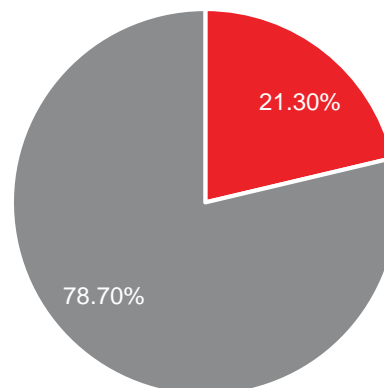
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India



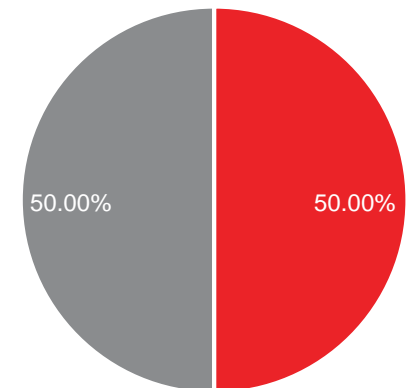
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Pakistan



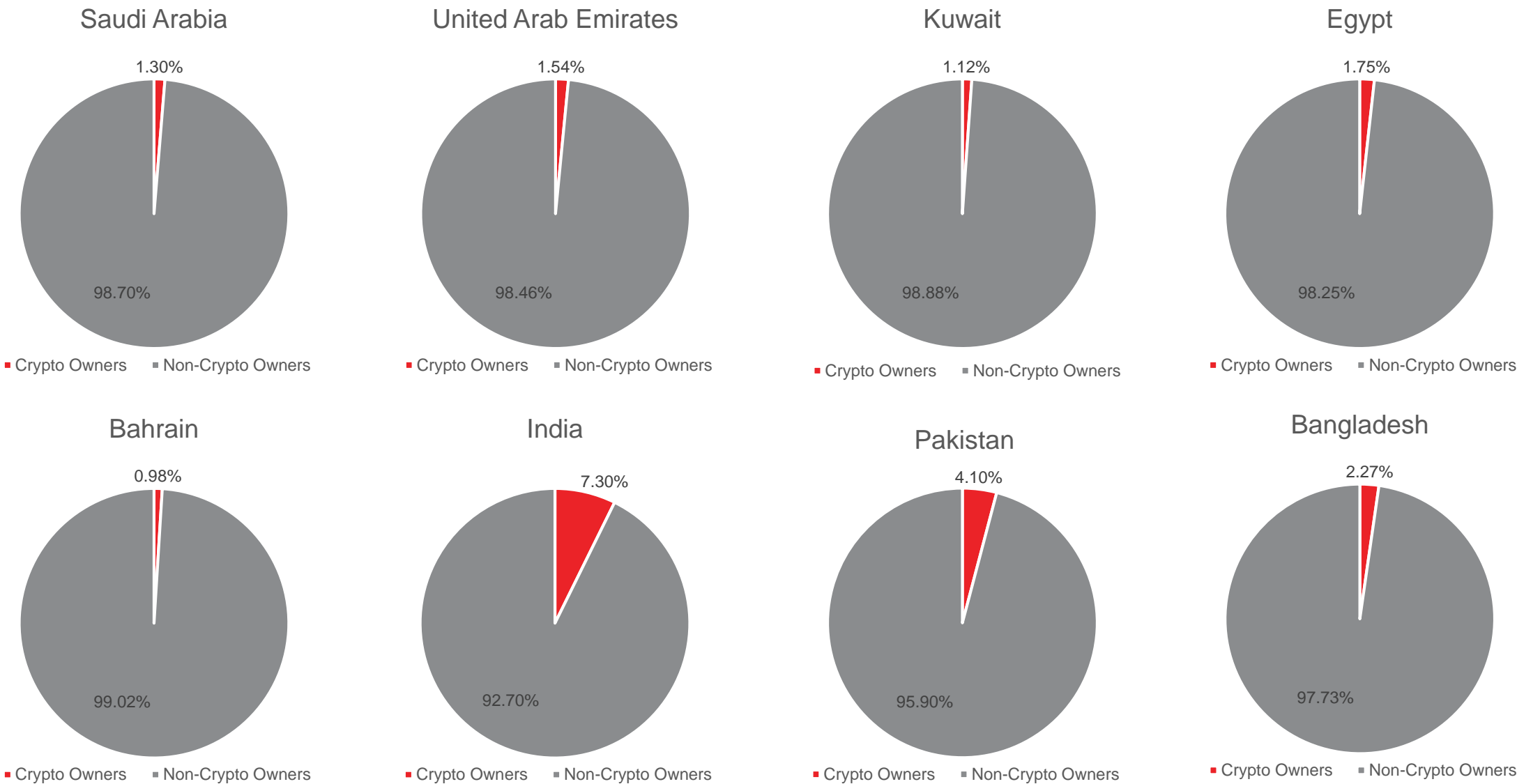
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Bangladesh

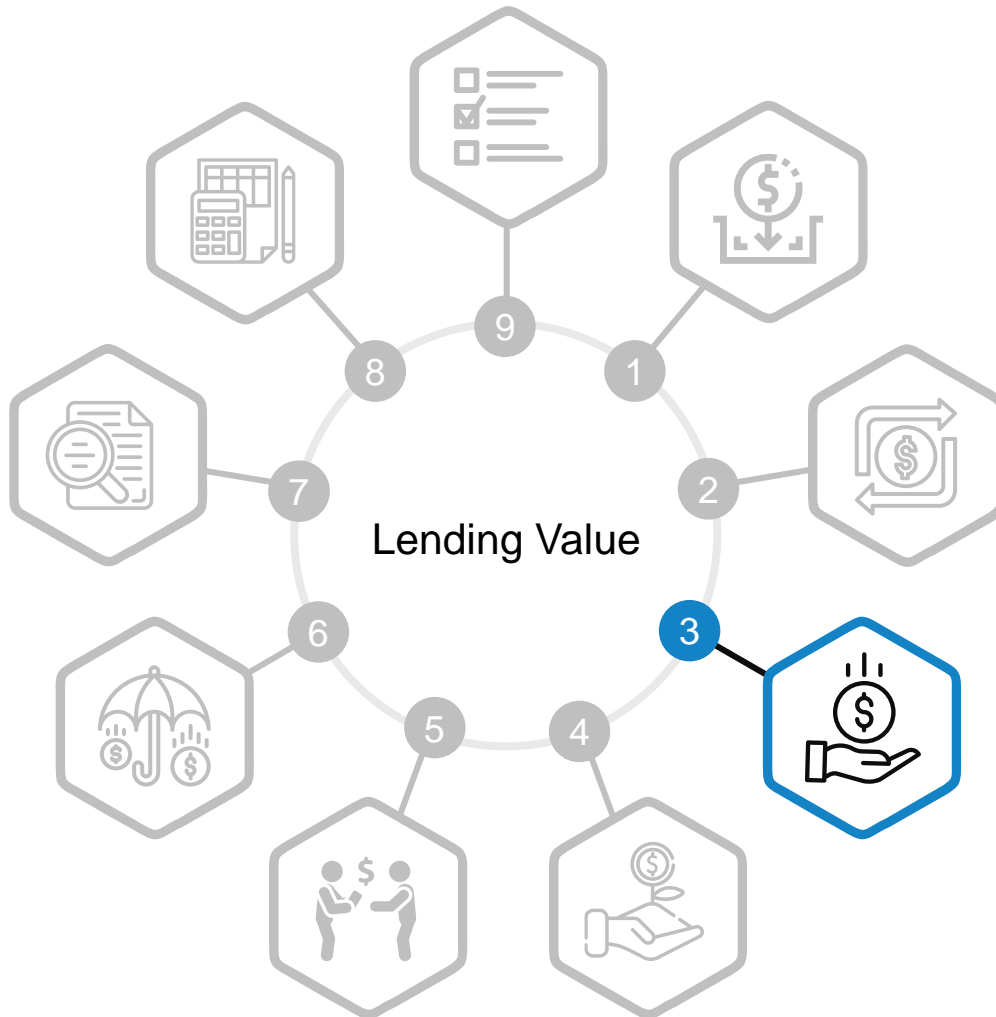


■ Bank Account ■ No Bank Account

Regional Levels of Crypto Ownership



3. LENDING VALUE



BLOCKCHAIN IMPACT

Pooled lending augments savings accounts with superior yields. Blockchain-based reputation scores broaden access for unbanked and the entrepreneurial.

EXAMPLES

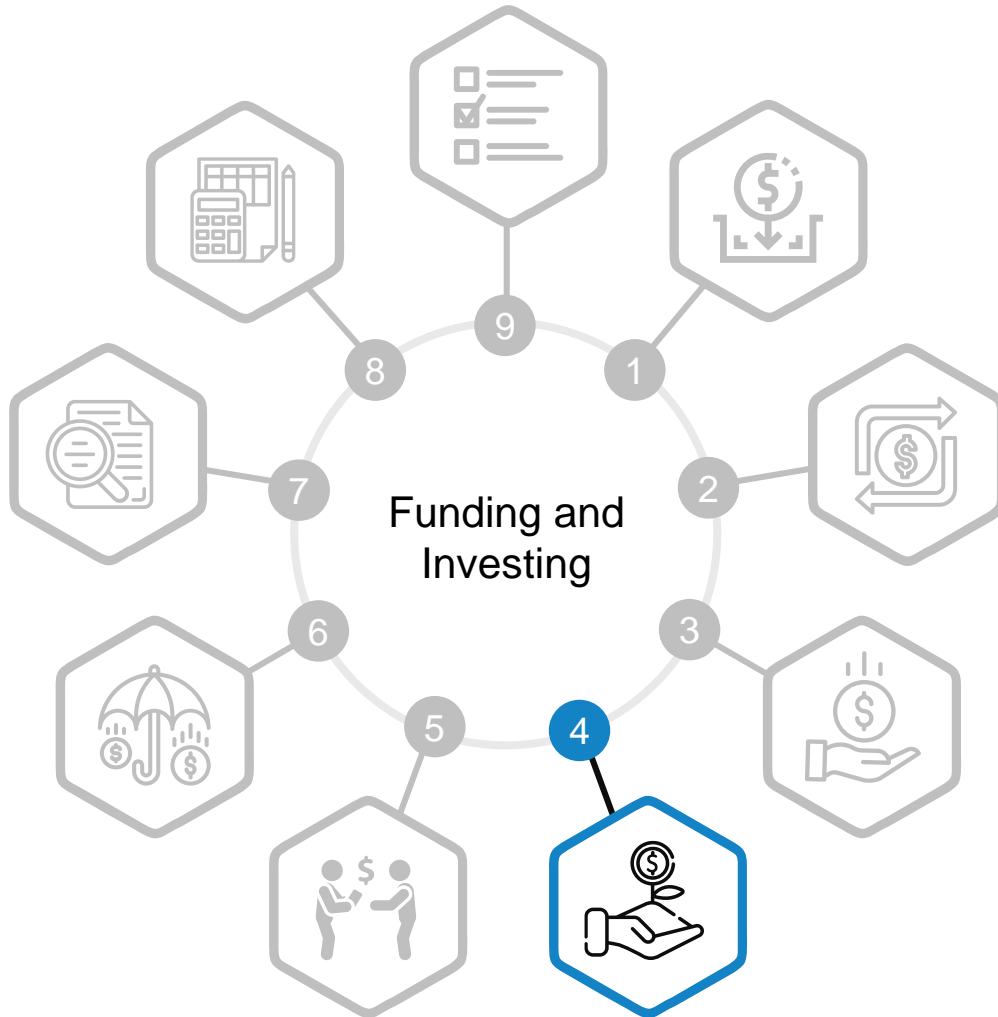
- Pooled lending such as Compound and AAVE

AAVE: A “LENDING PROTOCOL”

From \$1 billion to \$20 billion in 11 months



4. FUNDING AND INVESTING



BLOCKCHAIN IMPACT

Investment aggregators such as YFI and Rari could ultimately disintermediate investment advisors, mutual funds, exchange traded funds, and robo-advisors.

EXAMPLES

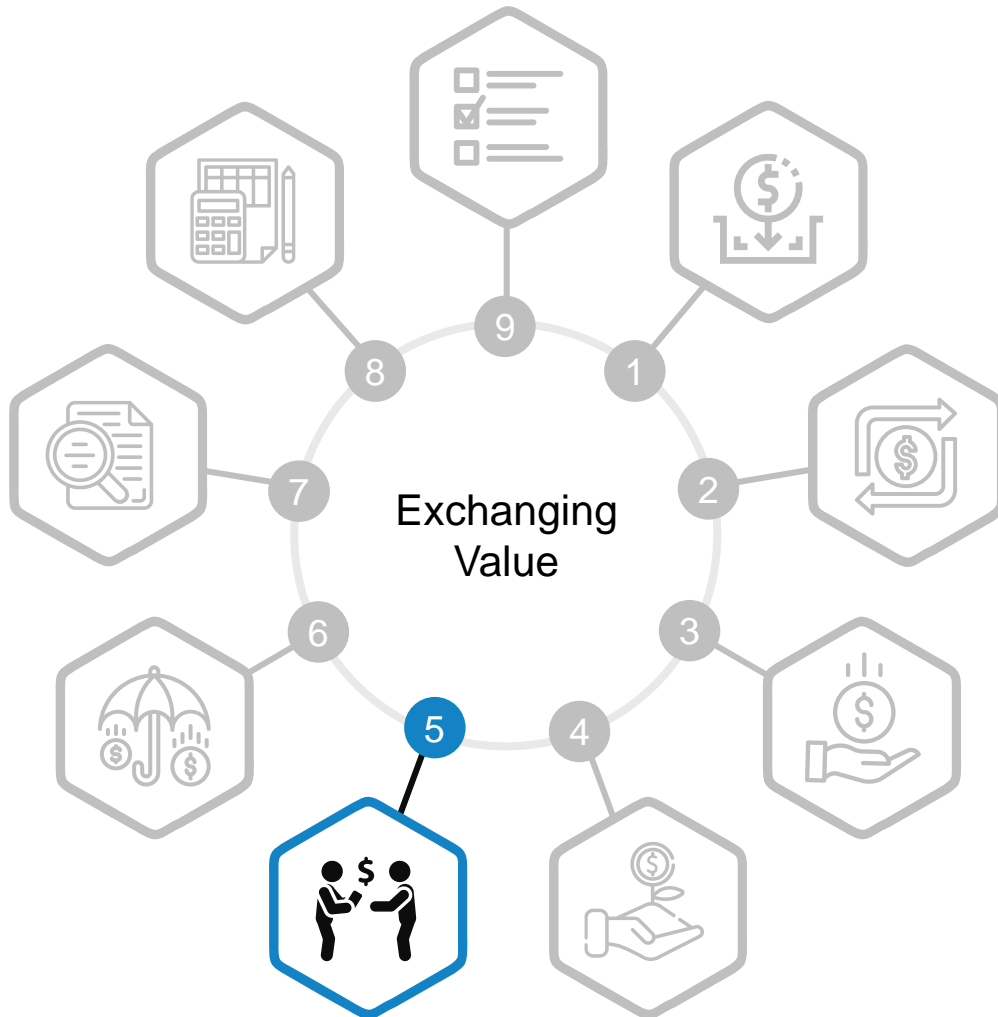
- Investment aggregators such as YFI, Rari, DeFi ETFs
- Index Co-op

YFI: A “YIELD AGGREGATOR”

From \$500 million to \$7 billion in 11 months



5. EXCHANGING VALUE



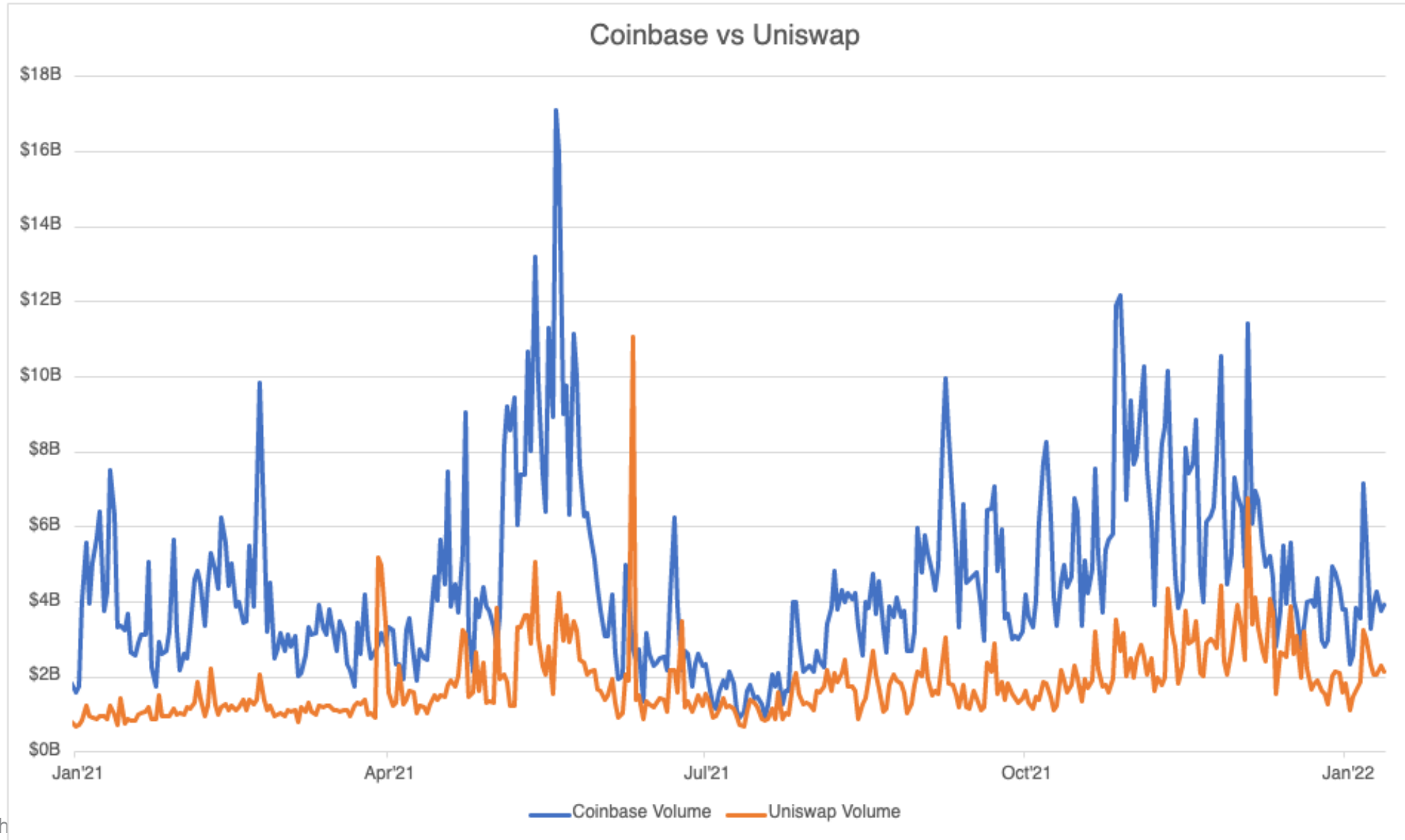
BLOCKCHAIN IMPACT

Decentralized exchanges such as Uniswap are competing with centralized exchanges for liquidity and dollar volumes and will be the model for all exchanges, including today's centralized stock exchanges.

EXAMPLES

- Decentralized exchanges such as Uniswap, Sushiswap, dYdX and QuickSwap

Decentralizing the Exchange of Financial Assets



A NEW TAXONOMY FOR CRYPTOASSETS



Coming soon...

Digital Asset Revolution Q2/22

BLOCKCHAIN RESEARCH INSTITUTE ENTERPRISE SERIES

"One or two line quote to go here."
—QUOTE AUTHOR, Quote author's designation

DIGITAL ASSET REVOLUTION

How **BLOCKCHAIN** Is
Decentralizing Finance and
Disrupting Wall Street



Edited with a preface by
ALEX TAPSCOTT
Co-Founder, Blockchain Research Institute

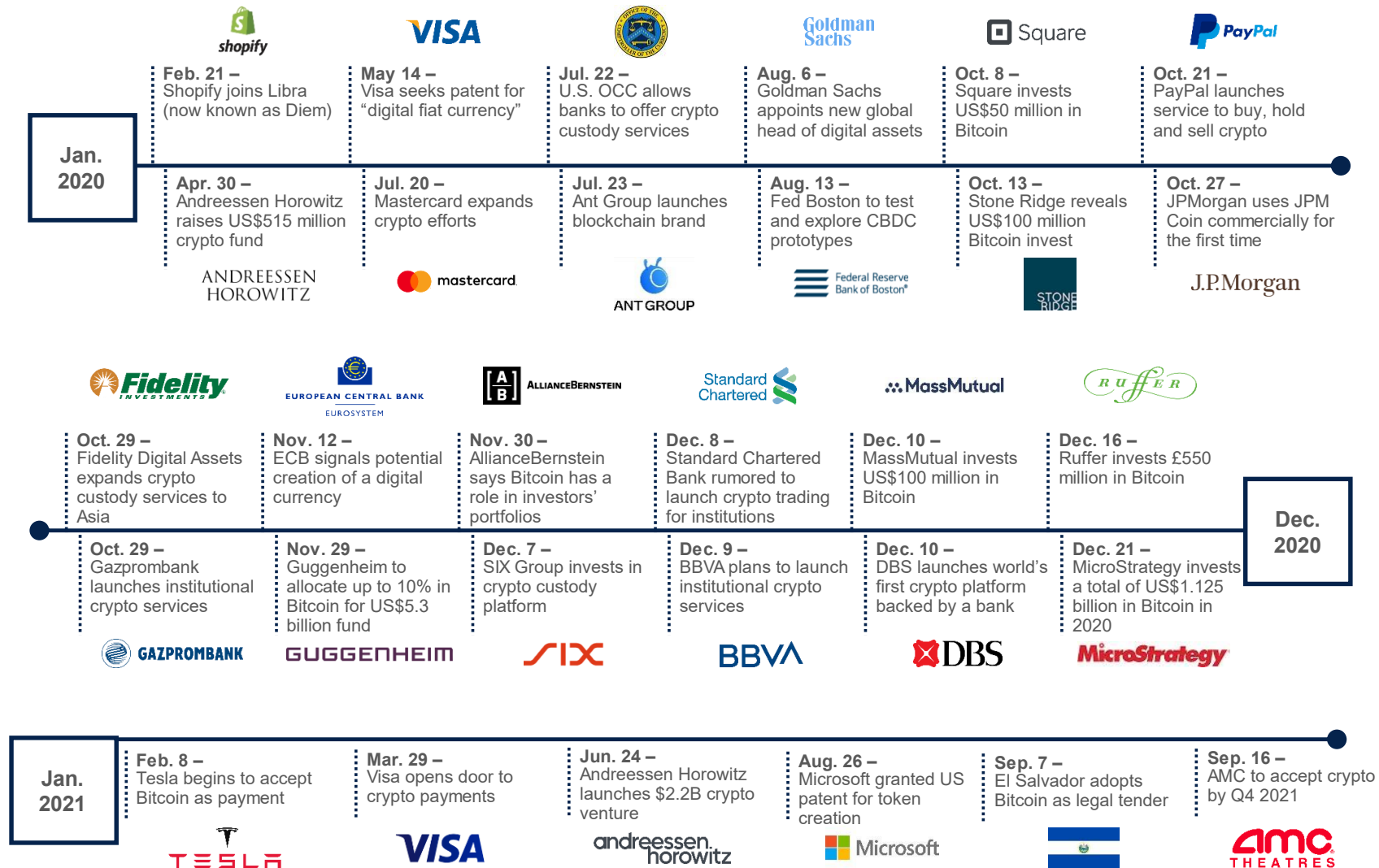
1. CRYPTOCURRENCIES

(AKA DIGITAL MONEY)



- Bitcoin is worth \$1 trillion, more than all of Silicon Valley's unicorns combined since 2009
- Cash for the internet and a final settlement layer for the digital economy
- Digital gold for investors, a diversifier for corporate treasuries and a life-line for many of the world's unbanked
- Bitcoin is unrivalled in this role

WIDESPREAD INVESTMENT AND ADOPTION



2. PROTOCOL TOKENS



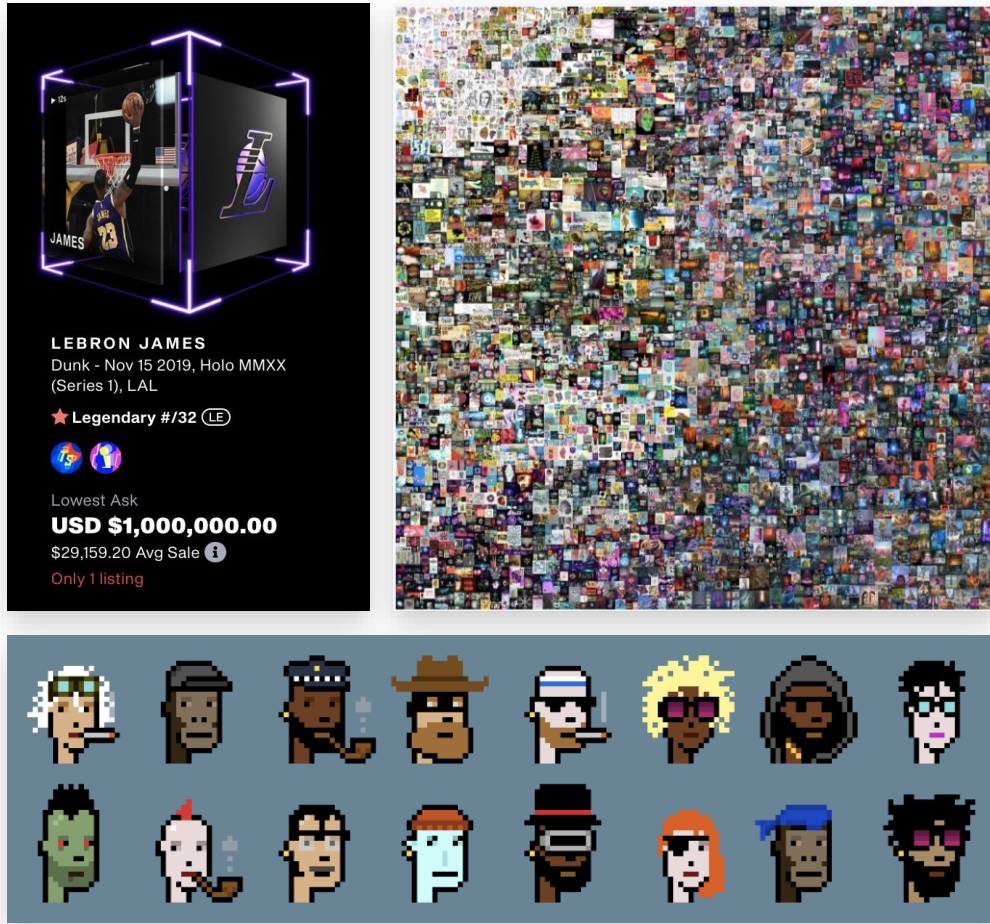
- Base-layer platforms of the blockchain economy
- Programmable blockchains that enable smart-contracts
- Foundational to DeFi, dApps, NFTS
- Fat Protocols: Value accrues at the platform level, e.g. Ethereum has a \$400 billion market capitalization

3. GOVERNANCE TOKENS



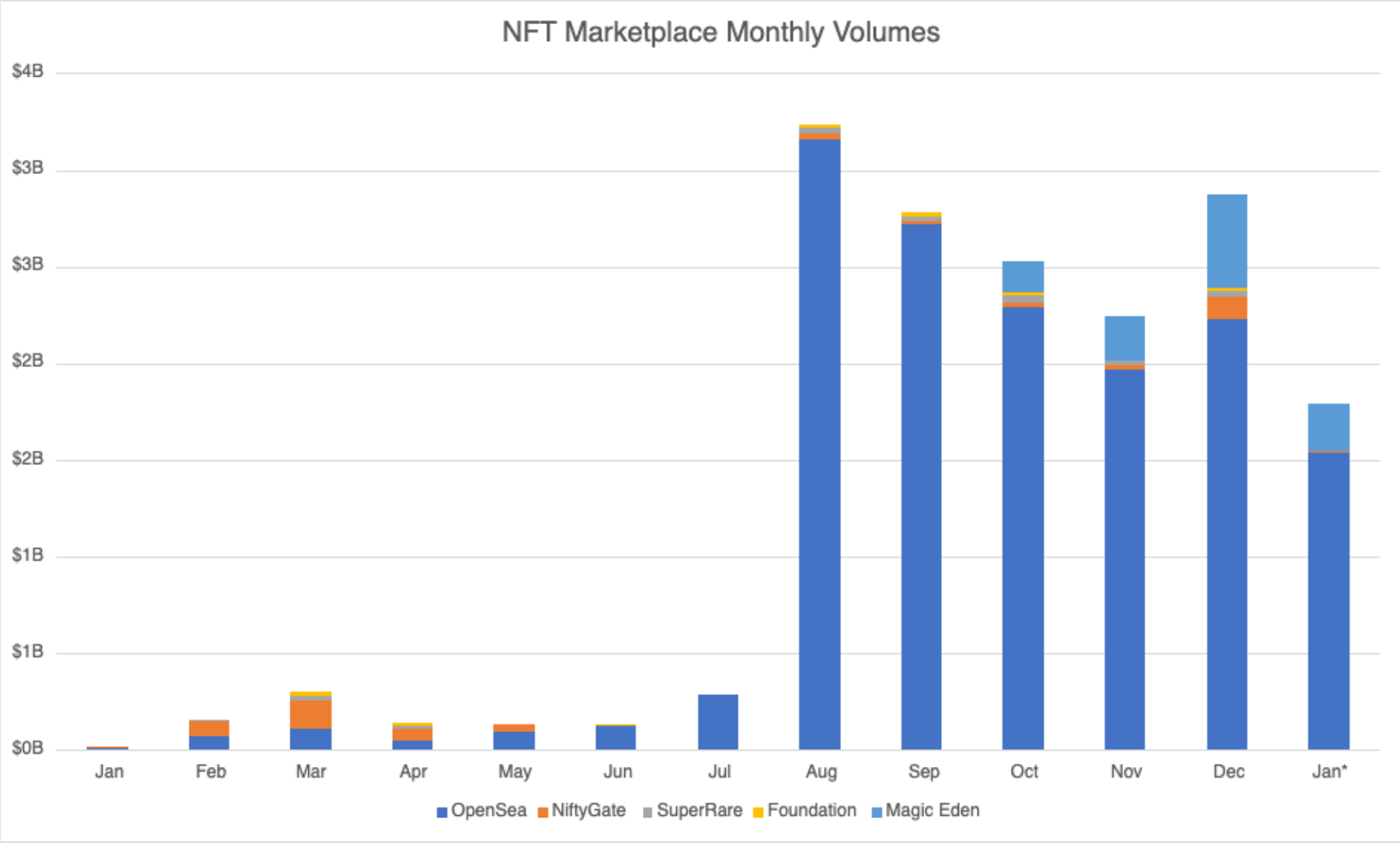
- Governance tokens give holders say in the governance of DAOs and decentralized applications
- Examples: UNI, YFI, AAVE, COMP, etc.
- As dApps gain users and gather assets (known in DeFi as TVL), their governance tokens often appreciate
- BIG MARKET: Governance tokens now have control over vast swaths of money and cryptoasset in DAO treasuries
- DAO treasury of Uniswap, a decentralized exchange, is over \$9 billion USD

4. NON-FUNGIBLE TOKENS (NFTs)



- NFTs are unique, provably scarce digital assets
- Today they are primarily used for art, collectibles, and digital assets inside games
- In the future, will be used as identities, to represent IP, and express ownership of many other kinds of virtual goods
- The foundation for digital identities and the metaverse
- BIG MARKET: OpenSea August volume of \$3 billion

2021 in Review: NFT's Have their “Big Bang” Moment



NFT's are a key building block of the Metaverse

Saudi Arabia to invest billions in metaverse, blockchain technology

The kingdom, which is seeking to reduce its dependence on oil, made the announcement at the futuristic LEAP technology forum in Riyadh.



Guests attend the Global AI 2020 Summit in the Saudi capital Riyadh on Oct. 21, 2020. - FAYEZ NURELDINE/AFP via Getty Images

5. EXCHANGE TOKENS



- Crypto-exchange tokens are native to centralized exchanges, such as Binance, FTX, and Huobi
- Provide rewards, discounts, improve liquidity, and provide other incentives to use a given exchange
- They are essential to the exchange's functionality and incentivize user growth
- Are more centrally managed and don't often confer governance rights
- BIG MARKET: Binance at \$70 billion – twice the size of NASDAQ

6. SECURITIES TOKENS



1. Digitally native securities

- Securities, such as stocks, bonds, and derivatives, are the largest asset classes in the world, and they are being transformed by DeFi



2. Synthetic securities

- There are three kinds of securities tokens:
 1. **Digitally native securities**, such as DeFi investment funds (e.g. Index Co-op)
 2. **Synthetic securities**, such as Mirror's mGOOG or mTSLA
 3. **Legacy-issued securities tokens** (e.g. WorldBank token offering, Santander, etc.)



3. Legacy-issued securities

7. STABLECOINS

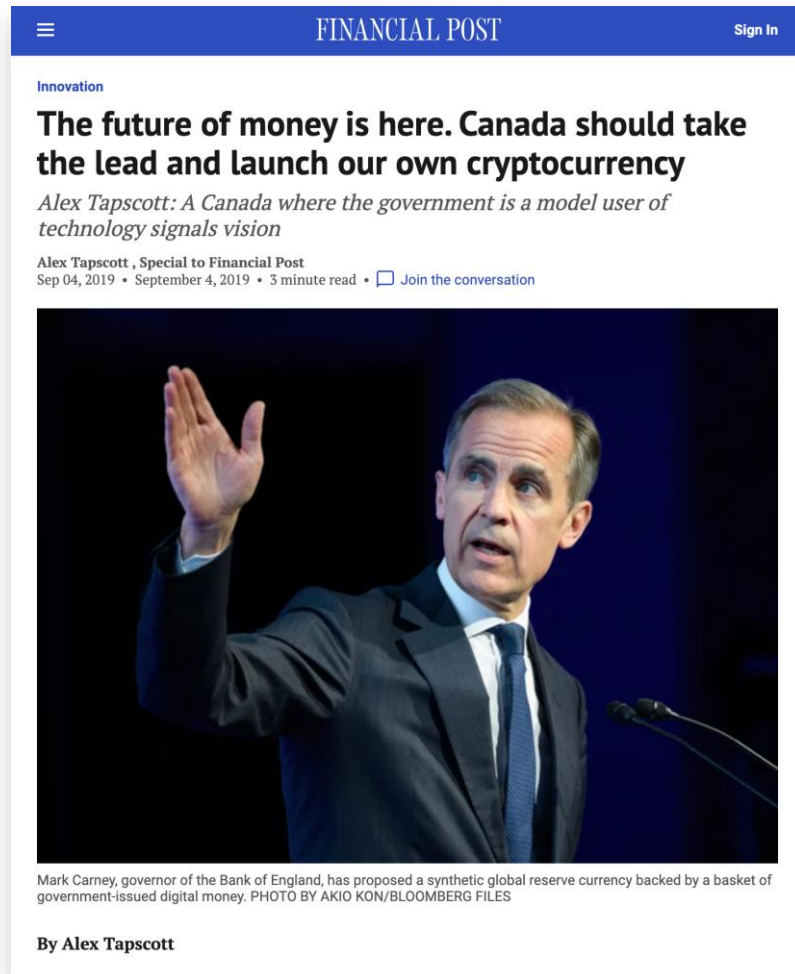
- Stablecoins are cryptoassets that track the value of a traditional asset, typically the US dollar
- There are two kinds of stablecoins:
 1. **Centralized stablecoins**, like USDC, are issued by regulated entities backed by reserves that sit inside financial institutions like banks
 2. **Decentralized stablecoins**, like DAI, are collateralized by cryptoassets held in a smart contract which can increase, and decrease based on demand

8. NATURAL ASSET TOKENS



- Natural asset tokens are digital assets backed by real-world commodities or goods
- For example, carbon offsets get retired to a centrally controlled 'registry'—a natural fit for blockchain, where an immutable, auditable, and verifiable decentralized record would replace the siloed databases of today

9. CENTRAL BANK DIGITAL CURRENCIES



- Central Bank Digital Currencies (or CBDCs) are the much touted 'killer app' of blockchains
- Dozens of countries researching and trialing CBDCs (e.g. US, Canada, Sweden, Thailand, etc.) but only a handful putting them into any real-world situation
- CBDC potential positives: Reduce friction, improve stability, and broaden access in financial markets
- Risks: Tool for mass surveillance and political oppression

CHINA'S DIGITAL CURRENCY

THE WALL STREET JOURNAL.

China Rolls Out Pilot Test of Digital Currency



E The Economist

China aims to launch the world's first official digital currency

1 month ago



M Modern Diplomacy

Digital Yuan will dent the Dollar



FOREIGN AFFAIRS

Could China's Digital Currency Unseat the Dollar?



V-A Voice of America

China's Digital Currency Takes Shape; Will It Challenge Dollar?



The Guardian

China starts major trial of state-run digital currency



Forbes

China's Digital Currency To Be Given A Test Drive By U.S. Companies



Los Angeles Times

China pioneers national digital currency. Can U.S. catch up?



RE-INTERMEDIATION

CENTRALIZED FINANCE (LEGACY WORLD)

- Banks
- Central banks
- SWIFT

OPEN FINANCE

- Digital Asset Custody
- Stablecoins
- Digital Wallets
- Triple Entry Bookkeeping
- Digital Asset ETFs
- Cryptocurrency exchanges

DECENTRALIZED FINANCE

- Aave
- NFTs
- Uniswap
- MakerDAO
- dYdX



The Red Flag Acts



LEGACY ATTITUDES

“There’s no chance that the iPhone is going to get any significant market share.”

Steve Ballmer, Microsoft CEO, 2007

“Remote shopping, while entirely feasible, will flop.”

Time Magazine, 1966

“Fooling around with alternating current (AC) is just a waste of time. Nobody will use it, ever.”

Thomas Edison, 1889

“The coming of the wireless era will make war impossible.”

Guglielmo Marconi, Pioneer of Radio, 1912

“There is no reason for any individual to have a computer in his home”

Ken Olsen, CEO Digital Equipment Corp, 1977



“I personally think Bitcoin is worthless”

Jamie Dimon, October 2021

“The horse is here to stay but the automobile is only a novelty—a fad.”

The president of the Michigan Savings Bank advising Henry Ford's lawyer not to invest in the Ford Motor Co., 1903.

“Democracy will be dead by 1950.”

John Langdon-Davies, A Short History of The Future, 1936.

“A rocket will never be able to leave the Earth's atmosphere.”

The New York Times, 1936

“This 'telephone' has too many shortcomings to be seriously considered as a means of communication.”

William Orton, President of Western Union, 1876

“Television won't be able to hold on to any market it captures after the first six months.”

Darryl Zanuck, 20th Century Fox, 1946

THE SECOND HALF OF THE CHESSBOARD





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