### Crypto For Financial Advisors

Hard Questions, Straight Answers, No Hype

Presented By

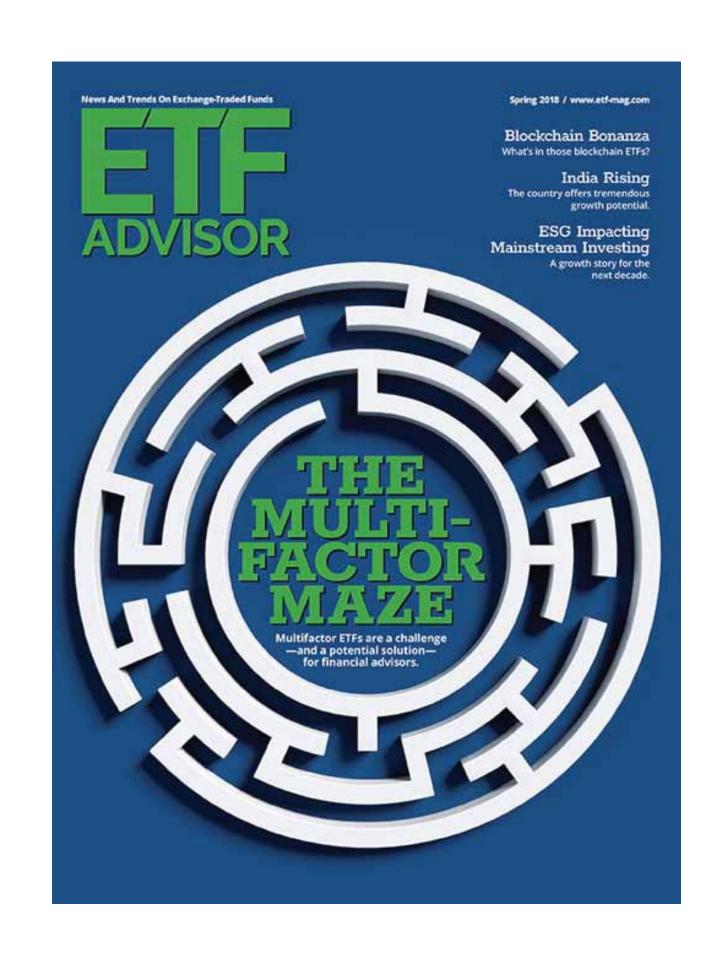




### **Presented By**



fa-mag.com



etf-mag.com

### Today's Speakers



Hunter Horsley
Chief Executive Officer

Previously Product Manager on monetization at Facebook and before that Instagram. Graduate of Wharton School at University of Pennsylvania.



Martha Shear Managing Director, Head of Business Development

Previously Director at Commonfund (\$25B AUM). Before that, Vice President at BlackRock iShares.

### Background on Bitwise

0

**Leader:** Created the world's first crypto index fund.

02

**Specialist:** Products solely focused on cryptoassets.

03

**Experienced:** Software, research, & asset management expertise.

#### INSTITUTIONAL INVESTORS

BLOCKCHAIN CAPITAL khosla ventures

GENERAL (G) CATALYST

TEAM BACKGROUNDS













J.P.Morgan

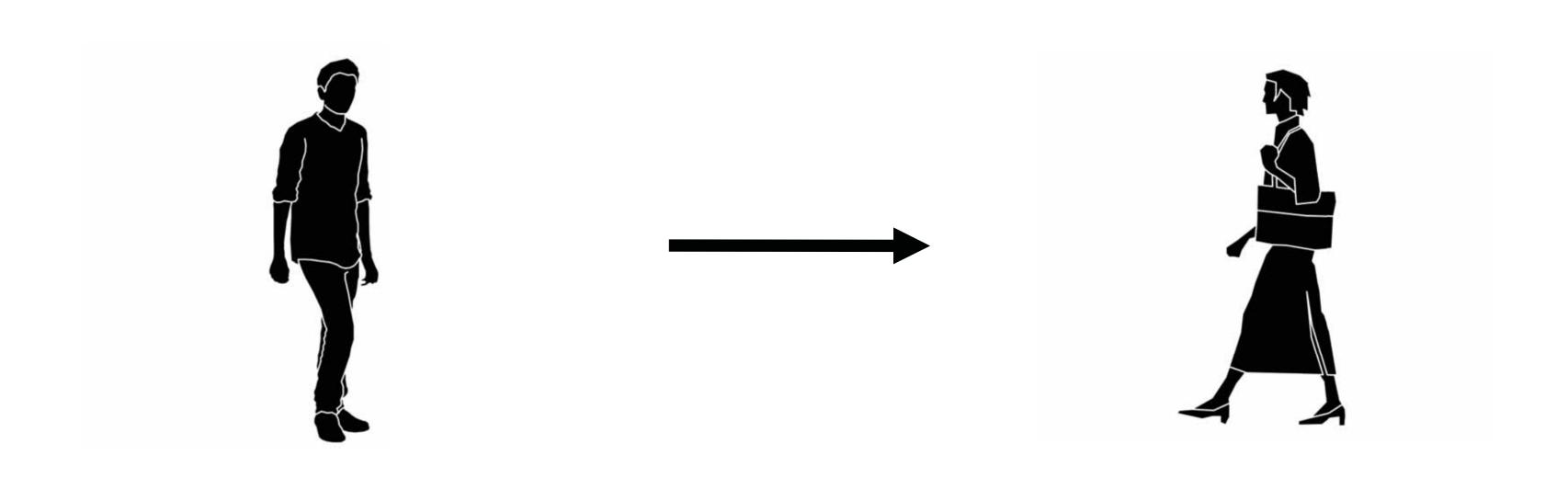


### Agenda

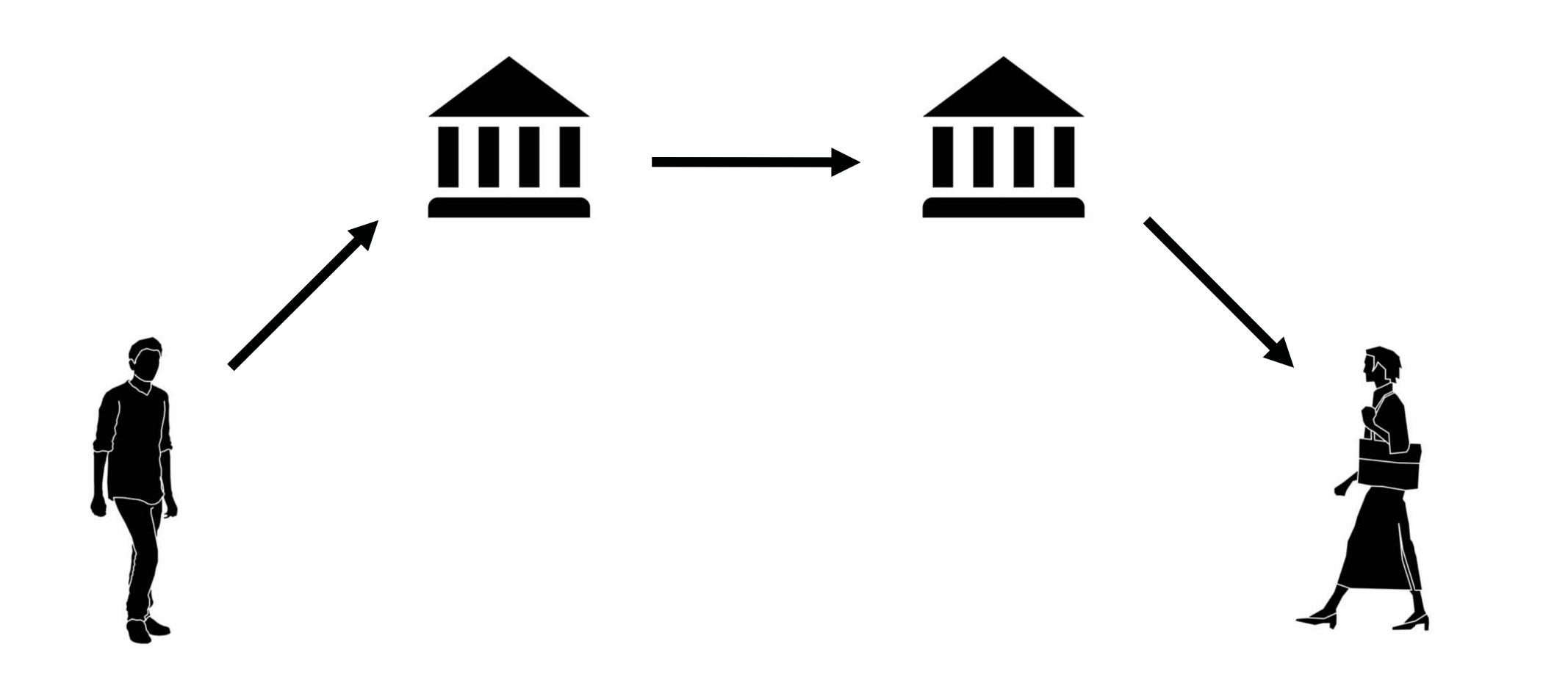
- Crypto 101: What cryptoassets are & why they are important
- Crypto 201: Why every diversified portfolio should consider cryptoassets
- Crypto 301: Why cryptoassets have value & will continue to
- Crypto 401: Blockchain vs cryptoassets & key considerations when investing
- Audience Q&A

# Crypto 101 What Cryptoassets Are and Why They Are Important

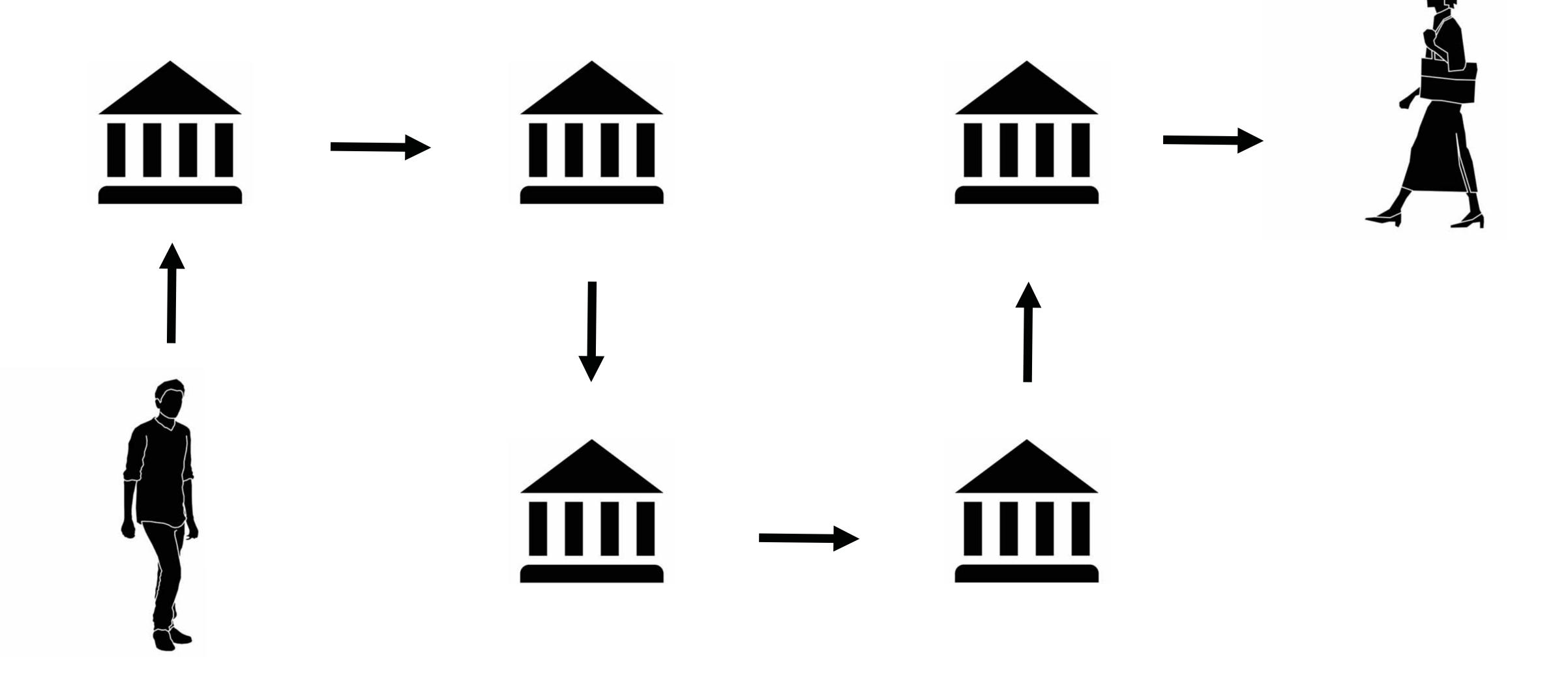
### A Simple Financial Transaction



### A Simple Financial Transaction

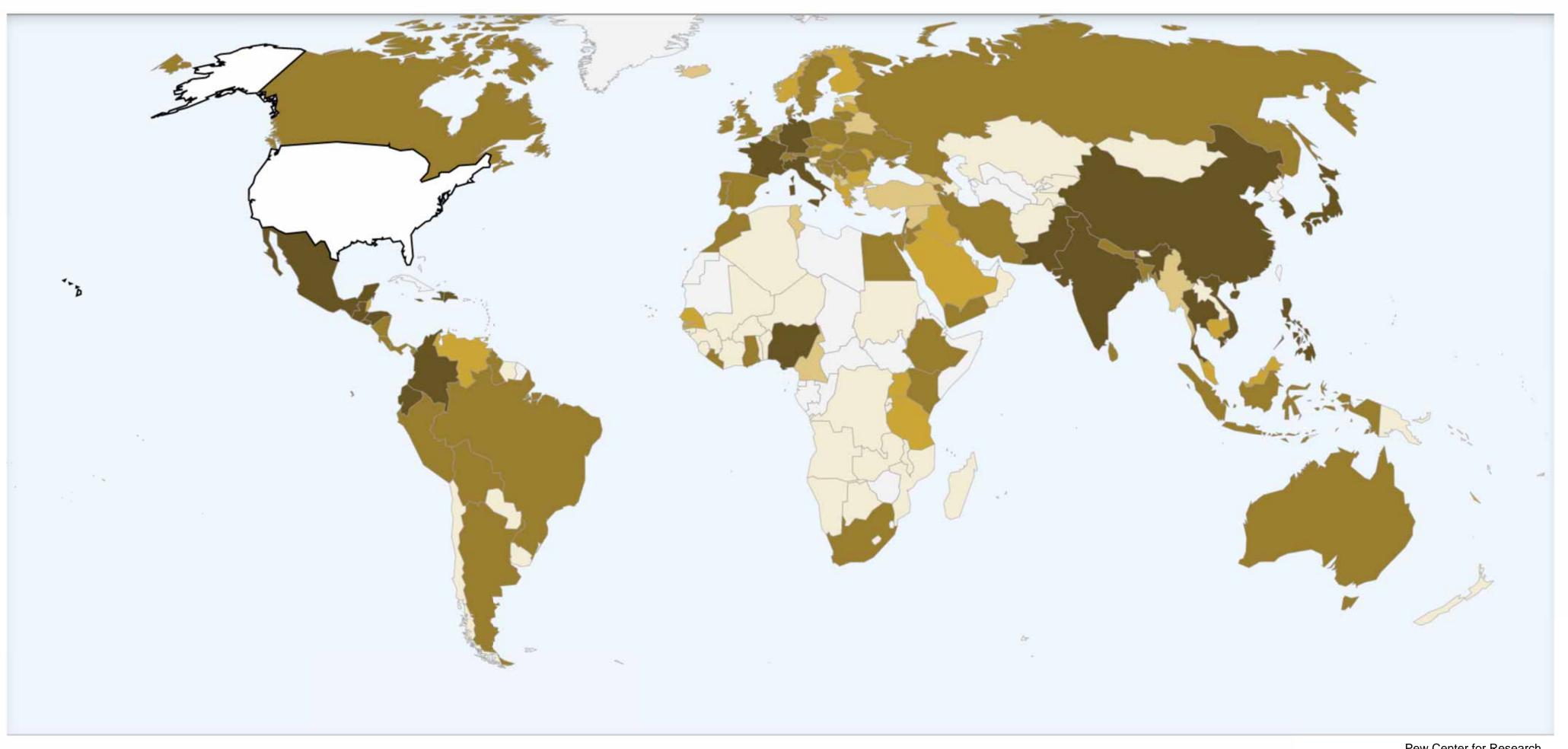


### A Common Financial Transaction



### Remittance Flows Worldwide in 2016

\$138,165,000,000 in remittances was sent from United States to other countries in 2016



### Remittance Flows Worldwide in 2016

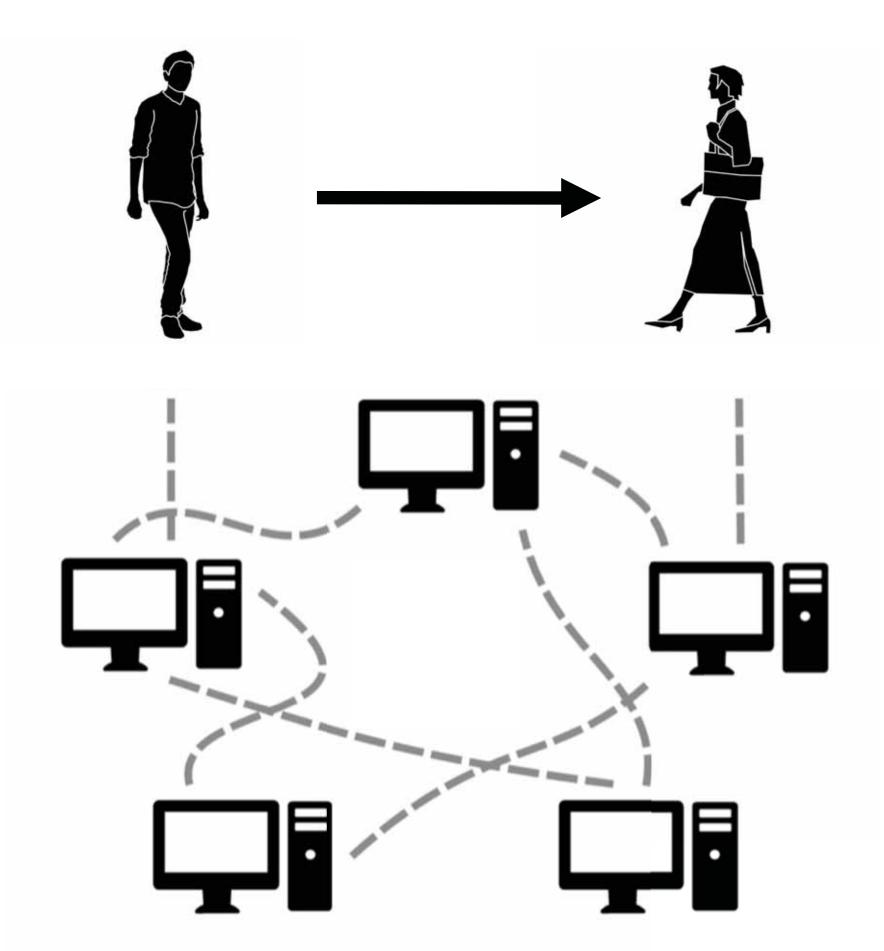
\$138,165,000,000 in remittances was sent from United States to other countries in 2016



Pew Center for Research

## Crypto Allows for Digital, Peer-to-Peer Transactions Without a Central Authority

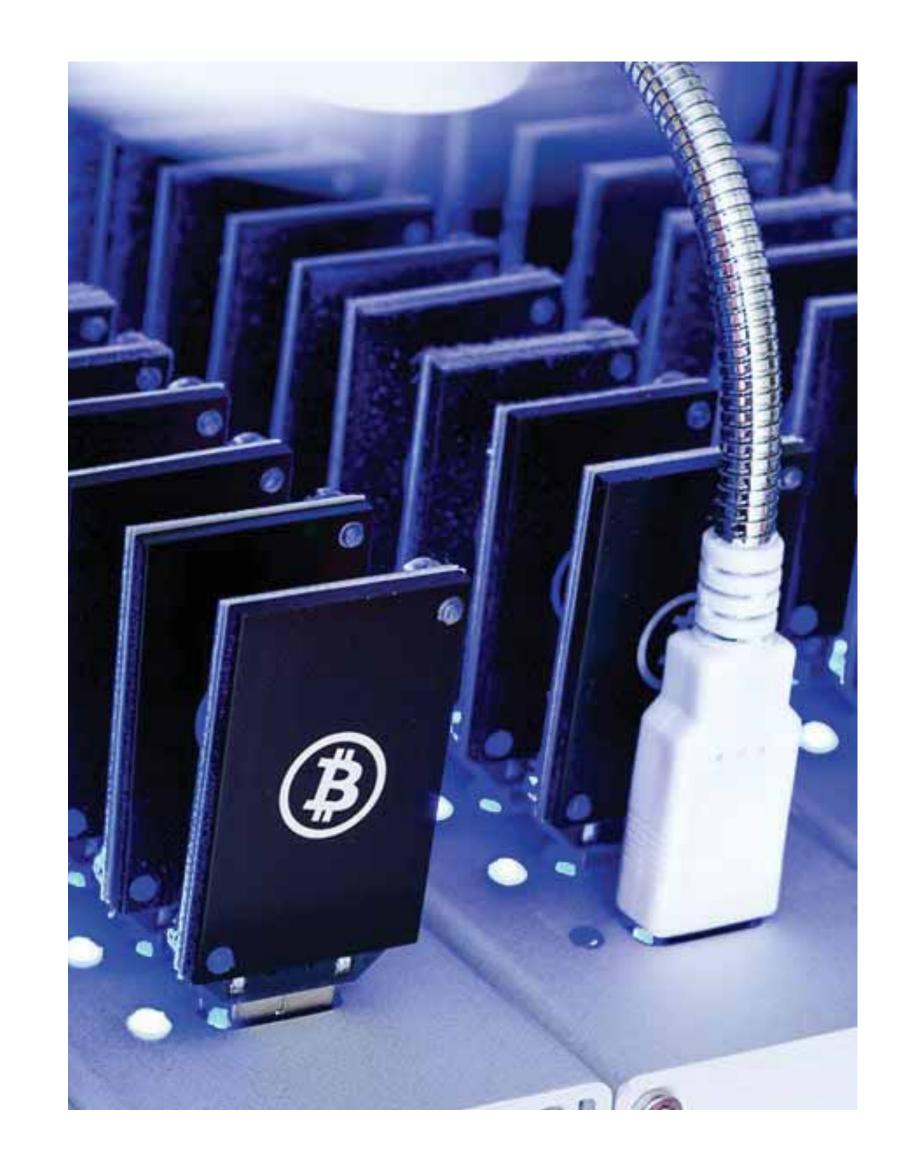
- Quick settlement
- Minimal fees
- No central authority means no seizure or error or changing policies



### The Breakthrough: Proof of Work Consensus Protocol

### **HOW IT WORKS**

- 1. Combine new transactions into a block.
- 2. Check if transactions are valid.
- 3. Race other miners to solve a complex math problem.
- 4. The first to solve broadcasts the solution to the network, along with the block of validated transactions.
- 5. Other miners check if the solution is correct & the transactions are valid. If they are, they update their copy of the Blockchain.
- 6. The winner is rewarded.
- 7. The process starts again.



# Rethink Our Biggest Systems

### The Guardian

Cyprus bailout deal with EU closes bank and seizes large deposits

Draconian terms aimed at keeping Cyprus in eurozone include closure of second-largest bank and big losses for wealthy savers



European leaders reached an agreement with <a href="Cyprus">Cyprus</a> early on Monday morning that closes down the island's second-largest bank and inflicts huge losses on wealthy savers.

Rethink Our Most Important Services







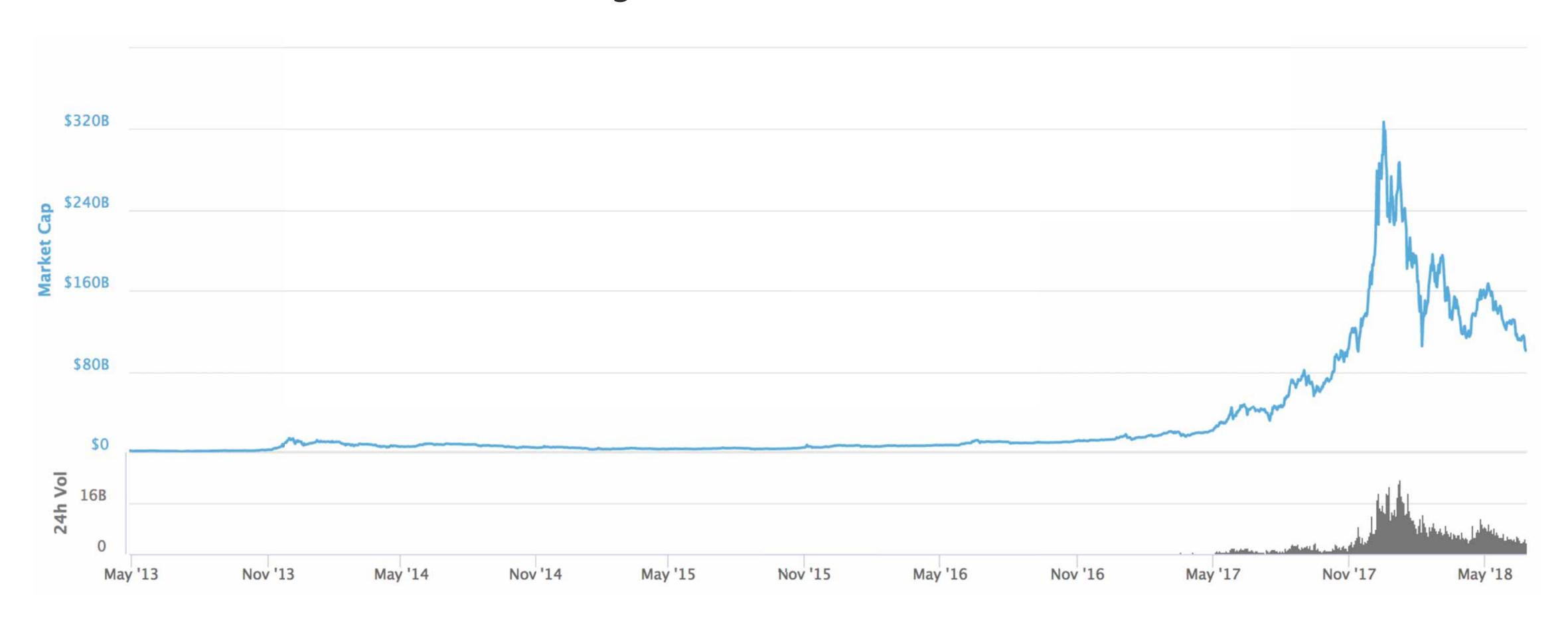






# Crypto 201 Why every diversified portfolio should consider cryptoassets

# \$100 invested in Bitcoin in 2010 would be worth \$200,000,000 today



### Bitcoin Has Low Correlations to Other Asset Classes

Bitcoin has exhibited low correlations to traditional asset classes historically, though data is limited.

Bitcoin's Historical Correlations			
Equities	0.12		
Bonds	0.25		
Gold	0.07		
Commodities	0.00		
Volatility Futures	-0.25		
Liquid Alternatives	0.00		

### The Role of Crypto in an Institutional Portfolio

Findings from a study of performance over the last 4 years, a tough time window for crypto.

### 1% Allocation, Rebalanced:

- Added 4.5% to total return.
- Volatility flat: 6.7% vs. 6.5%.
- Reduced the max drawdown
- Sharpe Ratio: 1.02 vs 0.80

	TOTAL	VOLATILITY (MONTHLY)	SHARPE	UP	DOWN CAPTURE	MAX
Traditional 60/40 Portfolio	26.53%	(MONTHLY) 6.5%	0.80	O.61	0.71	-11.37%
1% Bitcoin	31.09%	6.70%	1.02	.69	0.69	-10.95%
5% Bitcoin	50.89%	8.30%	1.55	0.99	0.68	-9.36%
10% Bitcoin	78.38%	11.6%	1.75	1.37	0.66	-12.11%

<sup>\*</sup>January 1, 2014 through March 31, 2018. This period was intentionally chosen because it captures two of the worst bear markets in Bitcoin history. The 60%/40% portfolio holds a 60% position in the Vanguard Total Bond market ETF (BND). Allocations to Bitcoin were pulled on a pro-rata basis from each of the two positions. The study did not include any consideration of transaction costs. For more, see "The Case for Crypto in an Institutional Portfolio," available at www.bitwiseinvestments.com/research.

### Key Drivers of Demand Going Forward

- Investor Adoption and Continued Network Growth
- Millennial Wealth
- Positive Regulatory Developments
- Weakening Trust in Monetary Authorities & Corporate Institutions
- Continued Institutionalization of the Space

### Key Risks and Concerns

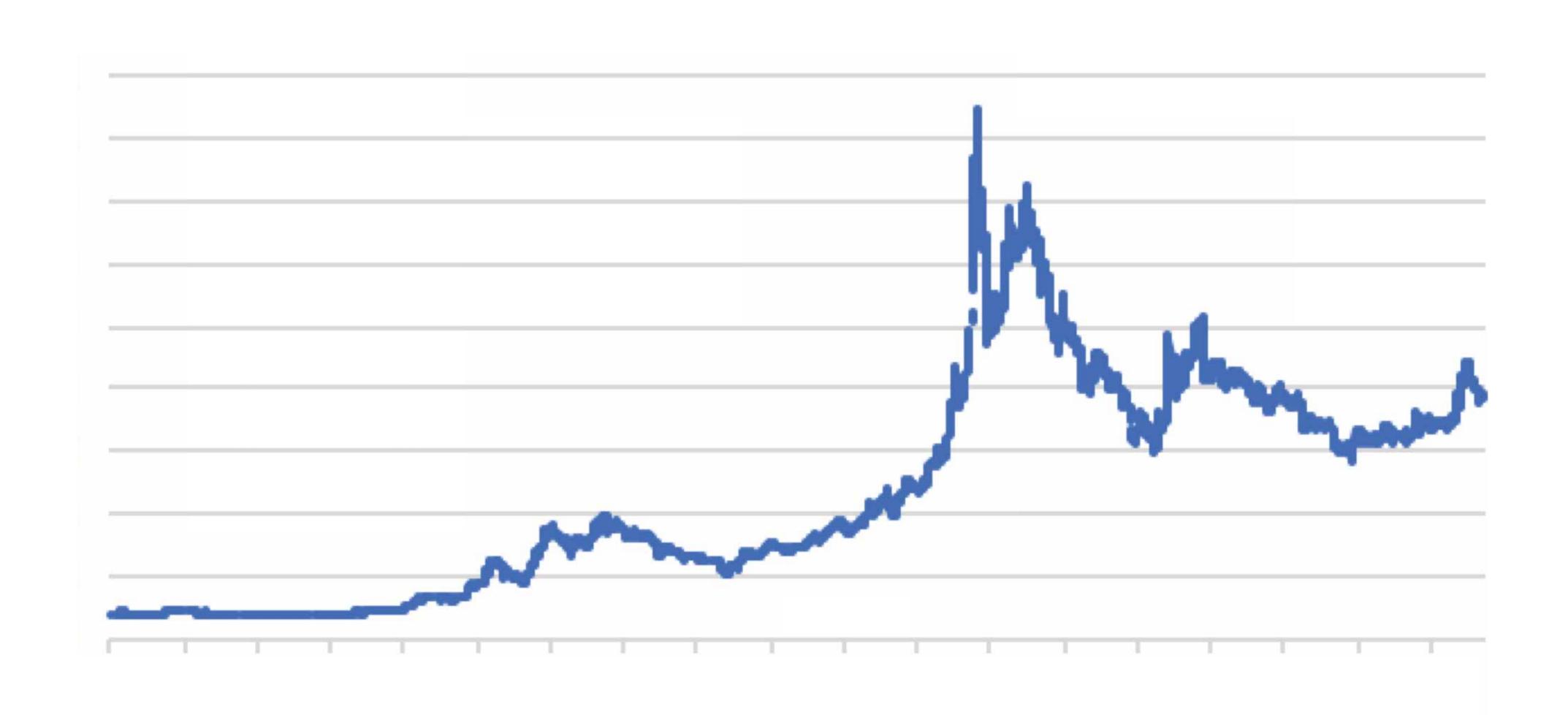
- Regulatory Overreach
- Hacking
- If development stops
- If investment community can't agree on how to do valuation
- What if everyone is just being foolish?

# Crypto 301 Why Cryptoassets Have Value and Will Continue to Have Value

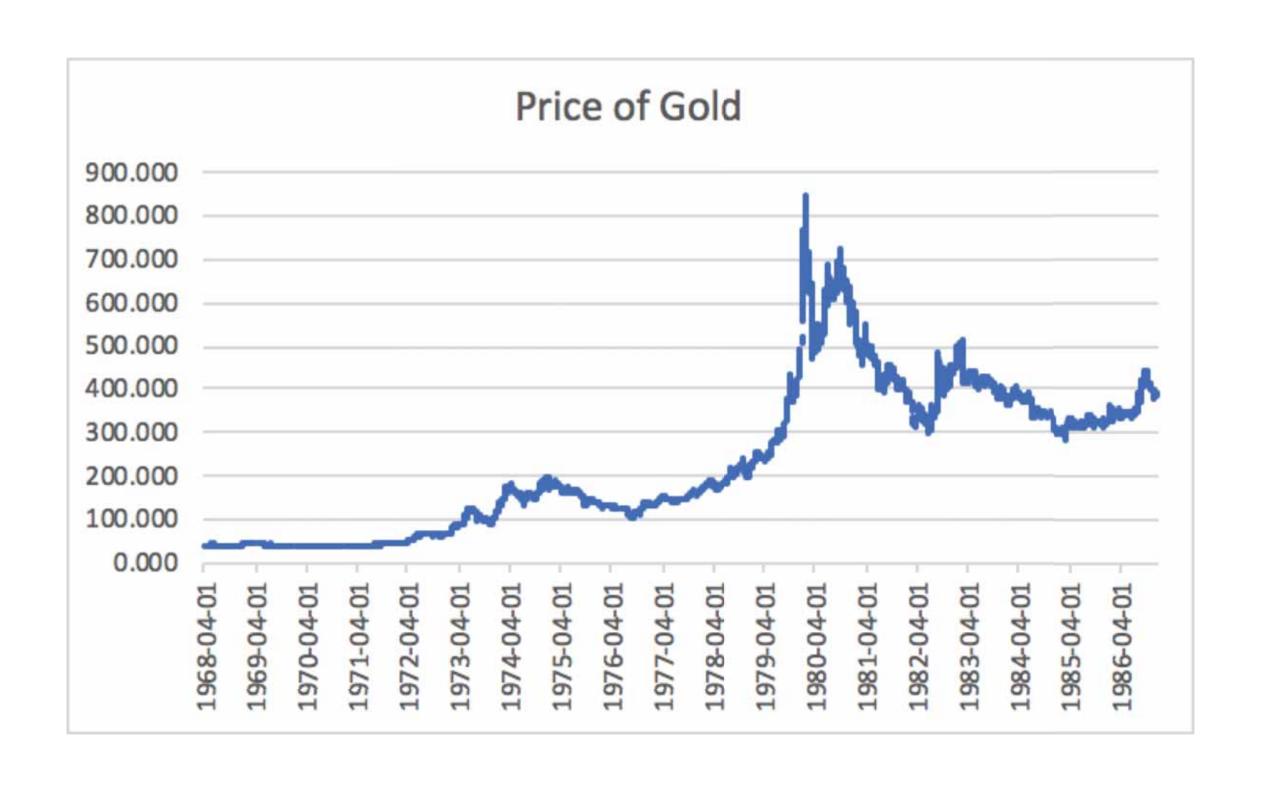


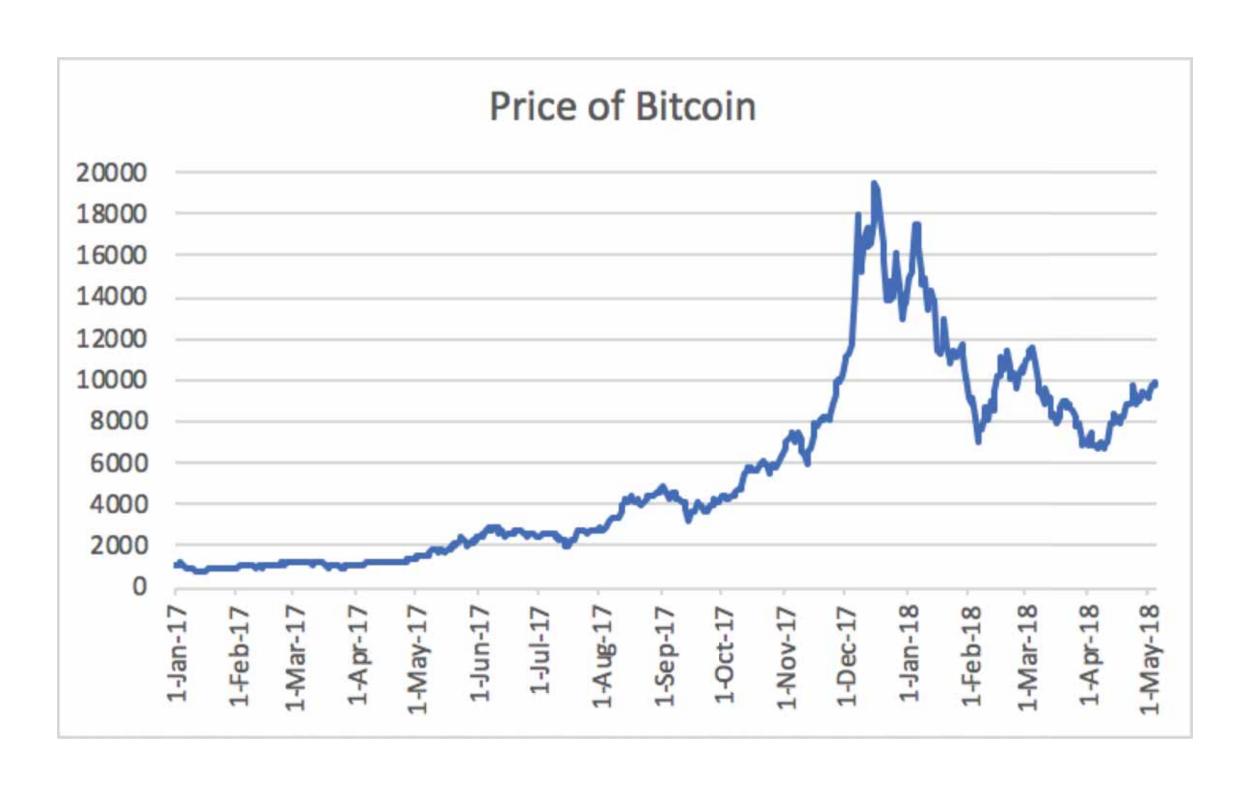
Thesis 1: Store of Value

### Bitcoin Is Too Volatile To Be A Store of Value

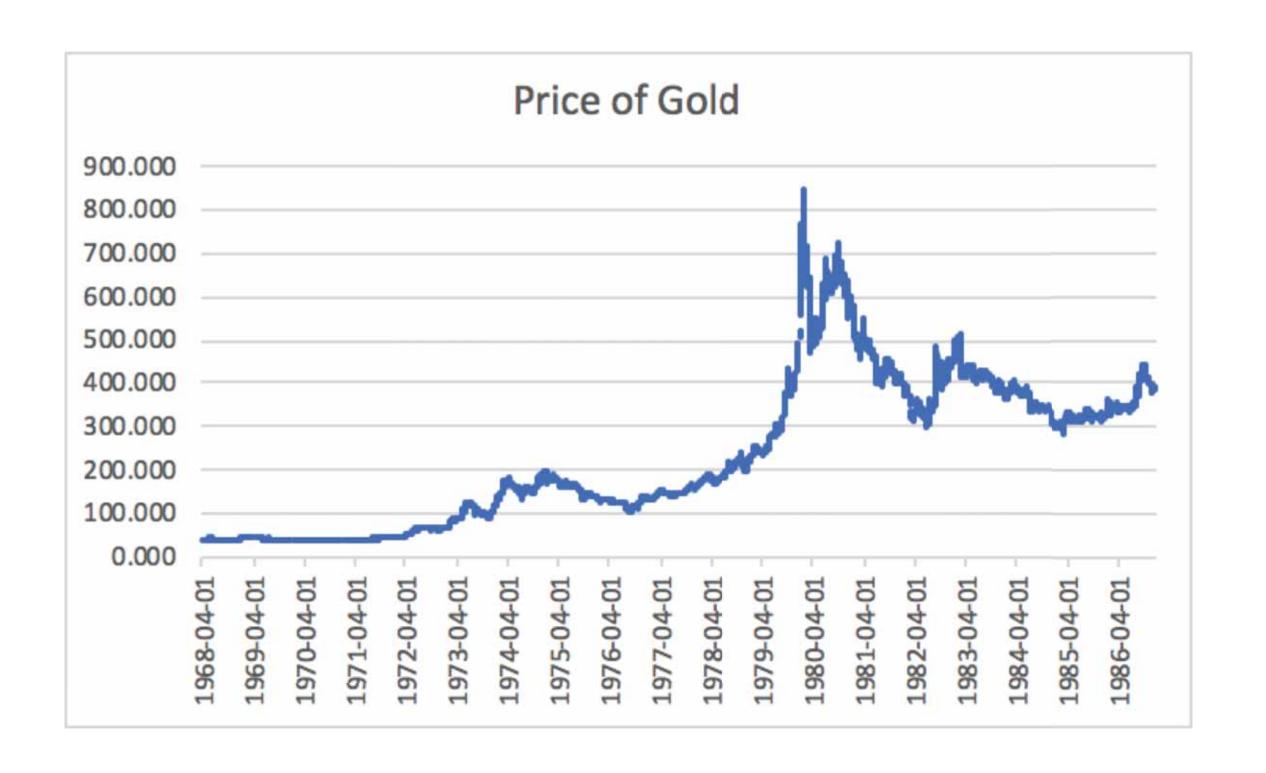


### Early On, Stores Of Value Are Volatile



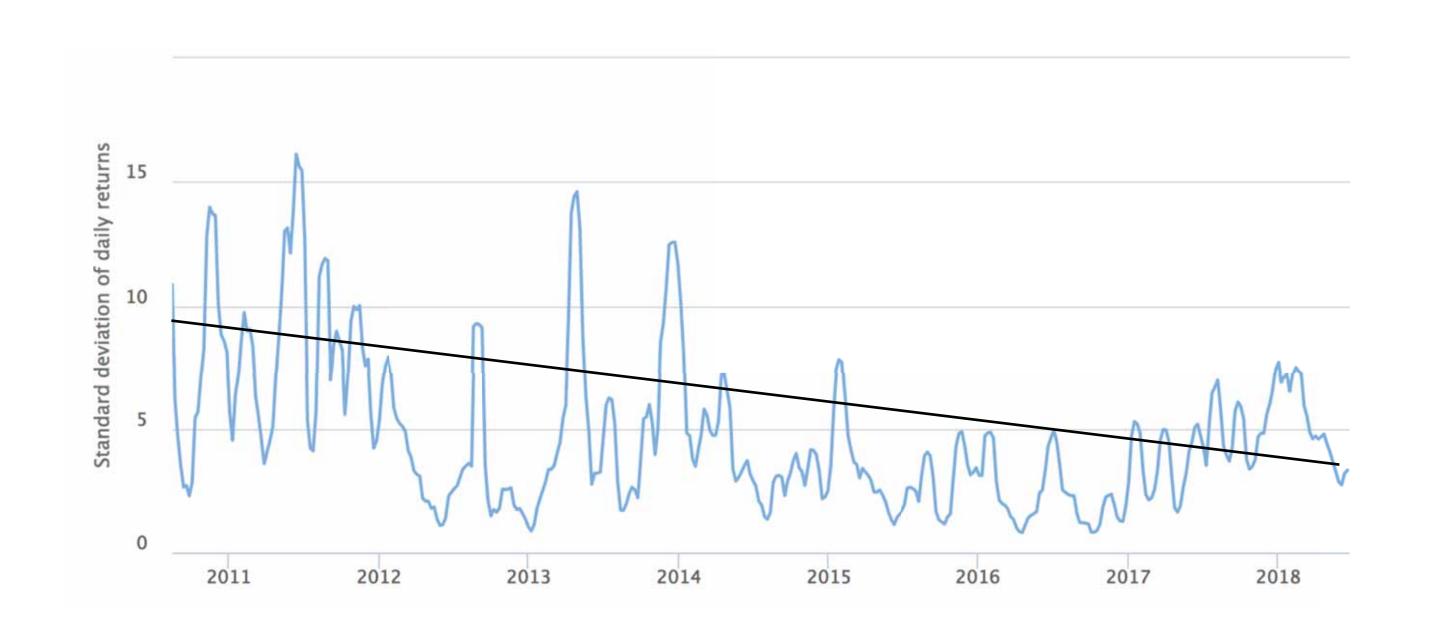


### Annual Returns of Gold: 10+ Years Post Gold Standard



Year	Return		
1971	15%		
1972	43%		
1973	67%		
1974	73%		
1975	-24%		
1976	-4%		
1977	20%		
1978	29%		
1979	121%		
1980	30%		

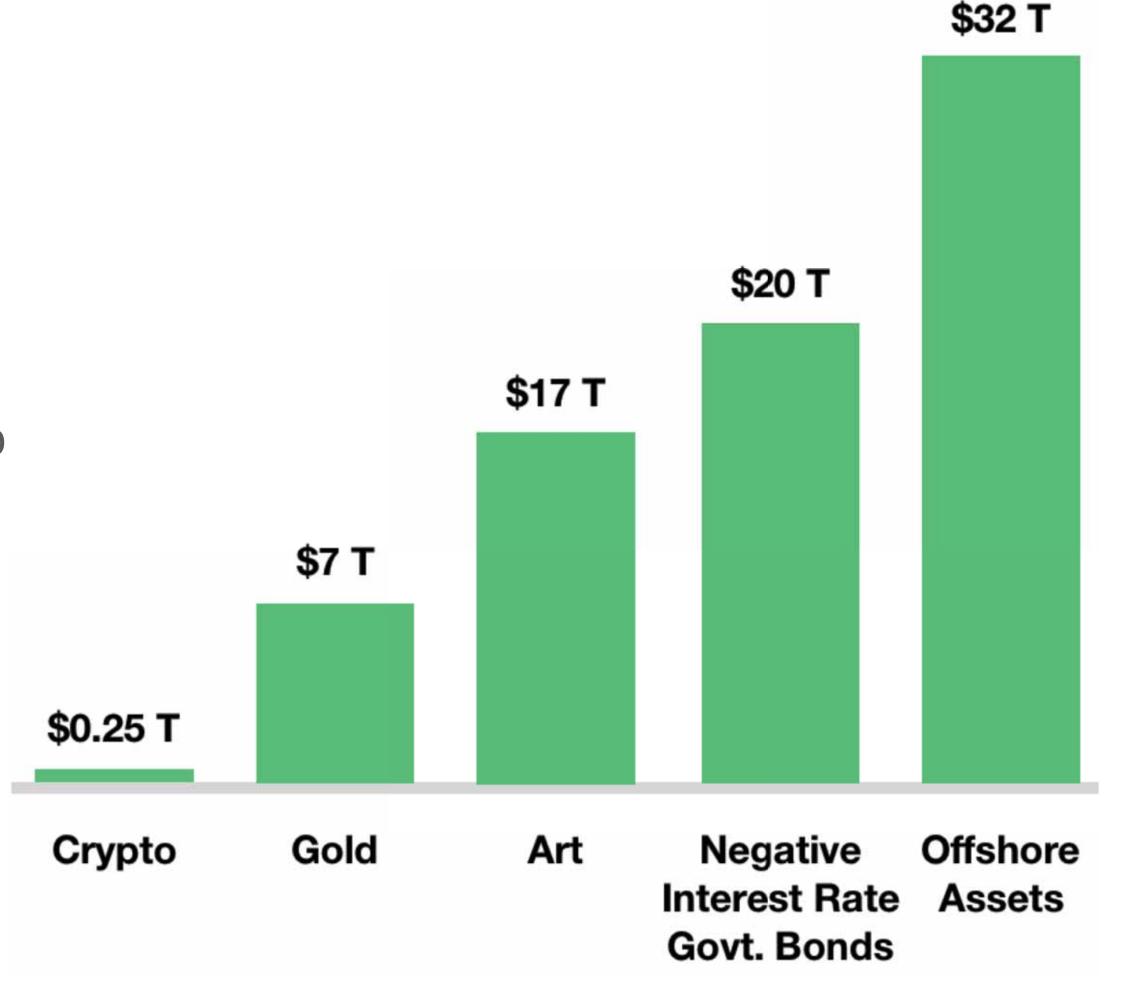
### Bitcoin Returns and Volatility: Last 9 Years



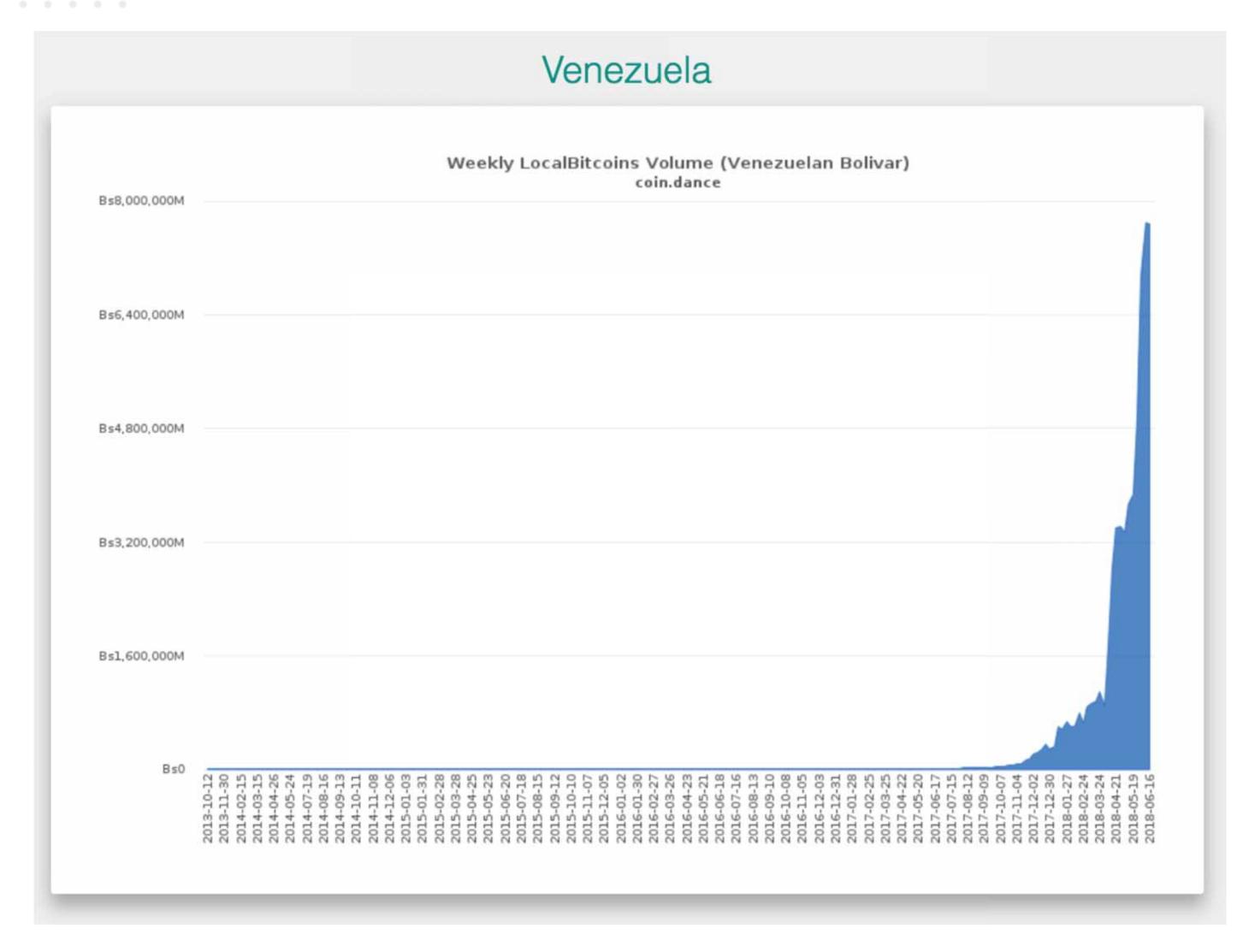
Bitcoin Historical Returns			
2010 (Partial)	233%		
2011	1,483%		
2012	186%		
2013	5,507%		
2014	-58%		
2015	35%		
2016	125%		
2017	1,331%		
2018 (Q1)	-49%		

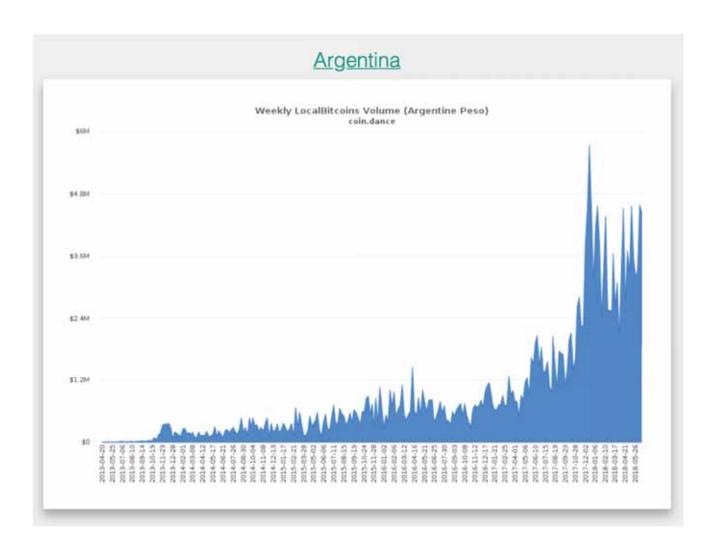
### Store of Value Is A Really Large Market

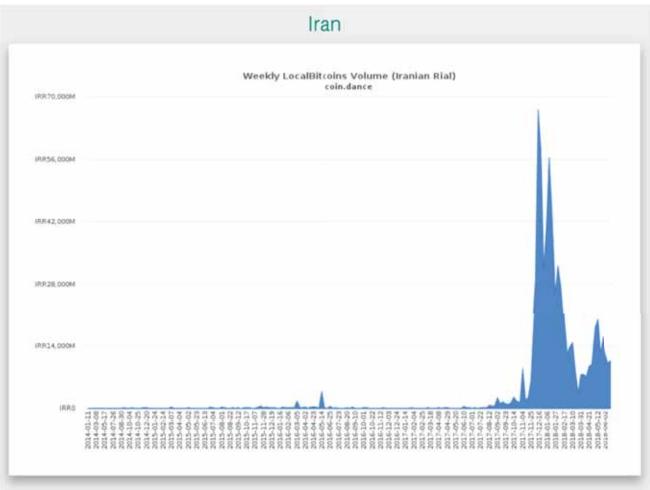
- Bitcoin currently ~1.3% the value of gold
- If Bitcoin matched gold as a store of value, bitcoin would be worth roughly \$350,000/coin
- 43% of male millennials prefer Bitcoin to government bonds.



### Crypto Interest Surges In Countries Under Duress







### Bitcoin Is Not The Only Store of Value Option













### Thesis 2: Financial Services

### Financial Services Eat Up An Increasing Share of GDP

- Global GDP = \$80 trillion
- Financial sector = Roughly 10%
- That's \$8 trillion



### Crypto Aims To Disrupt Essentially All Of It

### J.P.Morgan

J.P. Morgan > About Us > What We Do

### WHAT WE DO

Large multinationals and emerging companies, institutional investors and individuals all turn to us for capital, insights and solutions.



### **Investment Banking**

A global leader, we deliver strategic advice and solutions, including capital raising, risk management, and trade finance to corporations, institutions and governments.

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#### Markets & Investor Services

Serving the world's largest corporate clients and institutional investors, we support the investment cycle with market-leading research, analytics, execution, and investor services.

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We are a global full-service provider of cash management, liquidity, trade and escrow solutions that help resolve the working capital and efficiency challenges treasury professionals face.

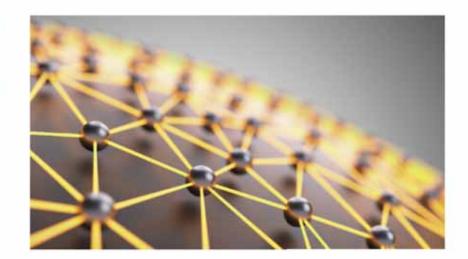
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### **Commercial Banking**

For organizations with annual revenues ranging from \$20 million to \$2 billion, we are uniquely positioned to provide comprehensive solutions, including lending and treasury services.

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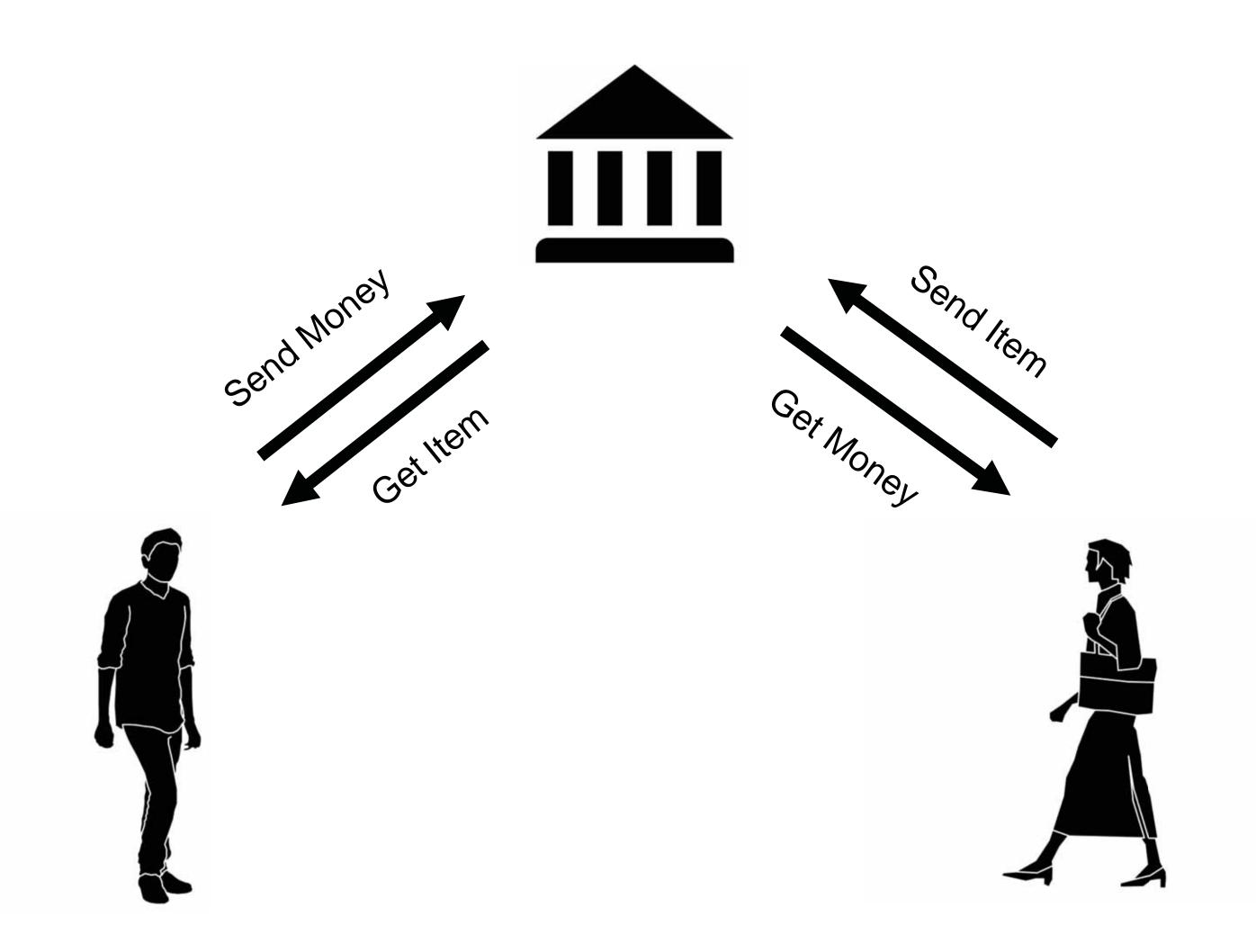


#### **Merchant Services**

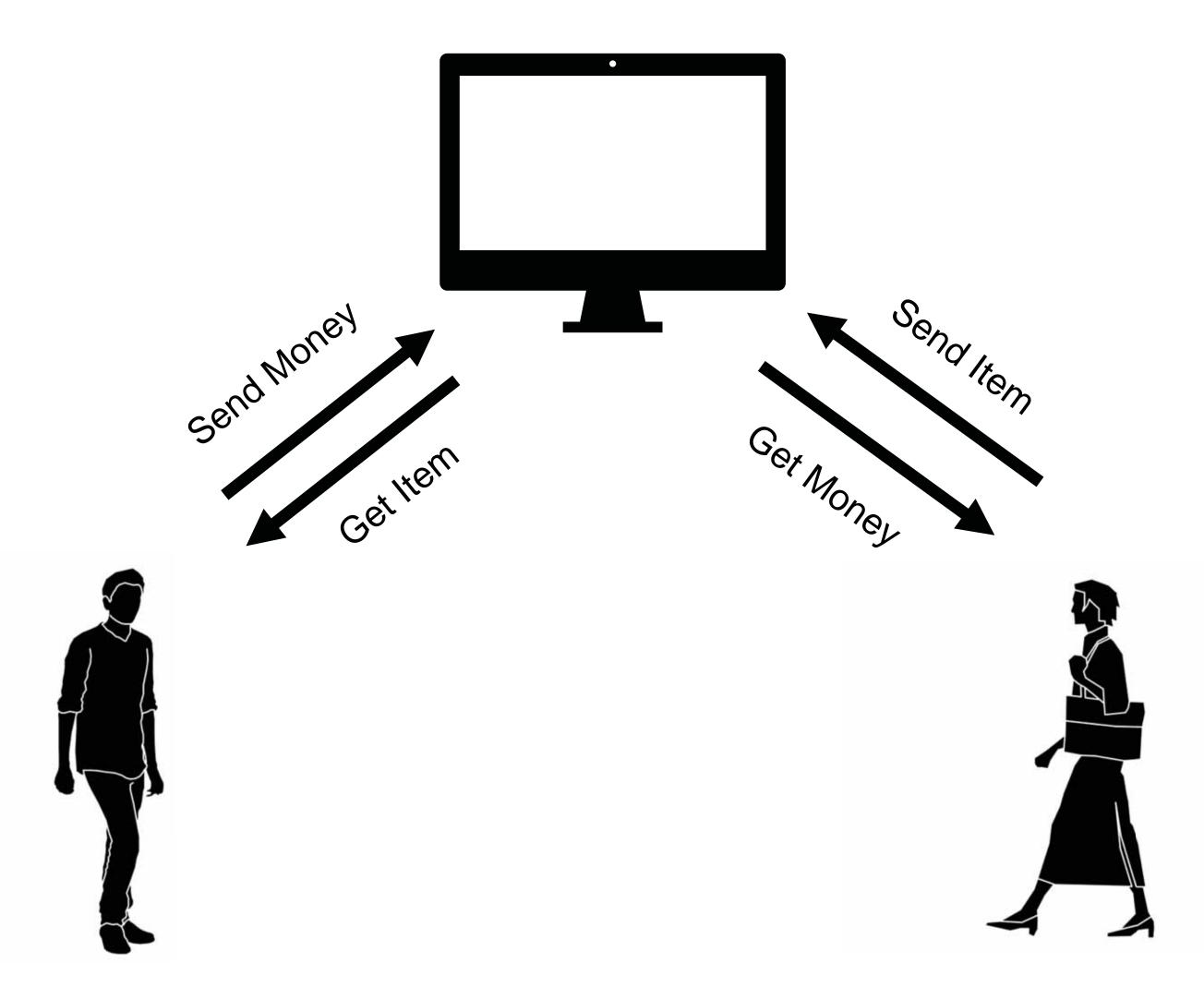
As the nation's number one bank-owned acquirer, Merchant Services can help you operate your receivables all in one bank, better navigate the omnichannel payment landscape, and enhance cash flow.

Explore 🗷

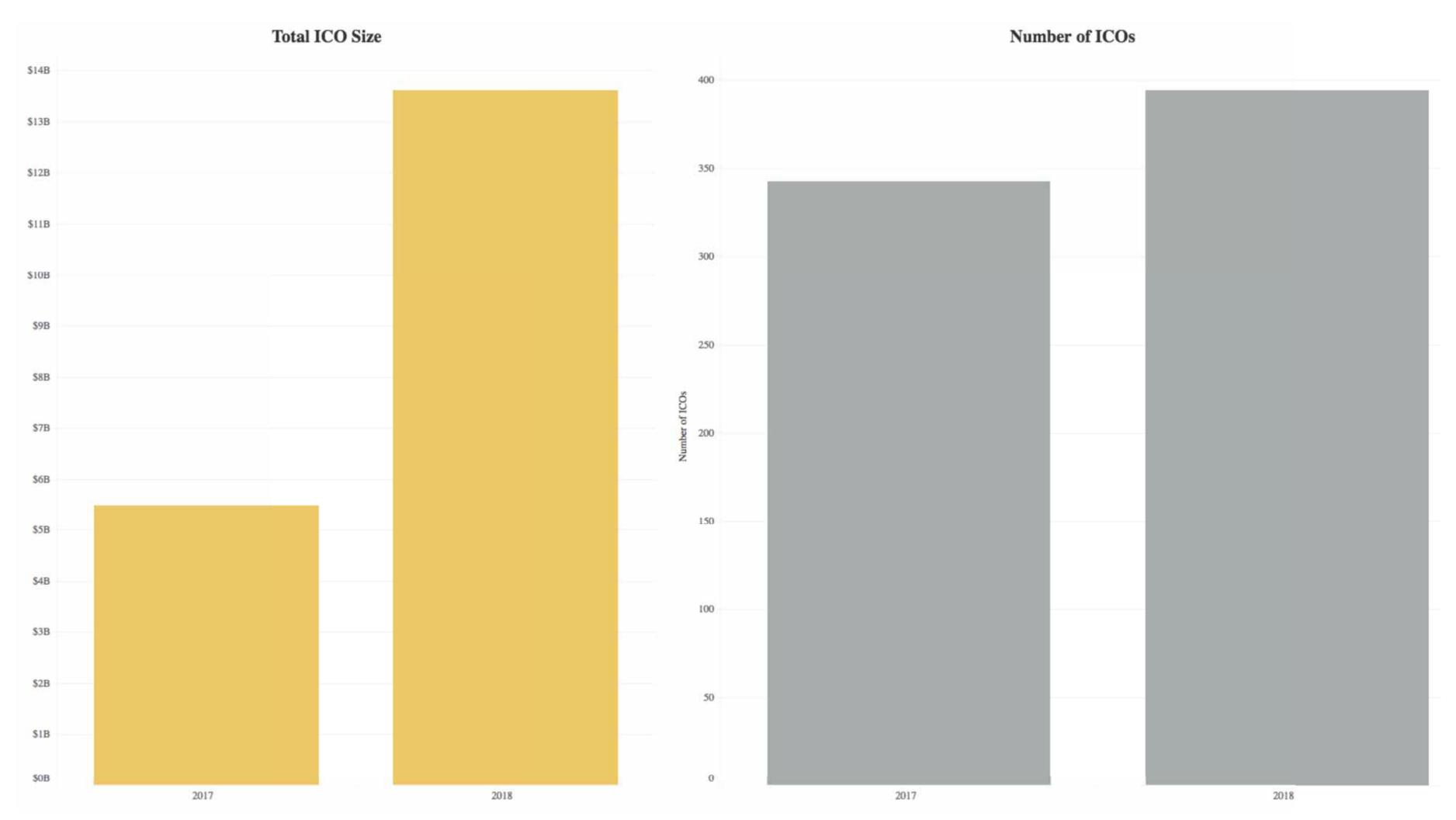
### Escrow: A Simple Example



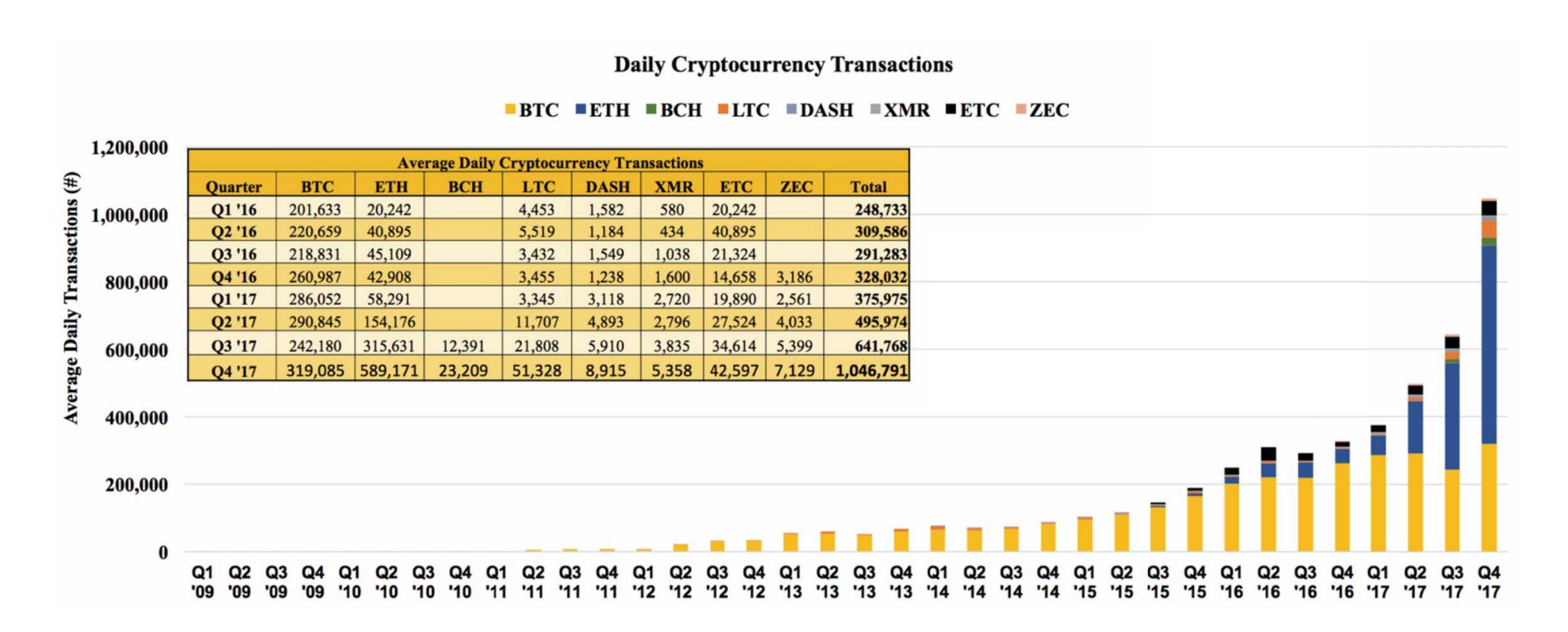
### Why Not Cut Out The Middleman?



### Capital Raising: ICO As A New Approach



#### Payments: Transaction Volumes Surging



# Just Ask the International Monetary Fund

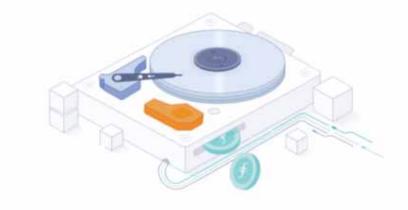
"Just as a few technologies that emerged from the dot-com era have transformed our lives, the cryptoassets that survive could have a significant impact on how we save, invest and pay our bills."

— Christine Lagarde, April 2018 "An Even-Handed Approach to Crypto-Assets,"

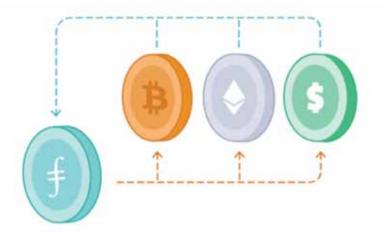
#### Thesis 3: New Business Models

## Filecoin: A Decentralized Dropbox

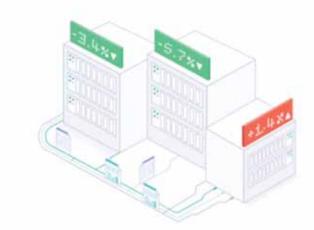
- Attacking the cloud storage market, estimated to be approximately \$89B by 2022.
- Low fees & no rent seeking motivation
- Centralized providers have been hacked: Dropbox in 2012, and iCloud in 2014.



EARN FILECOIN FOR HOSTING FILES



EXCHANGE FILECOIN FOR USD, BTC, ETH AND MORE



RELIABLY STORE FILES AT
HYPERCOMPETITIVE
PRICES

# Examples: Steem, 0x, Augur







# Crypto 401 Blockchain vs cryptoassets and Key Considerations When Investing In Crypto

# Key Considerations

- Blockchain vs cryptoassets
- Diversification
- Volatility and Time Horizon
- Custody
- Investment Options

## Blockchain vs cryptocurrency



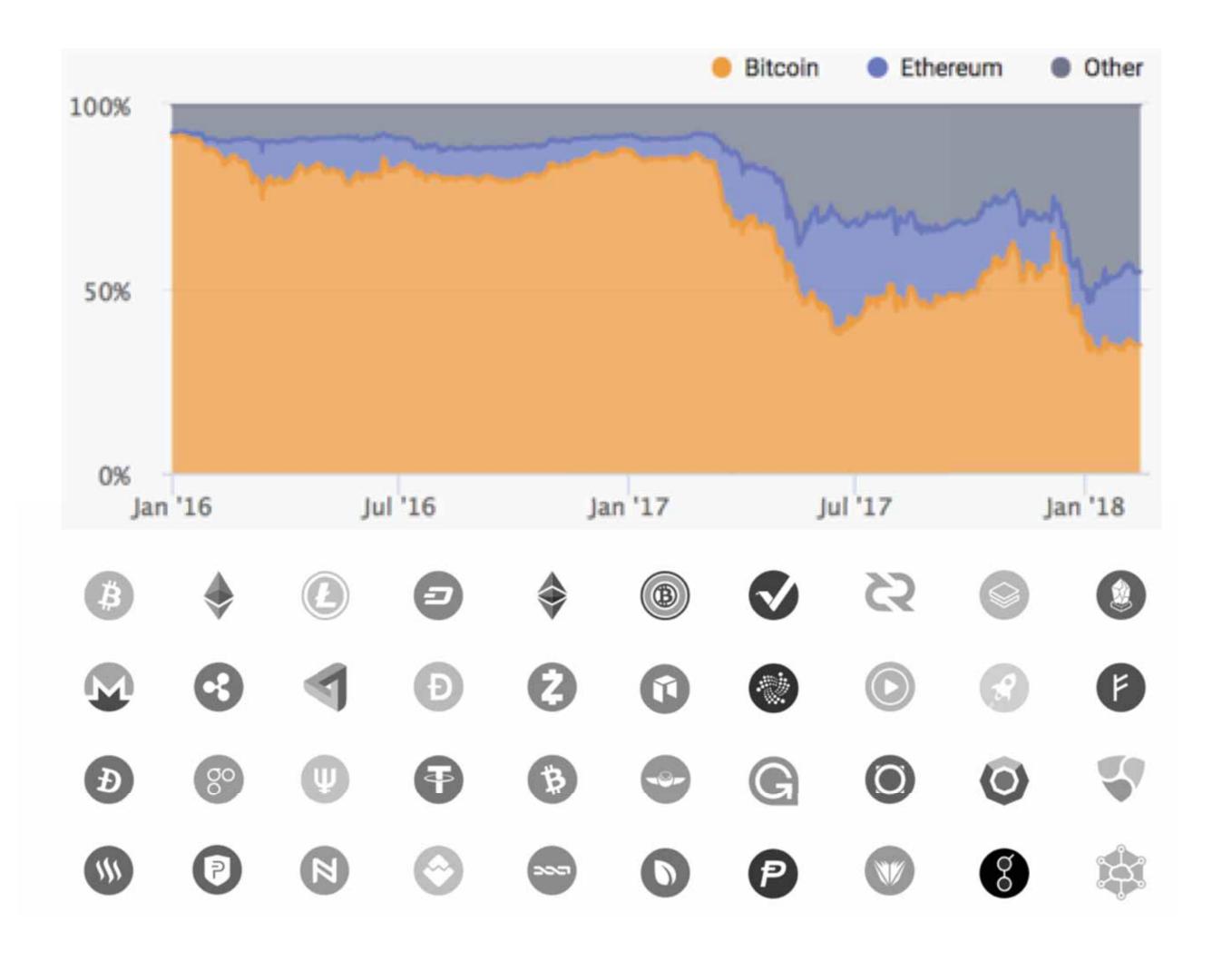
Private Blockchain = no cryptoasset



Public Blockchain = cryptoasset

"'Private blockchain' is just a confusing name for a shared database.'"

#### Diversification: The Crypto Market Is Changing



- In 2017, crypto's market cap grew from \$15B to more than \$300B.
- Bitcoin went from 85% of the market to less than 50%
- Today, more than 2,000 cryptoassets exist. Some competing, some doing different things.

## Diversification: The Crypto Market Is Changing

- Nothing guaranteed safe bet, as we've seen in the past.
- Multiple cryptoassets have interesting features.
- Exogenous, unforeseen events can help or harm an asset.
- The space is evolving rapidly.









## Diversification: The Crypto Market Is Changing

Monthly Performance Across The Top 10 Assets Varies Widely

The average monthly dispersion between the top and bottom performer over this time period was 300%.

Not Everything Moves In The Same Direction

During the 60%+ drawdown in Bitcoin from December 2017

– March 2018, three of the top 10 cryptoassets posted positive returns, with one rising 69%. Daily, weekly and monthly correlations were low.

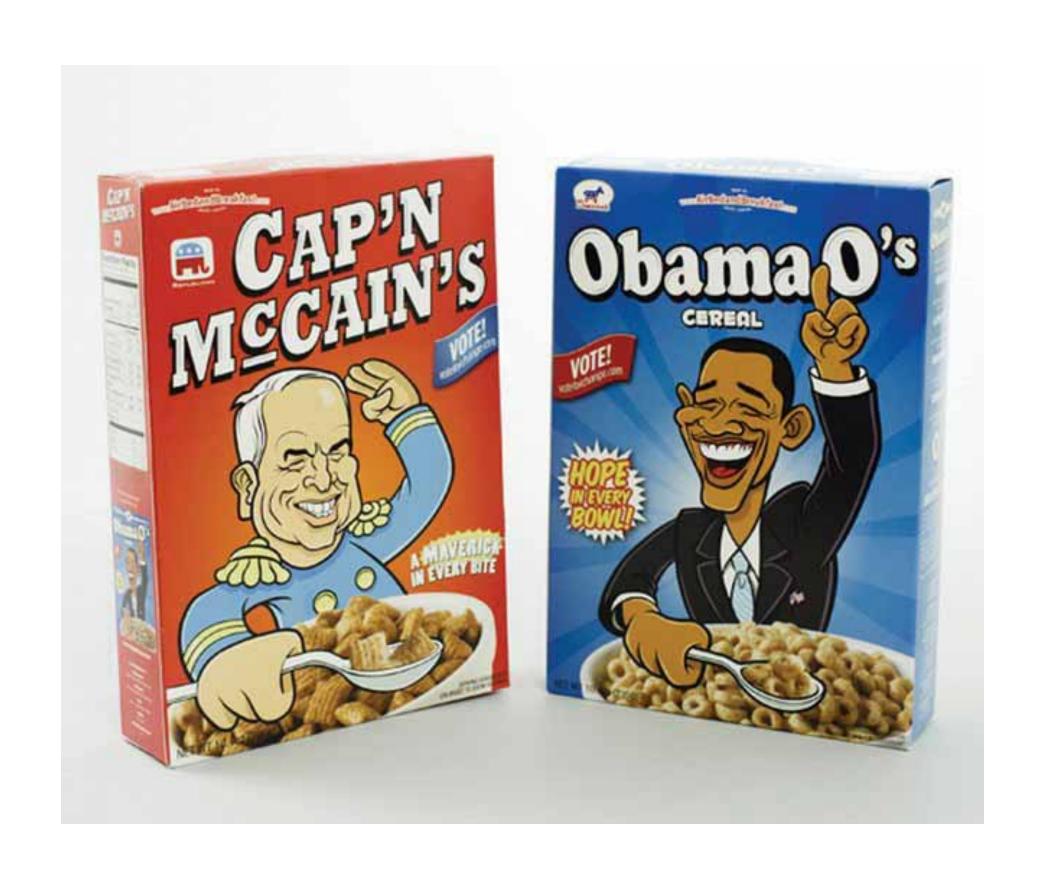
No Asset Is Consistently The Top Performer
Only twice in 12 months did the top-performing crypto
asset repeat as the best performer in the following month.



Data as of February 28, 2018. Source: Coinmarketcap.com.

## Volatility and Time Horizon

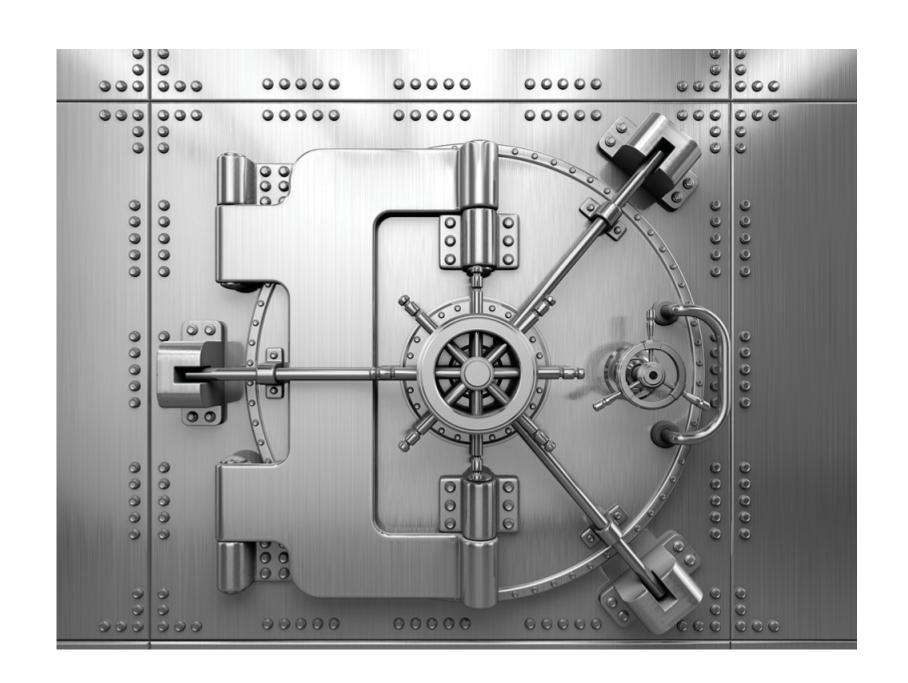
- Bitcoin prices are up 136% over the past 12 months
- Bitcoin has a history of significant drawdowns, including:
  - 93% in 2011
  - 40% in 2012
  - 69% in 2013
  - 83% from 2013-2015
  - 69% from 2017-2018
- Crypto is like an early-stage venture capital investment but liquid and repriced daily.
- High potential returns, high volatility, high risk, and a multi-year return horizon.



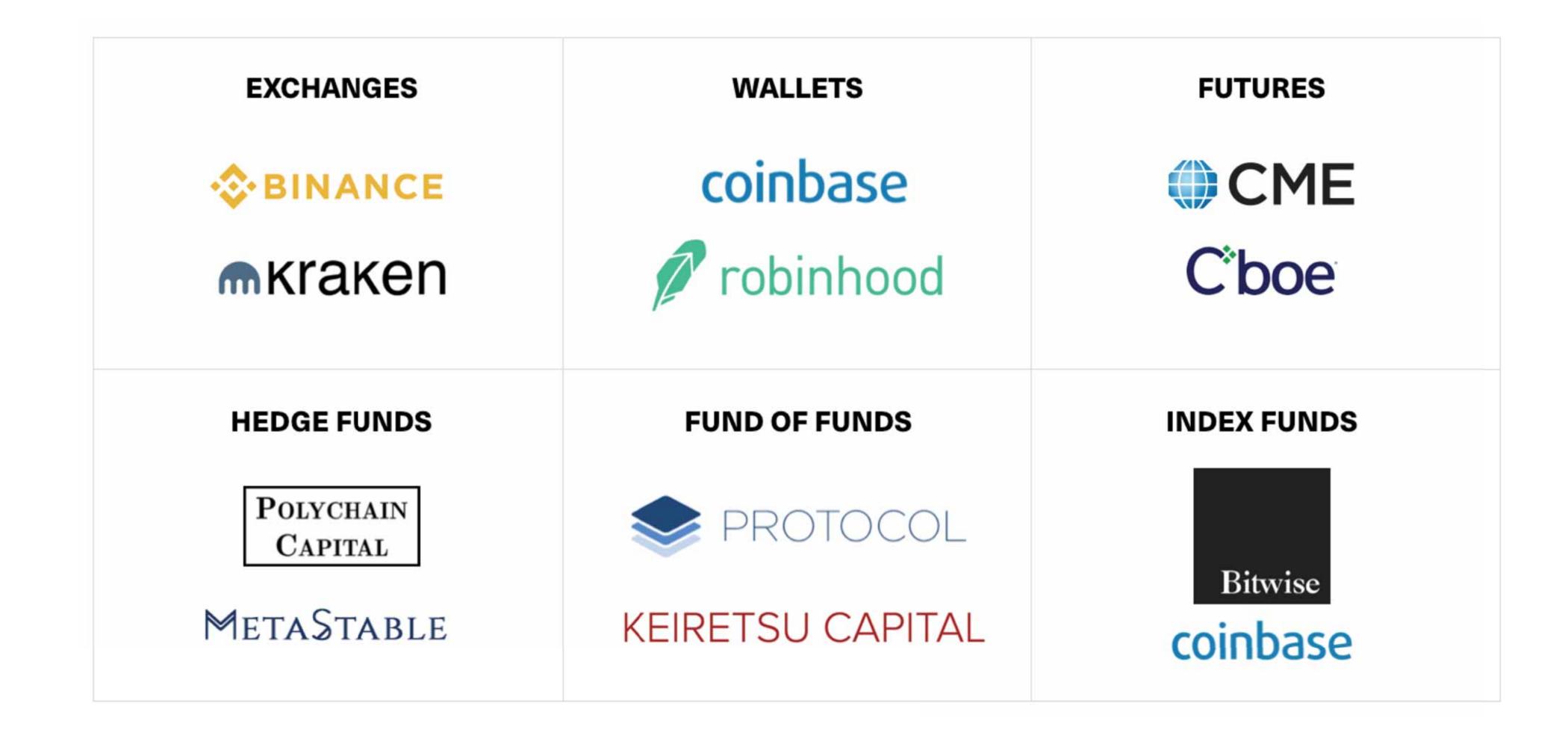
## Custody: Critical and Important to Understand

Many different approaches are available, and the space is evolving rapidly. Currently three main options:

- 1. On-exchange: convenient and good security but have to use "hot wallets" and have a history of hacks.
- 2. Self-custody: full control but complex, error prone, and slow.
- 3. Custodian: state-of-the-art is "cold storage" with multi-signature configuration.



## The Investing Landscape



# Bitwise Asset Management

Secure cryptoasset index investing



# Leadership Team



Hunter Horsley

CEO

Previously Product Manager on monetization at Facebook and Instagram. Launched \$300M in revenue and added over 100M MAU. Before that a Wharton Graduate.



Hong Kim

CTO

Previously Software Security
Researcher in Korean Military,
before that Software Engineer on
Google Drive. Computer Science
Graduate at University of
Pennsylvania.



Teddy Fusaro

COO

10 year ETF Veteran. Previously SVP at NYLife Investments (\$550B AUM), SVP and Head of PM at Index IQ (\$5B AUM), VP at Direxion (\$10B AUM), and credit trader at Goldman Sachs.



Matt Hougan

Global Head of Research

15 year veteran of ETF industry & well known industry expert.

Previously CEO of ETF.com, former managing director at Informa, Chairman of InsideETF, Forbes & WSJ Columnist.



Martha Shear

MD, Head of Business Development

Previously Director at Commonfund (\$25B AUM) working with Foundations & Endowments, before that VP at BlackRock iShares, member of Investment Committee for institutional specific turnkey solutions.



John T. Hyland, CFA

Global Head of Exchange-Traded Products

30 year veteran of ETF industry & well known industry expert. Previously CIO of US Commodity Funds (\$7B AUM), famous for launching firs oil, natural gas, and copper ETFs. Former president of SF CFA Society.

#### Bitwise HOLD 10 Private Index Fund

- S&P 500 for crypto
- Top 10 cryptoassets by 5-year diluted market cap.
   ~80% market coverage. Rebalanced monthly.
- Eligibility criteria: trade volume, concentration, compliance, history requirements
- Trading, custody, taxes, audit, reporting
- Claims hard forks, airdrops, staking rewards
- Open to all accredited investors; nearly 600 LPs



Past performance is not indicative of future results. Source: Bitwise Asset Management. Data from 1/1/17 through 6/23/18. \*HOLD 10 data prior to October 1, 2017, is backtested. Source: Bitwise. Data from 1/1/2017 - 6/23/2018. Performance of an index is not illustrative of any particular investment. It is not possible to invest directly in an index. The dashed line of the HOLD 10 Index represents a hypothetical, back-tested and unaudited return-stream that does not represent the returns of an actual account. Index performance does not include the fees and expenses that are charged by the Fund. Actual returns may differ materially from hypothetical, back-tested returns. Back-testing is calculated by retroactively applying a financial model or Index-weighting methodology to the historical data to obtain returns. Please refer to additional important disclaimers at the end of this presentation. The inception date for the index is October 1, 2017.

#### How Bitwise Works With Financial Advisors

- Direct investment in the HOLD 10, either off-book or working through your custodian
- Research into crypto, return drivers and crypto's role in a portfolio
- Partnered webinars, workshops and events
- Surveys and peer benchmarking



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Expense Ratio includes the management fee, custody charges for holding the fund's assets charged by the custodian, and customary fees and expenses of the fund administrator and auditor. Please refer to important additional disclaimers at www.bitwiseinvestments.com/disclaimers

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#### Fund Can't Track Index Exactly

The Fund will have losses, liabilities and expenses that will offset its income and gains and therefore the Fund's performance may be below the Index's performance. In addition, the performance of the Fund and the Index may vary somewhat due to other factors such as imperfect correlation between the Fund's investments and Index composition, regulatory restrictions, high portfolio turnover rate, rounding of prices and timing differences associated with additions to and deletions from the Index and the Fund.

#### Hypothetical Returns

The historical back-tested performance of the HOLD 10 Index was calculated by retroactively applying the Index Methodology (a financial model, or set of rules for calculating Index constituents and weightings) to an historical set of data in order to arrive at hypothetical Index performance. This performance history is not the performance of any actual account, but rather the result of applying a set of mathematical rules to a set of historical data in order to arrive at the hypothetical results of how the Index would have performed if it had, in fact, been in existence during the historical period. Actual returns from live portfolios will differ materially from the back-tested, hypothetical Index returns. Hypothetical returns do not reflect the macroeconomic risks of using an investment strategy in a different time period or the financial risk of executing trades in a live portfolio which include the potential market impact on cryptocurrency prices caused by buying or selling that could cause the model's buy or sell prices to differ from the frictionless trades of the back-tested model. As the back-tested returns simulate the historical hypothetical performance of an Index, hypothetical investment fees associated with investing in a Fund tracking this hypothetical index (including trading commissions, brokerage fees, management fees, or other fees) have not been included in (by reducing) the historical performance. Although the information on this Website provides some idea of the historic risks involved in investing in a portfolio designed to track the HOLD 10 Index, past hypothetical performance is not a guarantee of future returns. Backward looking performance cannot predict how any investment strategy will perform in the future. The inception date of the HOLD 10 Index is October 1, 2017.

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#### Questions



Hunter Horsley
Chief Executive Officer



Martha Shear
Managing Director, Head of
Business Development



Phil Glazer Cryptoasset Research

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- 5.Click on the webcast you are interested in and complete the short questionnaire and print the "Certificate Of Completion" page for your records.
- 6. The webcast credit will be reported by *Financial Advisor* magazine the first week of the new month for the previous month. Allow 10 business days for the credit to be posted on your account.

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