



wavemaker

- PARTNERS -

STATE OF  
CRYPTOCURRENCY  
& BLOCKCHAIN:  
GLOBAL OVERVIEW

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December 8, 2017

# Wavemaker Partners is an Early Stage Venture Investment Firm

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Dual headquartered in Los Angeles and Singapore

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Founded 2003

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Five Venture Capital Funds

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Invested in ~250 portfolio companies

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\$185M AUM

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Launching Wavemaker Partners 'Genesis Fund' - a \$40M fund focused on blockchain and cryptocurrency investments

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**Dave Siemer**

**Managing Partner | Los Angeles**

**Career:** Montgomery & Co., Siemer & Associates (acquired by China E-capital)

**Select Blockchain Investments:** BlockOne / EOS, Blockv / vAtomic, GEM, Coins.ph, DSX, WAX, Sensay, Gamma, Rightmesh



**Eric Manlunas**

**Managing Partner | Los Angeles**

**Career:** Arthur Andersen, Inter Foods (acquired by LA Reina), SiteStar (acquired by Lynchburg.net)

**Select Investments:** MindBody (NASDAQ), DigitalGlobe (NYSE), Stylehaul (acquired by RTL), Viagogo, Phunware, 17Hats



**Paul Santos**

**Managing Partner | Singapore**

**Career:** P&G, Indio (acquired by Dentsu), Vertex (acquired by Alorica)

**Select Investments:** Luxola (acquired by LVMH), Pie (acquired by Google), ArtofClick (acquired by Xurpas), Coins, Structo, Silent8, Adatos



# STATE OF CRYPTOCURRENCY AND BLOCKCHAIN: GLOBAL OVERVIEW



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01 . CRYPTOCURRENCY & BLOCKCHAIN IN 1 MINUTE

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02 . SIZE, DEPTH, AND MOMENTUM OF SECTOR

---

03 . CURRENCY FOCUSED TOKENS

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04 . PLATFORM / MARKETPLACE "UTILITY" TOKENS

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05 . ENTER ICOs

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06 . INCREASINGLY BROAD CRYPTOCURRENCY DEMAND

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07 . RISE OF SMART MONEY

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08 . A LOT OF CHALLENGES TO OVERCOME

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09 . FINAL THOUGHTS

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SECTION ONE:

# CRYPTOCURRENCY & BLOCKCHAIN IN ONE MINUTE



# Blockchain and Cryptocurrency in One Minute

## BLOCKCHAIN

Decentralized, distributed ledger based, encrypted digital platform to facilitate and record transactions *in the absence of trust*. Transaction history recorded on the shared ledger cannot be altered.



## CRYPTOCURRENCIES

Two Types:

1. Currencies like Bitcoin or Dash which are primarily designed to function like fiat money.

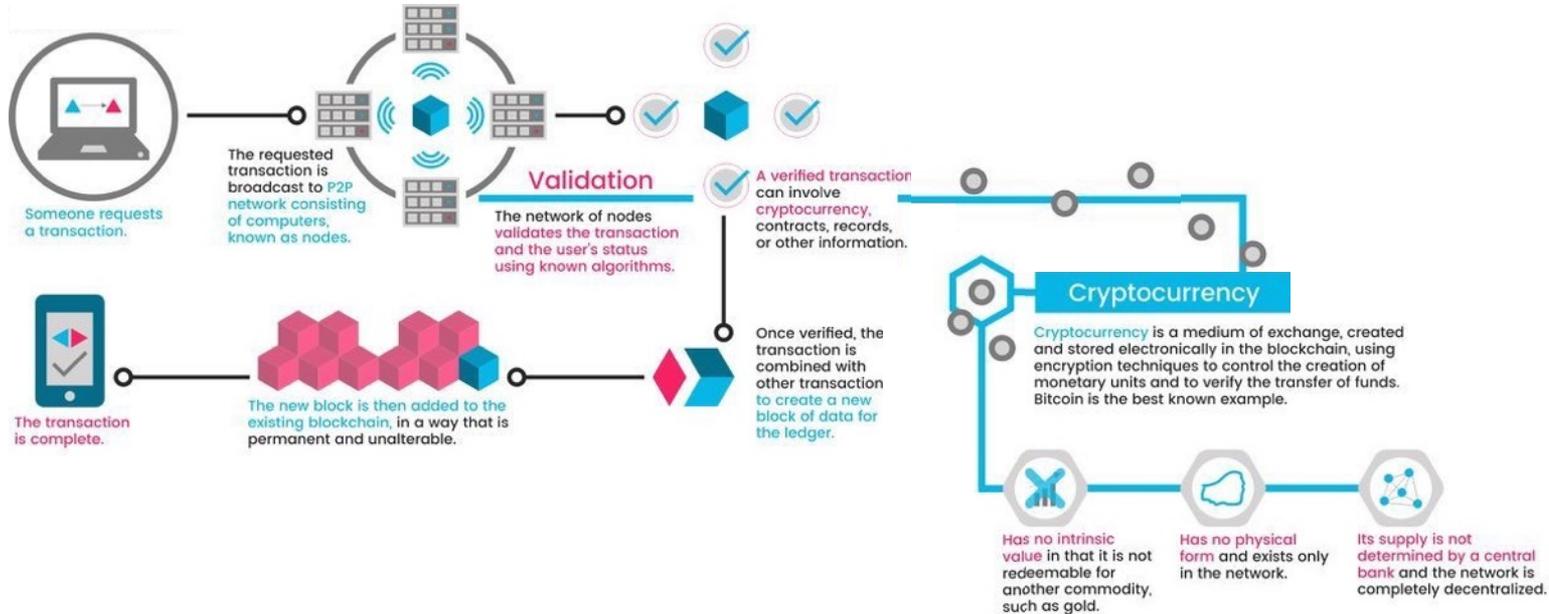


2. Utility tokens that have value as the 'gas' to a specific engine that can provide a decentralized platform with a means of exchange for services



# Basic Blockchain Aspects

## How it works



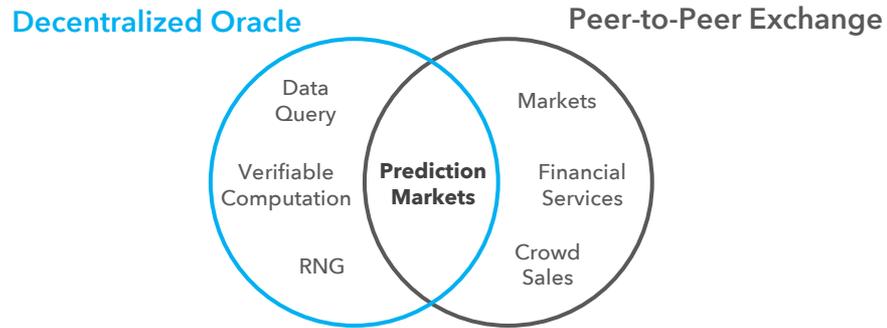
Source: [www.ethereumkaufen.ch/was-ist-ethereum/](http://www.ethereumkaufen.ch/was-ist-ethereum/)



# Protocol Networks vs Distributed Applications

## Protocols (Ethereum, NEO, EOS)

- Cryptocurrency that uses a set of cryptoeconomic rules to maintain distribute consensus across a network.
- Generally, protocols create financial incentives to drive a network of rational agents to coordinate behavior towards completion of a process.
- Protocols usually provide for smart contracts and other tools that allow rapid application development



## DApps (Augur, WAX, GameCredits, Private Blockchain Tools)

- Distributed Application, typically built on top of protocol networks.
- Utilize Protocol networks infrastructure, issue own token for payments within marketplace

Source: [www.0xproject.com](http://www.0xproject.com)



SECTION TWO:  
**SIZE, DEPTH, & MOMENTUM OF THE SECTOR**



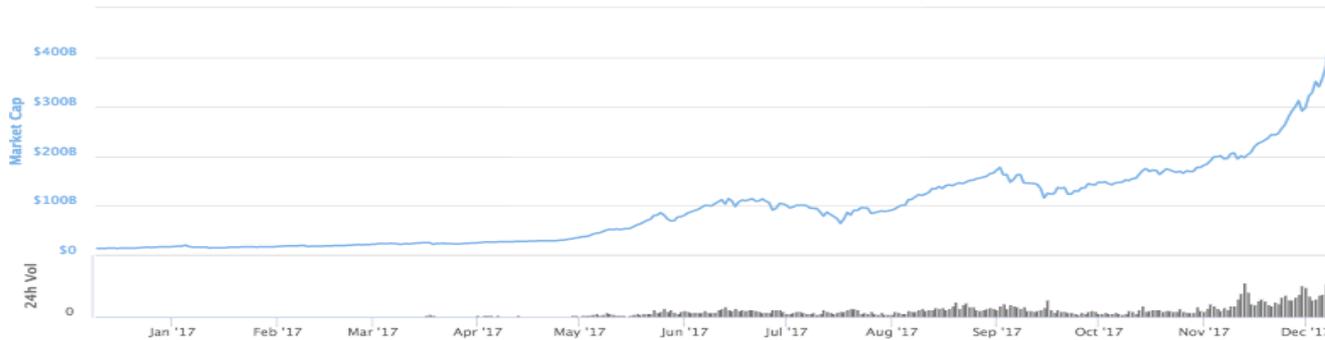
# The Rise of Cryptocurrency

Bitcoin gets most headlines, but other currencies have increased far faster

## Token Unit Price

CRYPTO	Dec 8 <sup>th</sup> 2016	Dec 8 <sup>th</sup> 2017	% Increase
 <b>bitcoin</b>	\$772	\$14,200	1,839%
 <b>ethereum</b>	\$9	\$480	5,233%
 <b>NEO</b> <small>Next-Gen Blockchain</small>	\$0.13	\$36	27,692%
 <b>DASH</b>	\$9	\$726	8,066%

## Value of All Cryptocurrency Tokens - Last 12 Months

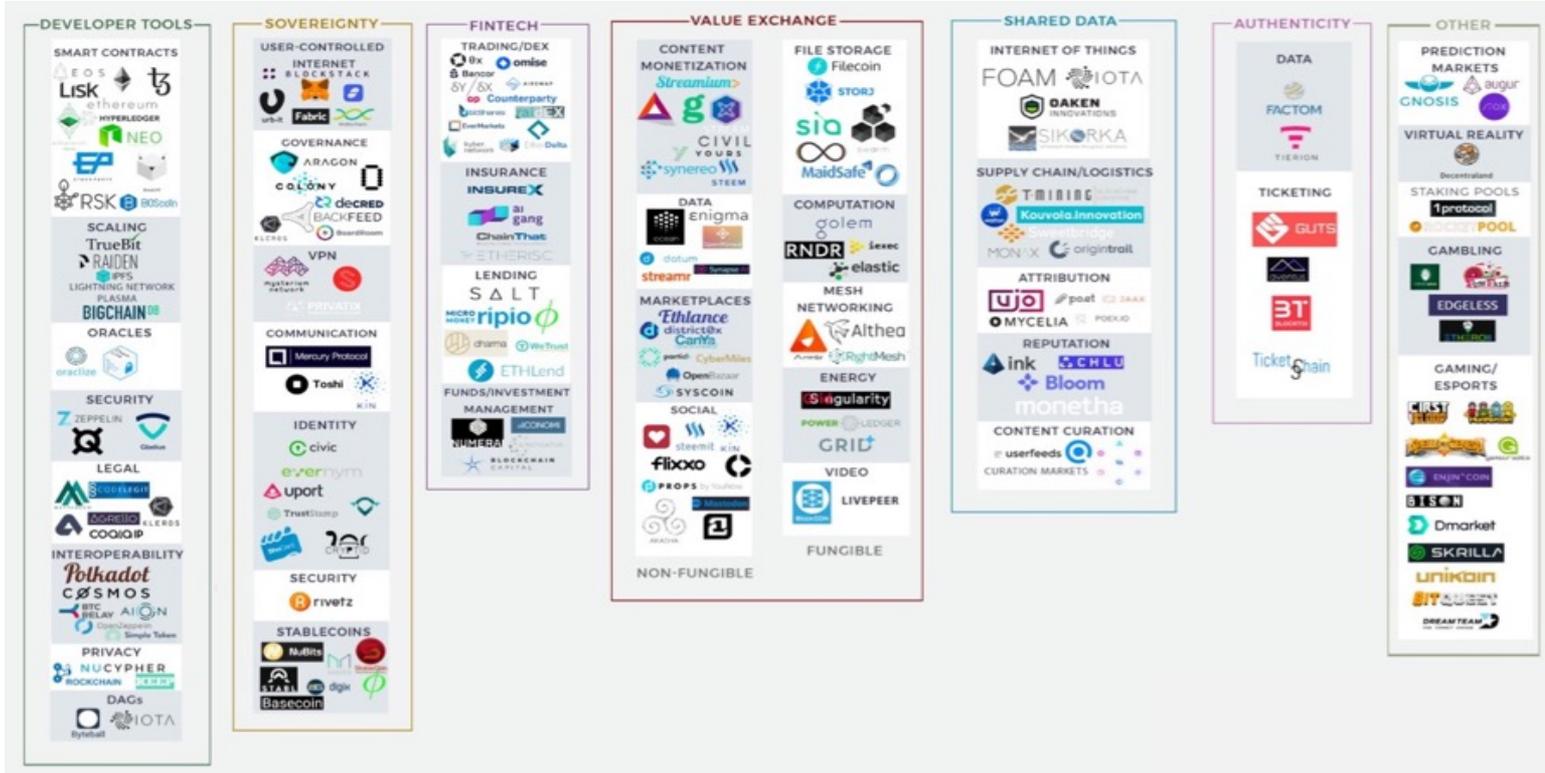


Source: CoinMarketCap.com



# State of Cryptocurrency

## 1,300 Currencies Live and Trading

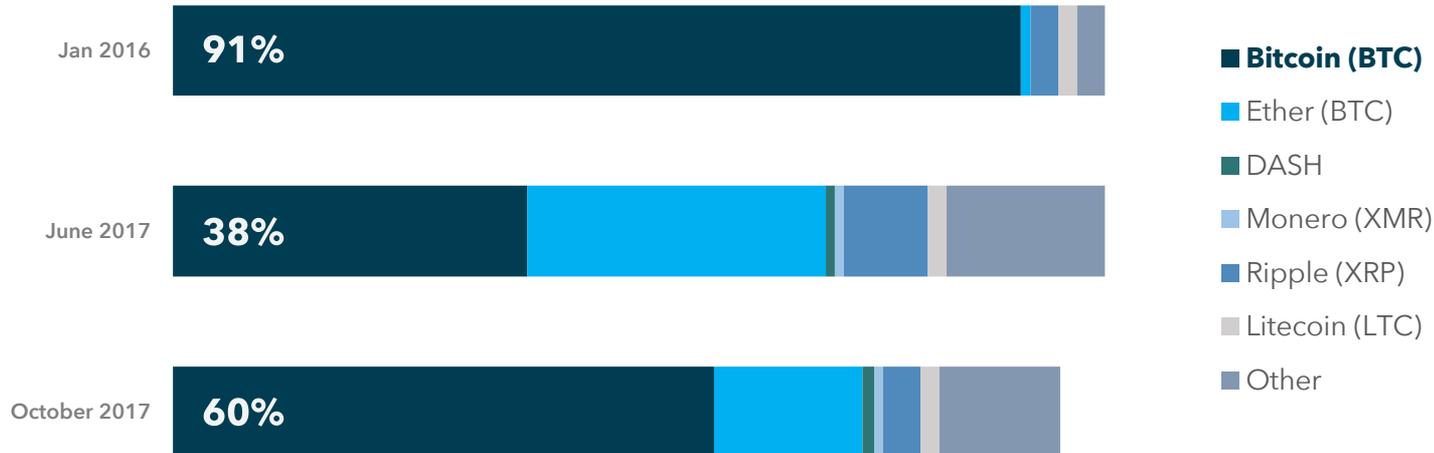


Source: CoinMarketCap.com. As of Nov. 19, 2017



# Bitcoin Market Share From 91% to 38% in 18 Months, then Bitcoin Rebounds

## Portion of Total Cryptocurrency Market Capitalization



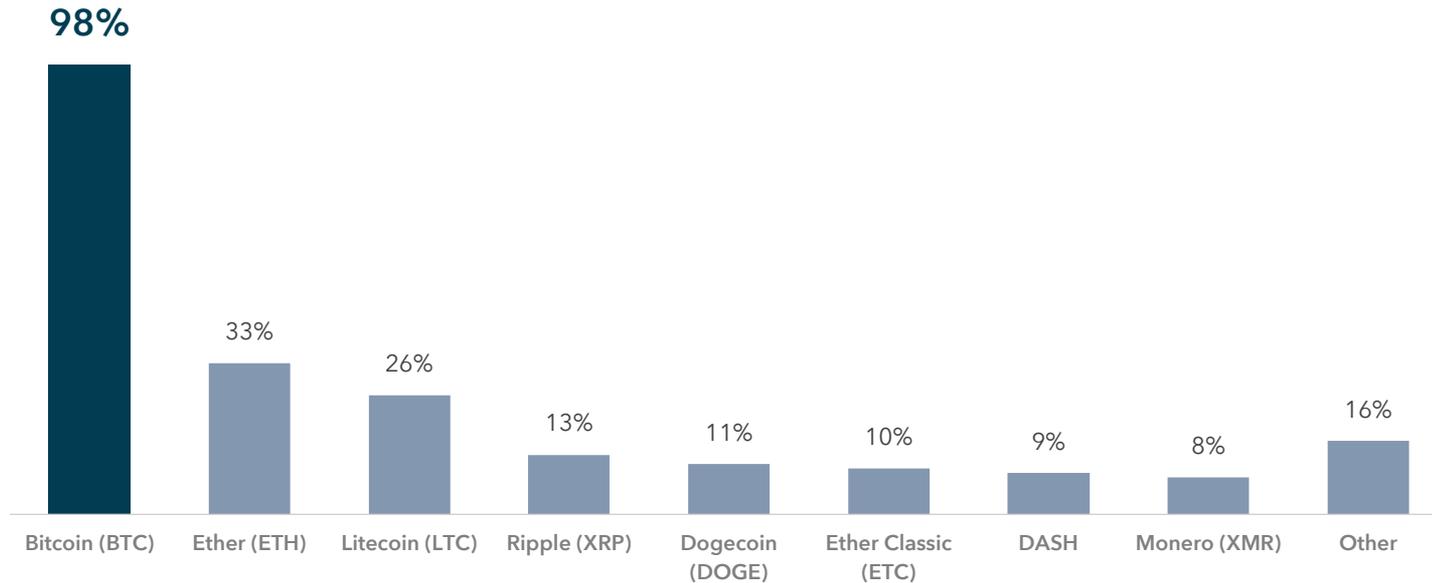
Source: CoinMarketCap.com



# 180 Exchanges and 250 Wallets Globally

Bitcoin is still the only crypto universally used across exchanges, wallets, and payments

% of Exchanges and Wallets Supporting Each Token



Source: Cambridge - Global Cryptocurrency Benchmarking Study, 2017



# Rapid Blockchain Adoption by World's Largest Financial Institutions

## The march of financial services firms into Bitcoin and Blockchain startups

Date of Deal, Q214 - Q217



Source: CB Insights



# Famous Advocates

**Peter Thiel** [Co-Founder | PayPal](#)

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"I do think Bitcoin is the first [encrypted money] that has the potential to do something like change the world."

**David Marcus** [CEO | PayPal](#)

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"I really like Bitcoin. I own Bitcoins. It's a store of value, a distributed ledger. It's a great place to put assets, especially in places like Argentina with 40 percent inflation, where \$1 today is worth 60 cents in a year, and a government's currency does not hold value. It's also a good investment vehicle if you have an appetite for risk. But it won't be a currency until volatility slows down."

**John McAfee** [Founder | McAfee](#)

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"You can't stop things like Bitcoin. It will be everywhere and the world will have to readjust. World governments will have to readjust."

**Ben Bernanke** [Former Chairman | Federal Reserve](#)

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"[Virtual Currencies] may hold long-term promise, particularly if the innovations promote a faster, more secure and more efficient payment system."

**Bill Gross** [Janus Capital Group](#)

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"Bitcoin and privately agreed upon blockchain technologies amongst a small set of global banks, are just a few examples of attempts to stabilize the value of their current assets in future purchasing power terms. Gold would be another example – historic relic that it is. In any case, the current system is beginning to be challenged."

**Al Gore** [Former US Vice President, Nobel Peace Prize Winner](#)

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"I'm a big fan of Bitcoin... regulation of money supply needs to be depoliticized."

**Bill Gates** [Co-Founder | Microsoft](#)

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"Bitcoin is a technological tour de force."

**Leon Louw** [Nobel Peace Prize Nominee](#)

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"Every informed person needs to know about Bitcoin because it might be one of the world's most important developments."

**Milton Friedman** [Winner, Nobel Prize in Economics](#)

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"I think the internet is going to be one of the major forces for reducing the role of government. The one thing that's missing, but that will soon be developed, is a reliable e-cash."

**Richard Brown** [Winner, Nobel Prize in Economics](#)

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"So my view's quite clear. I believe cryptocurrencies, Bitcoin is the first example, I believe they're going to change the world..."

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# Crypto ATMs Surge

Despite a 8.6% average transaction fee, each ATM averages ~\$25,000 per month in volume - 95%+ of transactions are deposits of fiat money for bitcoin\*

Number of Bitcoin ATMs installed over time\*\*



\* Source: bitcoin.com

\*\* Source: coinatmradar.com

\*\*\* Source: CoinTelegraph

Same as a regular ATM, just with added crypto features



**Korea's Hyosung (world's 3<sup>rd</sup> largest ATM manufacturer) Now Supports Bitcoin at ATMs, Will Soon Add Ethereum\*\*\***



# Crypto ATMs Breadth

## 1,751 Bitcoin ATMs in 58 Countries\*



\* Source: [coinatmradar.com](https://www.coinatmradar.com)



# Payment Providers and Largest Companies to Accept Bitcoin

## Several of these do not yet take crypto in the USA

### PAYMENT SYSTEMS

Intuit
PayPal/ebay
Stripe
Square
NCR
Shopify
Rakutan
Gyft
SimplePay
+40 More

**These enable payments for 25M global merchants**

### COMPANIES

Expedia.com	1-800-Flowers	CVS
Amazon	CheapAir.com	Kmart
Apple	Newegg.com	Limited
Whole Foods	Wikipedia.com	BigFishGames.com
Zynga	Steam	Suntimes.com
Microsoft	Mint.com	GameStop
Time, Inc.	Bloomberg.com	Braintree
Overstock.com	JC Penney	TigerDirect
Tesla	Dell	Lionsgate Films
Subway	Dish Network	RE/MAX
Etsy	Google	WebJet
Reddit	Gap	
Virgin Airlines	T-Mobile	

**120,000 merchants now accept bitcoin, another 400,000 have announced plans to accept bitcoin**

**“ Real estate project in Dubai to be the 'first major development where you can purchase in bitcoin' ”**

**Sept 5, 2017**

A 250 million pound (\$325 million) luxury development has been launched in Dubai – and the people behind it don't mind if you pay in bitcoin.



Source: CNBC



# Merchants Save 2-12% Using Cryptocurrency Instead of Credit Cards

## Finally Seeing Proper Incentives from Merchants

### U.S., First World Countries

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2.3-3.0% CC processing fees

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0.5 to 1.0% in chargebacks for fraudulent use

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**Average cost: ~3.0%**

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### Developing World

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4.0-10.0% CC processing fees

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1-5% chargebacks for fraudulent use

---

**Average cost: ~7.0%**

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3% off

Pay with Bitcoin



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Visa/Amex/MC strongly discourage cost sharing with customers

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Bitcoin transactions now cost about USD \$6.00, regardless of transaction size, but this has been dropping and is expected to be below \$3.00 by year end. Most other cryptocurrency tokens are less than \$0.01 per transaction.

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Bitcoin-accepting merchants are starting to share savings with consumers - driving adoption

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Merchants typically use crypto payment service providers that process transactions and manage currency risk

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**bitpay**

 **BitGo**



# Total Number of ACTIVE Wallets Increased 8.8 million to 17.1 million

Another ~100M inactive wallets, mostly smartphone apps

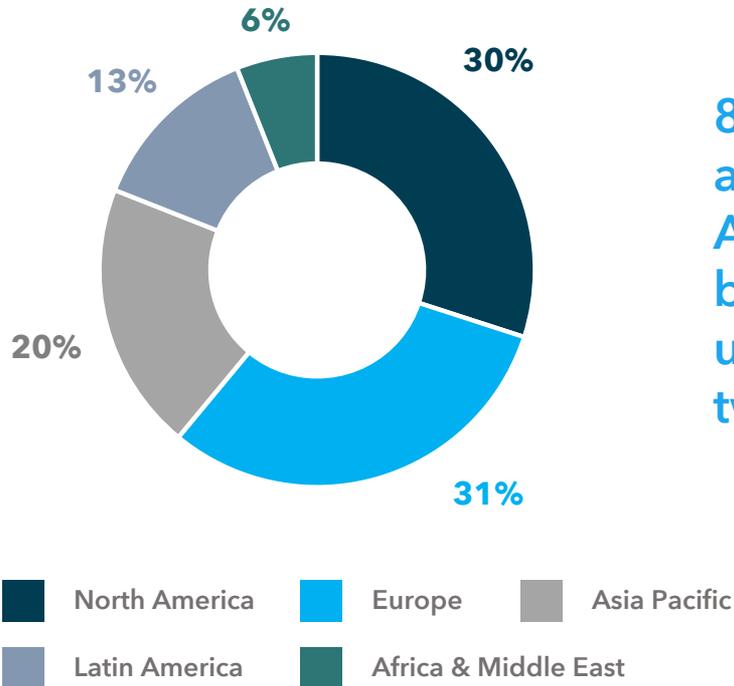
## Number of Current Active Wallets



Source: Blockchain.Info



## Greatest number of wallet users are based in North America and Europe

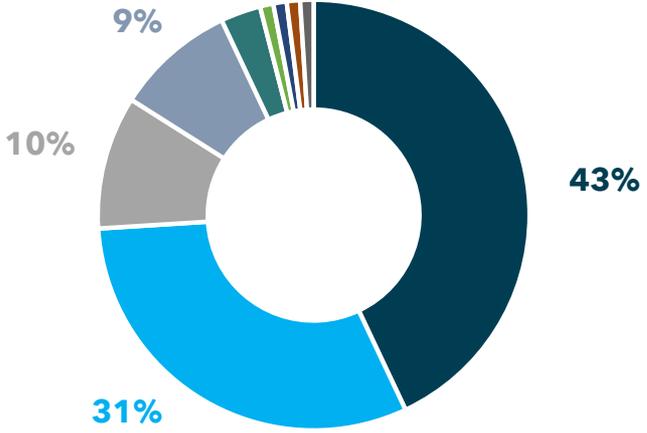


81% of wallet providers are based in North America and Europe, but only 61% of wallet users are based in these two regions

Source: Cambridge - Global Cryptocurrency Benchmarking Study, 2017



# China dropped from 85% of total bitcoin trading to 9% in one month following ban



**BTC Exchange Trading Volume Share by National Currency in the Past 30 Days**

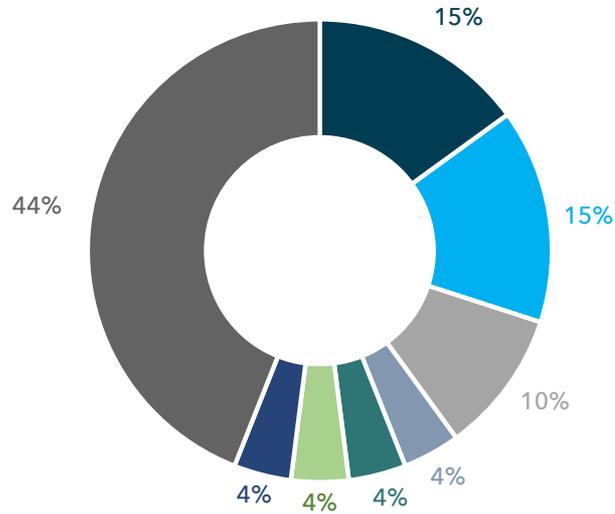
- JPY
- USD
- EUR
- CNY
- KRW
- GBP
- RUB
- BRL
- PLN

Source: Cambridge - Global Cryptocurrency Benchmarking Study, 2017



# 65 Payment Companies from 27 Countries

Crypto payments platforms operate in almost every country



**'Other' is the important category - cryptocurrency payments companies cover 96% of the worlds population**



Source: Cambridge - Global Cryptocurrency Benchmarking Study, 2017



# Vertical Integration:

## 31% of study participants are operating across at least two industry sectors

Industry Sectors	Primary Function
Exchanges	Purchase, sale, and trading of cryptocurrency
Wallets	Storage of cryptocurrency
Payments	Facilitating payments using cryptocurrency
Mining/Processing	Securing the global ledger ("blockchain") generally by computing large amounts of hashes to find a valid block that gets added to the blockchain

Source: Cambridge - Global Cryptocurrency Benchmarking Study, 2017



SECTION THREE:  
**CURRENCY FOCUSED TOKENS**



# Cryptocurrency - Replacement for Fiat Currency

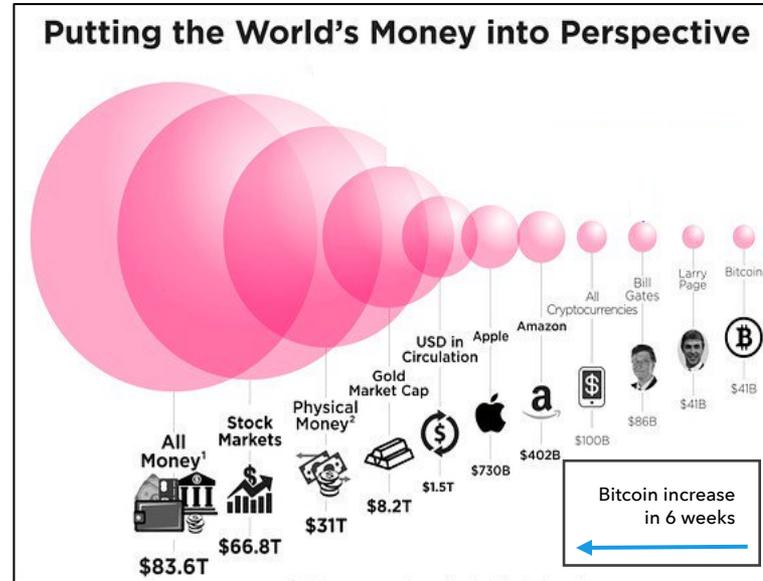
## Why will crypto replace fiat currencies?

**It's simply better in most ways. Some simple math with a little macro economics:**

- \$86T - this is the total sum of all money in the world (M2 money supply) - spread across 180 currencies. The vast majority is in the world's biggest economies - US, China, Europe.
- But a lot of money is also in some really ugly economies - e.g., Venezuela, Sudan, Nigeria, etc.... There are about 30 economies with associated problematic currencies:
  - 20%+ inflation per year
  - Corrupt leadership
  - Abhorrent monetary policy
  - The wealthy move all their money to other currencies or global stock markets immediately.

**So why do the middle class and poor hold damaged currency?**

- Because they have no other options.



# Cryptocurrency - Replacement for Fiat Currency (cont.)

## Why will crypto replace fiat currencies?

### **Banks don't want poor customers, even in the US - they are not profitable.**

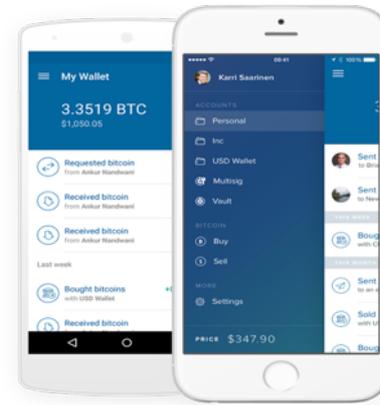
- Keep small deposits, don't use more expensive services like mortgages - banks make essentially no revenue from them
- Do need lots of human services (tellers) - problems with check/deposits, overdrafts, records and management overhead, etc.
- All banks would love to drop

### **A crypto wallet is basically a feeless bank that can be placed in a pocket (smart phone)**

- Easy, low-fee, secure digital transactions
- Deposit account / store of value / savings account
- Debit card
- Wire transfer desk / global remittance platform
- Record book / bank statement / transaction history

**For the 3B unbanked adults in the world, this is life changing. Even for first world consumers, this is a meaningful upgrade.**

**So what happens when lots of consumers switch to crypto?**



# Cryptocurrency - Replacement for Fiat Currency (cont.)

## Near Term Case Study: Venezuela

### Vicious Cycle - Before Crypto:

- Little tax revenue as economy is practically destroyed
- Government prints money to pay soldiers and pay debts
- Inflation soars as the currency base is multiplied - now at 2,000%
- The people do whatever they can to NOT hold local money - it declines 50% every month - so buy whatever they can find (canned goods, toilet paper) and barter
- This makes the currency even less valuable - increasing inflation and lowering tax revenue
- Repeat

### Enter Bitcoin

- People have a good means of holding money - better than the fiat in every way
- Adoption is soaring, which means even less fiat money moving through system - less to tax.
- Government still needs just as much to meet budget - so is printing even more to pay bills
- More money printing against a lower base spikes inflation even higher.
- This pushes even more consumers to switch to Bitcoin
- Repeat

Average Venezuelan Adult spends 4 hours per day waiting in line to spend Bolivar - then use goods to barter.



**“Venezuelans Turn to Playing Runescape In Order To Survive”**

BitcoinNews.com



# What is Money?

## Network Effects are All that Matter

All moneys that are not backed by a commodity rely exclusively on a combination of perceived value and network effect – revealed through supply and demand. Simply, the more people that agree that a piece of paper with a number on it has value, the more value it has.

Precious metal coins were the standard for ~3,000 years, then paper money backed by such metals. Only in 1971 did the USA drop the gold / silver standard, quickly creating the world's most prevalent and distributed currency – now at almost \$12T (M2).

Cryptocurrency is the ultimate form of money. As each token is highly secure, easily portable, infinitely divisible (effectively), and is becoming widely available – it is being increasingly adopted globally.

- This virtuous cycle is self-fulfilling – the more people that hold cryptocurrency the more value it has – same as fiat currency. As more people begin using cryptos the price rises on demand (supply only grows very slowly). As more merchants accept cryptos, the more value it has for consumers.
- All leading indicators are positive
  - Growth in active Crypto wallets is accelerating – approaching 1M per month
  - Growth in merchants accepting crypto is surging – likely doubling in the next 3 months
  - The tools to utilize cryptos are advancing rapidly – better exchanges, wallets, and payment systems – and better integration of each
  - Hundreds of crypto technologies are funded each quarter – expanding the market use cases
  - Media coverage is now constant. 78% of US citizens know what bitcoin is, up from 48% just six months ago.
  - 13 countries are actively exploring launching their own cryptocurrencies. Whether they succeed is debatable but the awareness these efforts will bring is enormous.

Source: Forbes – Four Facts About Bitcoin - 2017;



# Currency Replacement Opportunity

## Should a Country's Populations Start Adopting Cryptocurrency?

To Absorb Money Supply the Value Needs to Multiply By:

Country (3yr avg. inflation)	Money Supply (M2)	Expansion Multiple
Cryptocurrencies Designed as Fiat Currency Replacements	\$250B	-
Venezuela (300%)	\$300B	1.2X
Nigeria (20%)	\$350B	1.4X
Argentina (32%)	\$420B	1.7X
<b>Bottom 30 (23%)</b>	<b>\$4,000B</b>	<b>16.0X</b>
<b>Replace Entire World's Currency</b>	<b>\$86,000B</b>	<b>344.0X</b>

Source: Wikipedia



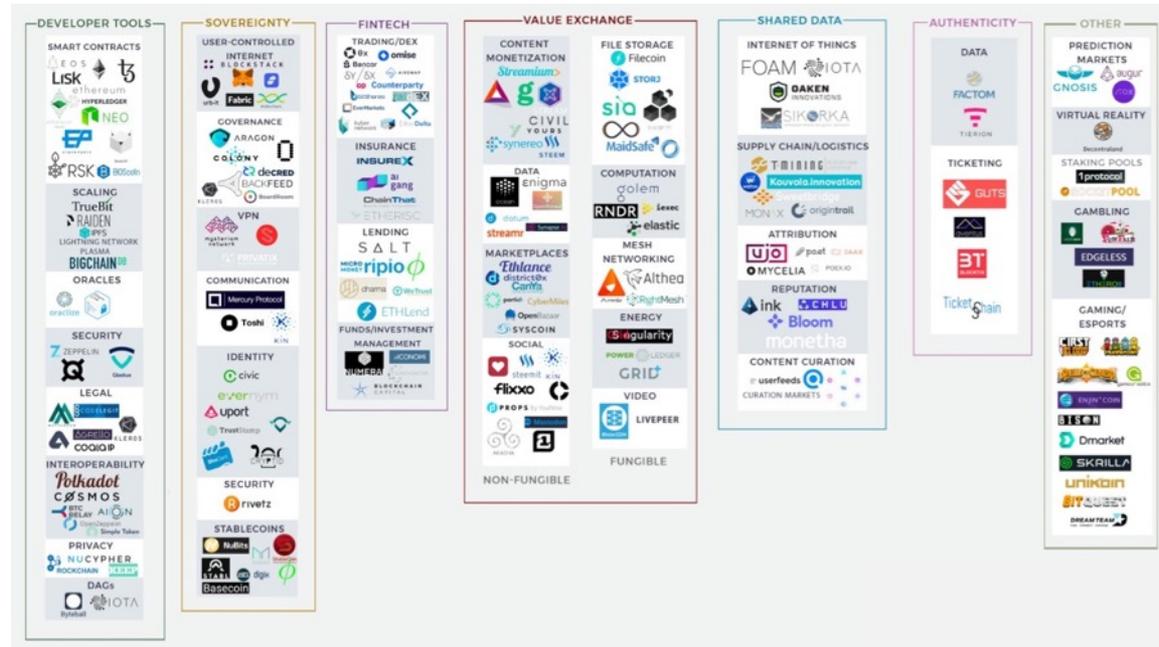
SECTION FOUR:

**PLATFORM / MARKETPLACE 'UTILITY' TOKENS**



# Decentralized Software and Utility Token

-  ethereum is the most prevalent, but there are 1,300 utility tokens
- The “utility” of each token is to fuel a process – e.g., software or service as opposed to simply replacing a fiat currency (e.g., bitcoin)
- Buyers of tokens want a digital service performed. They exchange token for said service. Typically, the party performing the work earns tokens



Source: Compound; www.medium.com



# Decentralized Software and Utility Token (cont.)

## Simple example: Filecoin (see HBO's Silicon Valley)

- Large demand for online storage (records, media storage, data storage, etc) supplied by Amazon AWS, MS Azure, Dropbox, etc. Those cloud companies build huge data centers and sell capacity.
- Lots of people have excess storage on their devices (computers, phones) from which they receive no utility.

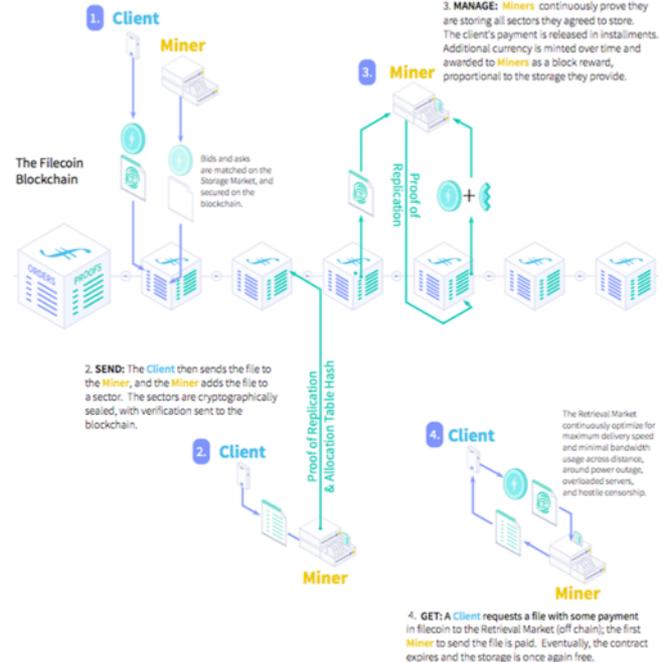
## Enter Filecoin

- Allows individuals and corporations with extra storage to sell it to those that require a lot of storage. Those with extra storage will sell it for far less than a company that had to build huge server farms. It's just excess right now – so might as well make a few coins letting someone else use it.
- Sellers and buyers are both better off – centralized storage providers lose out.

Source: Filecoin.com

## Filecoin: Lifecycle of a File

1. **PUT:** Clients send information about the file, storage duration, and a small amount of filecoin to the Storage Market as a bid. Simultaneously, Miners submit asks, competing to offer low cost storage. Deals are made in the Storage Market, on the blockchain.



# Industries Affected:

## Cloud Computing and Storage

**Distributed computing platforms like Storj, Sia, Gamma and Filecoin (and hundreds more) are seeking to disrupt the cloud computing and storage industry (worth a total of about \$550B):**

- Data Centers - 7,000 - \$36B
- Public Cloud Services (like Amazon AWS, Dropbox and MS Azure) - \$127B
- Content Delivery Networks (e.g., Akamai) - \$10B
- Other private data processing and storage that could move to blockchain - \$400B
- Expansion of market:
  - Large increase in new consumer and business services enabled by blockchain will drive growth
  - Cloud services already expected to expand to \$256B by 2022



Source: Accenture



# Industries Affected:

## Legal and Smart Contracts

### Legal Sector disrupted by Smart Contracts

- Blockchain based platforms can replace simple legal services (escrow, purchase agreements, leases, stock purchases). A simple smart contract where the associated ledger verifies compliance on both sides is all that is often needed.
- Less than 1% of contracts have a dispute arise, and those can be kicked out to an arbitrator.
- Globally, legal is a \$4T market.
- Estimates are that about 25% could be done with smart blockchain contracts - so \$1T could move to the blockchain.



Source: Accenture



# Industries Affected:

## Insurance

### Insurance (Excluding Health)

- \$4T global market today.
- Most forms of insurance are standardized and involve no human action. Policies are fairly simple math for most types (e.g., life, flood, auto, home/renters) that, along with access to public records, can easily be built into the blockchain, replacing many human costs.
- Just 60% of all insurance proceeds are paid out in claims, with 40% going to overhead and profits.
- 30+ blockchain startups already.

fidenciaX



iXledger  
Blockchain Insurance Solutions

YOcoin

Source: Accenture



# Industries Affected:

## Marketplaces and On-demand Services

### Online Marketplaces

These exist as users need a trusted intermediary to transact - each side can't trust the other to perform.

- Goods marketplaces like ebay take 9-15% of the value of transactions - \$250B gross in US alone. Only 1% of transactions have a dispute, and only 1% of those require human intervention.
- Services marketplaces take 10-40% of gross value
  - Uber is 20%, Soothe (massage) is 35%, Airbnb is 20%, Grubhub is 10-15%
- App Stores take 15-30% of purchases

Blockchain operates in the absence of trust - a simple smart, internet connected token can easily verify compliance by both sides and the release escrowed funds.

- There would still be some overhead for insurance and dispute resolution, but that is a very small cost factor.
- Expansion of market:
  - Large increase in new consumer and business services enabled by blockchain will drive growth

Source: [ibisworld.com](http://ibisworld.com)



# Industries Affected:

## Loyalty Programs and Gift Cards

Global loyalty and points programs generate ~\$120B annually

- These programs sit as liabilities on large airline and other affinity program issuers.
- By issuing tokens in place, the liabilities are removed
- Tokens would make these programs interoperable, which would provide far more value to consumers.
- Loyalty is generated by giving points, not redeeming them

Consumers spend ~\$700B on gift cards annually, an amount that is expected to grow at 24% per year for the next 7 years.

- Massive liability for issuers
- Large marketplaces emerging to swap or sell cards

Source: 2017 Forecast of US Consumer Loyalty Program Points Value; MarketWatch 2017



# Securitization / Tokenization of the World's Assets

## Blockchain Efficiencies Enable New Financial Instruments

Tokenization of existing assets – a stock market for everything:

- Division of large assets opens up massive numbers of buyers.
- The global property market is \$240T. Typical small investors can't easily bet on local real-estate values.
- Not many consumers can afford an entire classic Ferrari or a Van Gogh painting, but they believe those assets will continue to increase in value.
- Ownership can be tokenized and distributed, likely resulting in a higher value. This would also create liquid marketplaces for such assets.

Fan Engagement Platform:

- In 2011 the Green Bay Packers sold 'equity' in their team. The security had extremely limited rights, but still sold over \$200M – valuing the team at 3x what Forbes estimated it's value to be.
- There are thousands of opportunities where consumers would pay more than a pure financial buyer for assets:
  - Entertainment – what would Beatles fans pay to own a piece of their entire catalog – including future royalty streams?
  - Sports Teams – hundreds of teams could literally be owned by their most passionate fans.
  - Collectable – comic books, stamps, baseball cards, etc...



# Industries Affected:

## Banking/Brokerage Services

### Banking/brokerage services

Credit card processing, peer-to-peer loans, mortgages, corporate debt, payday loans, remittance, factoring.

- \$5T revenue per year sector now - a very large portion of which could move to blockchain
- Most banking and brokerage services are already fully automated or self-service.
- **Note:** Only 1.5B people are banked today. What are the other 3B adults worth?



# Industries Affected:

## Other

### **Other - the biggest opportunity**

- This is the most interesting to imagine, as no one knows what advances will ultimately be enabled by blockchain and cryptocurrency technologies. No one saw Facebook or Uber in 1995.
- 12,000 startups are seed funded each year in the Internet and software sectors. The world is still in the early stages of understanding what the Internet and software sectors will create.



# Decentralized software and DApps Opportunity:

## Utility Token Expansion Multiples to Absorb Crypto Portions of:

Category	Total Market	Crypto Value	Expansion Multiple
Total value of all utility/protocol tokens	\$90B	\$90B	-
Distributed computing and storage	\$550B	\$450B	5.0X
Smart contracts - legal	\$4,000B	\$1,000B	11.1X
Marketplaces	\$1,000B	\$700B	7.8X
Loyalty and Gift Cards	\$800B	\$400B	4.4X
Insurance	\$4,000B	\$1,000B	11.1X
Tokenization of Assets	Huge	\$1,000B	11.1X
Banking & brokerage services	\$5,000B	\$2,000B	22.2X
<b>Totals</b>	<b>\$13,550B</b>	<b>\$6,550B</b>	<b>72.8X</b>

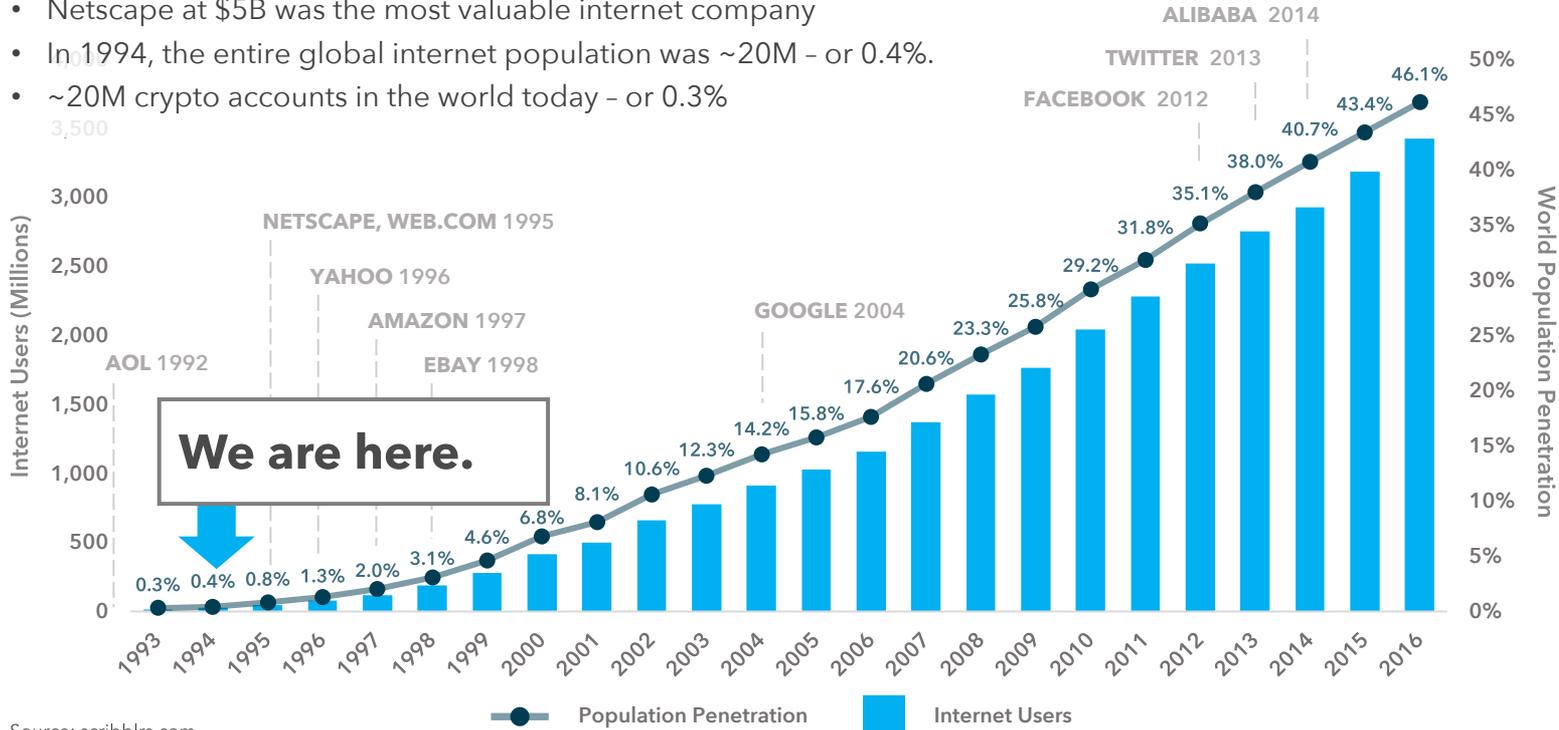
**Note** - this does conflate market value with revenue, but that is a meaningful discount as all these industries trade at greater than 1x revenue



# Opportunity:

## 1994/1995 Analogy

- The 'decentralized software' market value is just \$90B
- In 1995, the entire internet sector - public and private - was about \$70B
- Netscape at \$5B was the most valuable internet company
- In 1994, the entire global internet population was ~20M - or 0.4%.
- ~20M crypto accounts in the world today - or 0.3%



Source: scribblrs.com



SECTION FIVE:  
**ENTER ICOS**



# ICO Overview

- ICO investments of \$3B exceeded ALL seed stage global VC investment so far in 2017.
  - 18 months ago it was less than 2% of all early startup capital.
- \$1B is expected to go into ICOs in Q4 of 2017.
- There were over 250 ICOs in the past year that raised at least \$3M.
- 8 of the ICO startups launched in the last 12 months are already unicorns - meaning \$1B+ value. There are another 400 ICOs on deck in the next 3 months. Currently about 60 per week are coming to market.
- Almost 80% of all ICOs in the past 30 days failed to reach critical mass - signaling a huge turn in the market.



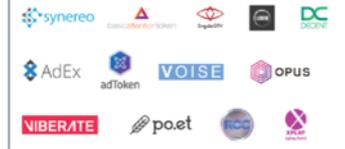
# ICO Breadth: 135 Blockchain startups with ICOs

Closed initial coin offerings greater than or equal to \$500k. 2014 - YTD (9/8/2017)

## ASSET MANAGEMENT



## MEDIA & ADVERTISING



## GAMBLING & GAMING



## EXCHANGES & WALLETS



## TRADING



## DAO & TOKEN LAUNCH



## BROWSERS & SOCIAL



## CROWDFUNDING & LENDING



## PREDICTION MARKETS



## HEALTHCARE & INSURANCE



## OTHER



## INFRASTRUCTURE & DEVELOPMENT



## IDENTITY & INTERNET OF THINGS



## PAYMENTS & BANKING



## FINANCIAL SERVICES



Source: CB Insights



# ICOs Rise - 2013 to March 2017

- Mastercoin (now Omni) launched the first in 2013 - raising ~\$1M.
- Ethereum launched in Sept 2014 - raising ~\$18.4M
- Early ICOs typically raised of a simple white paper. Founders announced a date to begin sale process, and all buyers that wanted to participate paid the same price.
- Typical token distribution structure:
  - 50% of tokens sold in ICO/presale
  - 10% reserved for Foundation
  - 10% for employees
  - 10% for early advisors
  - 20% for biz dev, partners, and incentives
- Towards the beginning of 2017, many began by raising a small private/pre-sale discounted round to cover early legal and roadshow costs - usually under \$1M. The public sale on average raised 90% of total proceeds (about \$12M on average) at a set price.



# ICO Golden Age - April 2017 to Sept 2017

## Explosion in the number and size of ICOs

- Mainstream investors enter market in mass
- Sector land grabs - mirroring most successful Internet companies. These require little imagination from investors:
  - Cloud computing and storage
  - Banking and Finance
  - Marketplaces and on demand services
  - Alternative currencies
  - Loyalty and gift cards
  - Securitization of assets and IP
- Many large ICOs
  - Bancor - \$150M
  - EOS - \$185M
  - Filecoin - \$257M
  - Tezos - \$230M
- Many silly projects funded - a lot that are reminiscent of Internet 1.0



# ICO Funding Slows - Oct 2017 to Present

## Macro events like regulatory decisions and major forks hold down market

- Large number of ICOs come to market - many from companies that saw the excess of the June to July batches and wanted to attract cheap funding.
- ICO economics shifted almost entirely into heavily discounted private sales, with companies selling only a small amount (often 5% to 20%) at the public retail sale price.
- Most ICO investors shifted into pre-sale buying pools to get discounts. Now, paying retail for an ICO is a sign of someone being outside the connected, smart buyers.
- The result is that most ICO tokens are sold at a huge discount, but since most don't garner meaningful public sale volume, the price immediately settles to the discount price or worse.
  - If everyone gets a discount then no one does. It's simply the price.
  - Even worse, most buyers were primarily motivated by the discount, not the projects' merits. So now they hold illiquid tokens in a project they either don't really like or don't understand - and are losing money.



# ICOs Aging Poorly - Vast Majority Trade Below ICO Price

- No utility - actual software launch dates sometimes years away (Polkadot, Filecoin)
- No support beyond speculators

## 0x Charts



## Civic Charts



## TenX Charts



## Kyber Network Charts



Source: CoinmarketCap



# ICO Trap

Eventually, speculators always exit markets. Fundamentals need to support price

- 'Utility Tokens' need true utility to maintain value long-term. Meaning very large numbers of buyers and sellers of a service.
- Speculators typically sell a token immediately following the ICO - eventually find something else that is the new token
- E.g. - A company successfully launches it's ICO and raises \$20M.
  - At startup - the tokens have no utility - there aren't buyers or seller of a service
  - Even if this company grows to \$20M ARR - the token value isn't supportable
    - Tokens are instant transfers - there is no A/R or A/P.
    - At most this level of revenue would need ~\$2M of tokens - buyers will only buy as needed, service providers / miners will sell into cash or mainstream tokens like Bitcoin.
- So what happens when a company does an ICO, but the token value falls to almost nothing.
  - If it's services are priced in the same tokens - it's sales are undercut.
  - Service providers and miners won't be incentivized
  - Publicly visible failure - potential partners will see a crashed coin
  - Similar to a company the goes public and then sees it's value crash - options for any future funding becomes limited



# ICO Process Today

Resembles the VC space more everyday - small seed round leading to an ICO

**The market has largely shifted from raising ICOs simply off a white paper to the vast majority of projects having a full team and at least a NVP. Investor now expect:**

- Company founded with initial team and whitepaper. Typical model is an operating company to support technology/distribution and a foundation to receive funding and control token governance.
- Funding and costs to get to a pre-sale:
  - Initial funding of ~\$750K from backers, taking a mix of equity and very heavily discounted shares - often 80%+ discount (resulting in a 5x or more return at ICO).
  - Legal and tax planning, foundation setup - typically costs \$200K.
  - Token development and platform building - typically \$300K (and rising, talent demand is incredible)
  - Roadshow for fundraising - typically \$50-\$150K depending on breadth and time.
  - ICO processes are typically planned to take 4-6 months, depending on scale and platform ambitions.
- Majority of successful ICOs raise \$4-10M



SECTION SIX:

# INCREASINGLY BROAD CRYPTOCURRENCY DEMAND



# 110 Hedge Funds Launched

## 200 on Deck

- Since Dec 2016, the entire crypto space has increase from ~\$14B to ~\$400B, a 2,800% increase.
- Everyone involved in crypto space early has great returns. Many of them believe it's because they are really talented at this, despite the fact that most underperformed the market. Starting a crypto hedge fund is fairly easy.
- Vast majority of Hedge funds focus on token purchases, not equity of the startups.
- Many strategies evolving:
  - Long only funds - mutual fund type model.
  - Long/short funds - market neutral model
  - Private/presale focused funds - early investments into tokens at discounted prices, typically with the goal of exiting quickly to lock in gains
  - Arbitrage fund - taking advantage of the lack of clearing houses - market neutral
  - Activist funds - identify tokens with good ideas and work to bring in stronger execution and marketing teams
  - Regional funds - geo specific funds performing above models



# Enter Mainstream Exchanges - With Far Superior Platforms

## Massive consolidation and shakeout needed - current exchanges are poor

- Crypto trading is very simple for companies that are already engaged in any other type of trading i.e. stocks, bonds, ForEx.
- The current trading fees charged by crypto exchanges are 10x to 100x what non-crypto funds are able to charge - making this a big opportunity.
- Most traditional exchanges have already built or are building crypto trading tools.
  - The delays in launching such services are mostly due to regulatory and legal risks. As the SEC in the US and other government regulatory agencies provide more clarity, these are expected to launch in the next 3-12 months
  - These exchanges are far superior to what is currently available to consumers - massively more featured and intuitive (these are built by exchanges like e-trade or Schwab that have been refined for 15+ years)
  - Regulation is a huge challenge - only a handful of US exchanges are regulated today - a lengthy process that requires complying with all 50 states laws. Traditional exchanges have already completed this and have huge compliance teams.
  - 20 ForEx exchanges have already launched crypto trading - bringing professional trading tools to the market.



# First Mainstream Crypto Index Funds Close

## Many ETFs coming this year

- Index/ETF funds are already experimenting with cryptocurrencies, and several are rumored to have already completed digital currency projects and are just waiting for regulatory clarity to launch.
  - Technologically, building a crypto index is trivial for a company like Fidelity or Vanguard that already manages a few trillion.
  - Most crypto hedge funds launched or planned are basically long-hold funds, but charge fees similar to complex trading funds - 2% management fee and 20% carry.
  - For an ETF firm that typically charges 0.1% and no carry, it would be exciting to have simply a 1.0% fee (and no carry) - 10x what they are usually able to charge.
- GBTC was the first, now 10 other ETF linked tokens are either announced or planned for the larger market cap currencies. Most are expected to launch in early 2018

**“Fidelity dives deeper into cryptocurrencies”**

Aug. 10, 2017

**BUSINESS  
INSIDER**



# Mainstream Crypto Availability Will Drive Near-term Pricing

- Buying crypto is currently fairly cumbersome.
  - KYC is aggressive and time consuming
  - Trust in exchanges is justifiably low
  - Perception that since crypto isn't on mainstream exchanges, that it is either illegal or scammy
    - Recent poll asked US citizens if Bitcoin was legal to own - 11% thought it was illegal outright and another 48% were unsure if it was legal
- Price of cryptocurrencies is soaring despite challenges
- Appears to be huge pent up demand
  - Bitcoin Investment Trust (GBTC) - only exchange traded ADR of Bitcoin today. It simply holds Bitcoins, yet trades at an average premium of 80% to the price of Bitcoin.
    - GBTC has a market cap of \$3.4B - huge considering the premium retail consumers are willing to pay simply to have the ability to buy Bitcoin on a traditional exchange.
  - Huge number of new crypto hedge funds shows demand for managed accounts.
- So what happens when a bunch of ETFs are released around many aspects of cryptocurrency?
  - Liquidity is very low for many coins - hence the large swings in prices on even small volume.
  - The global stock market is worth about \$75T - the global bond market is \$200T. 0.1% of that is \$275B - roughly the size of the crypto space today. If even a small portion of stockholders made a small allocation for crypto - say this 0.1% in total, the market would likely have to increase upwards of 10x to absorb that amount of new funding.

Source: [lendedu.com/blog/bitcoins-role-in-the-american-economy/](https://lendedu.com/blog/bitcoins-role-in-the-american-economy/)



SECTION SEVEN:  
**RISE OF SMART MONEY**



# ICO 'Gold Rush' Ending Rapidly

## ICOs starting to look a lot more like VC investments

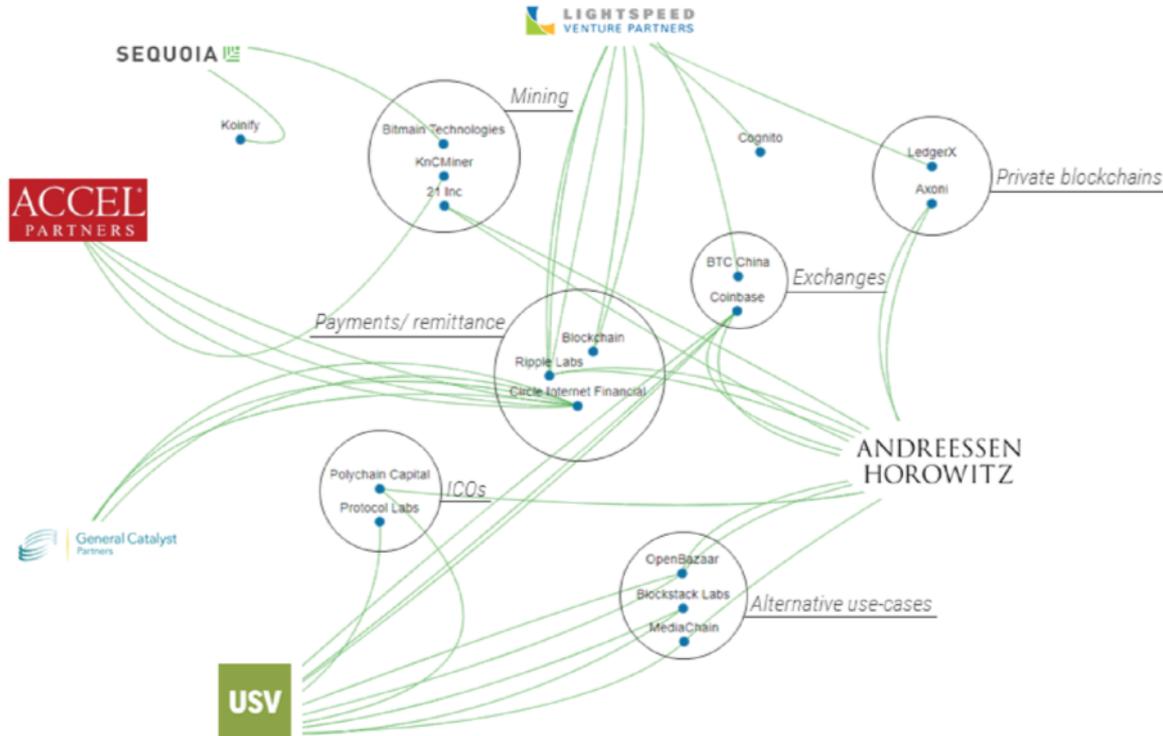
- ICO buyers shifting rapidly from 'general retail investors' to smart, institutional investors that can actually provide value/advice.
- Rapid decline in the size of ICOs - '\$7M is the new \$20M'
- Vast majority of funding raised in the pre-sale of the ICO, not the actual offering
  - Individual pitches to investors, exactly like a VC pitch. Investor evaluates team, idea, progress, market, etc...
  - Vast majority of successful new ICOs are from startups that have made a large amount of progress or already have a working software platform. Very high failure rate of ICOs raising on just a whitepaper.
- Longer lockup periods to avoid flippers of tokens - typically one year or more
  - Many early ICOs succeeded in raising substantial funding, but the public value of it's tokens quickly dropped to almost nothing - leaving the company without a viable currency to actually operate.
- Typical venture terms entering ICOs
  - Minimum hurdle before raise closing (majority fail to reach hurdle)
  - Founder/employee vesting to align interests
  - ICO investments are often becoming milestone based to release funding in parts. Should milestones for product launches be missed, investors have the option to get remaining investment back
  - More typical boards of advisers to maintain stronger governance



# Largest financial VCs very active

## Select brand-name investors and blockchain investments

Equity funding (excluding altcoins and initial coin offerings); 2012 - 2017 YTD (10/08/2017)



Source: CB Insights



# Most Active Corporate Blockchain Investors

2012 - 2017 YTD (10/3/17)

Investor	Rank	Select Companies
	1	       
	2	     
	3	     
	4	    
	5	   

Source: CB Insights



# Largest Blockchain Investments by Corporates

## Notable Bitcoin & Blockchain startups with financial services investors

Company	Total Funding (\$M)	Category	Financial Services Investors
Circle Internet Financial	\$136	Wallet & Money Services	Goldman Sachs, CICC
Coinbase	\$117	Wallet & Exchange	Bank of Tokyo Mitsubishi UFJ, NYSE, Relventure (WestPac)
Ripple	93	Capital Markets & Financial Services	CME Group, Banco Santander, SBI Group, Standard Chartered
BitFury Group	90	Mining & Blockchain Services	China Credit Limited Holdings
Blockstream	76	Capital Markets & Financial Services	AXA Strategic Ventures
Digital Asset Holdings	67	Capital Markets & Financial Services	Citigroup, CME Group, Goldman Sachs, JP Morgan Chase & Co., PNC Financial Services Group, Banco Santander, DTCC
Chain	43	Capital Markets & Financial Services	Capital One, Citigroup, NASDAQ, Visa

Source: CB Insights



SECTION EIGHT:  
**A LOT OF CHALLENGES TO OVERCOME**



# Unsustainable Valuation Multiples

## Revenue Multiples Comparison

Global Stock Market	SaaS Sector	Facebook	Ethereum
1.1X	5.8X	14.4X	~2,000X

The best estimates available put Ethereum revenues for actual transactions at just ~\$22M per year. This is just counting the transactions for using the platform for events like ICOs and smart contracts. This ignores trading/speculating revenue that only involves moving tokens between owners.

Ethereum probably has the LOWEST revenue multiple of all Utility tokens - it actually has revenue around utility.

The revenue multiple of Ethereum outpaces Facebook (the most highly valued large public company by revenue multiple) by a factor of 142x.

These valuations require rapid and substantial adoption to sustain their current lofty highs.



# Altcoin Speculation and Future Token Issuance

## Current Multiples

### Four largest ICOs - Fully Diluted

Crypto	ICO Raise	FD Market Cap	Product Launch Date
Filecoin	\$253M	\$2,530M	Beta in Q2 2018
Tezos	\$232M	Uncapped	Beta in Q1 2018
EOS	\$185M	\$729M	Launch on June 1 <sup>st</sup> , 2018
Bancorp	\$153M	\$306M	Undisclosed

### 3 Largest Gaps in Market Float and Fully Diluted Value

Crypto	"Market Cap"	Float	Fully Diluted
Ripple	\$9,545M	38%	\$25,118M
Dash	\$5,550M	40%	\$13,875M
EOS	\$2,100M	50%	\$4,200M

The true valuation of many currencies is much higher when viewed on a fully diluted basis than most people realize.

To support current altcoin valuations, the market needs to absorb another ~\$40B in new token issuances from existing tokens, ignoring new ICOs.

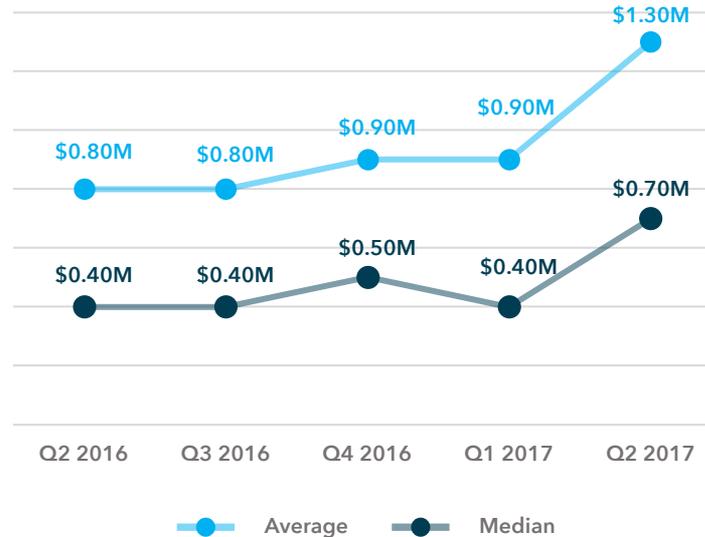


# ICO Valuation Disconnect

## Massive 'valuations' - no equity value or underlying value

- Last 100 ICOs - average valuation fully diluted is ~\$30M
  - 5 ICOs in the past 12 months are already Unicorns (\$1B+)
  - Almost all are pre-product - raising off of a whitepaper
- 2017 average VC Angel and Seed round post money valuation was ~\$4.5M, average raise was \$1.3M\*
- These two sets of companies are basically identical relative to stage, technology progress, scale, etc... All else rather equal - the crypto early stage market trades at a 7x premium

Global Angel-Seed Stage Round Size in Q2 2017\*



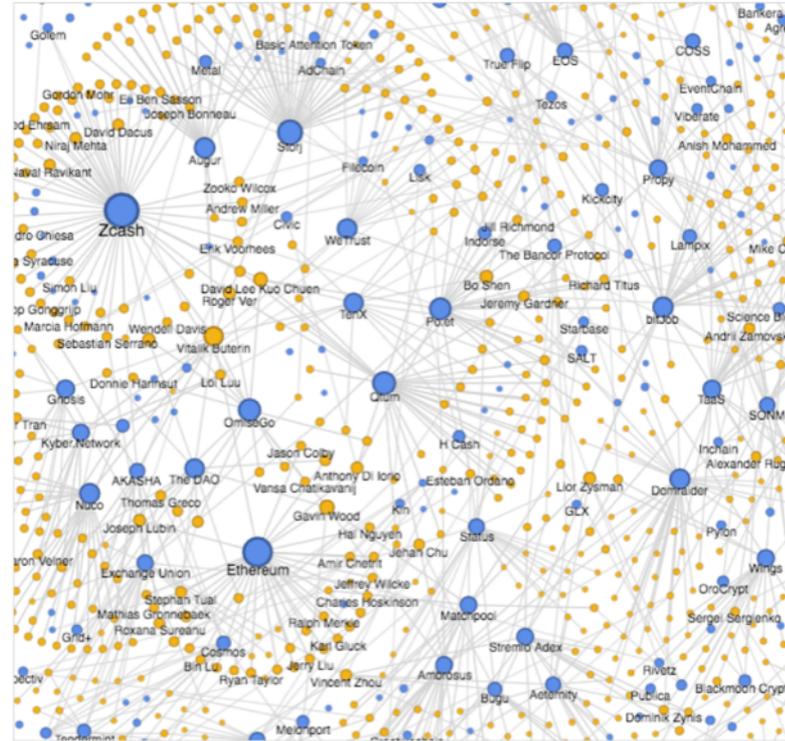
\* Source: techcrunch



# ICO Influencers Make it a Rigged Game

- All major ICOs are incredibly interconnected - it's the same people advising/promoting and profiting off most of them
- Trade almost entirely on sentiment - pure speculation.
- Influencers effectively place a huge tax on the entire ICO sector. Without them as named advisors ICOs rarely succeed

Interactive ICO Team Member Network Map



# Crypto Challenges

## Exchanges are not safe

### MT GOX - \$500M Lost

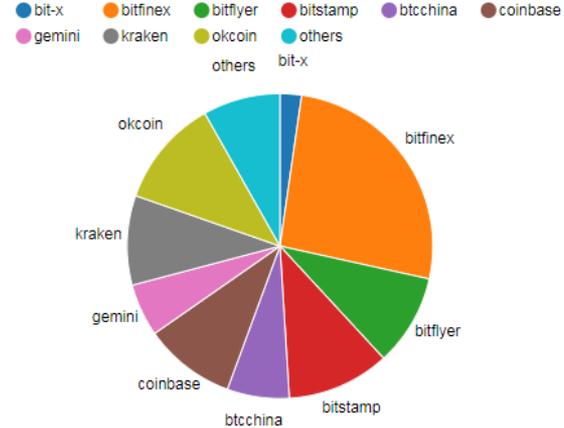
“Feds Seize Assets From Mt. Gox’s Dwolla Account, Accuse it of Violating Money Transfer Regulations”



### Bitfinex - \$72M Lost

“Bitcoin Worth \$72M Was Stolen in Bitfinex Exchange Hack in Hong Kong”

FORTUNE



In the wake of the Bitfinex breach, 36% of every account’s total balance was subtracted to spread damage - and somehow it’s still the largest global exchange.

\$200M of other hacks and crimes - barely covered by press



# Crypto Challenges

## Many Technological Challenges to Wide Adoption

- Scaling transaction volume
  - Bitcoin and Ethereum each have a theoretical max of ~7 transactions per second, vs Visa at 24,000/sec
- Transaction costs (gas) are still far too high
  - Bitcoin's last SegWit fork brought costs down from \$7.00 to \$1.50, but with Bitcoin price increase and competing miner resources it is already back to ~\$7.00.
- Transactions are slow
  - Transaction completion times of 10 minutes are common during peak usage periods.

## All of these challenges are solvable over time.

- New technologies aimed to fix scaling, timing and cost issues
  - Bitcoin and Ethereum technology upgrades (forks)
  - New parallel networks to offload some transaction processing - Lightning Network, Raidan, Plasma Network
  - Entirely new protocols that are designed to speed transactions and simplify/eliminate mining issues - EOS, NEO, Tezos



# Shady Practices

## Marketing and Promotion that Violates SEC and FINRA Laws

**“ SEC Charges ICO:  
US Agency Takes  
Action Against Alleged  
Token Scammer”**

Source: Coindesk

**“ Floyd Mayweather Just  
Promoted His Second  
ICO on Twitter”**

Source: Coindesk



**“DJ Khaled Is the  
Latest Celebrity to  
Promote an ICO ”**

**105,518 likes**

I just received my titanium centra debit card. The Centra Card & Centra Wallet app is the ultimate winner in Cryptocurrency debit cards powered by CTR tokens! Use your bitcoins, ethereum, and more cryptocurrencies in real time across the globe. This is a Game changer here. Get your CTR tokens now!  
[#CryptoBilli](#) [#Bitcoin](#) [#Ethereum](#) [#Digitalcurrency](#)

Source: Twitter



**“ Paris Hilton is supporting an  
ICO backed by a man who was  
convicted of domestic violence”**

Source: Business Insider, Twitter



Actual ICO in China:

**Performance Art Based on  
BlockChain Technology**



人类历史上第一个基于区块链的  
现代行为艺术品  
The First Modern Performance Artwork  
Based On Block Chain Technology

# Crypto Challenges

## Crypto processing is incredibly resource intensive and expensive

- Bitcoin alone has 10K+ nodes; each is a full record of all transactions. So each has to be updated and validated for every single transaction.
  - vs. a centralized platform like Visa where each transaction is only recorded in a handful of places
  - Since crypto is decentralized, all nodes have to confirm with each other, creating a huge overhead to operate
- Each Bitcoin transaction takes about 5,000x the energy of a simpler, centralized transaction - or about enough energy to power a US home for one day. Now about 500K transactions per day.
- Visa processes about 150M transactions per day, so if Bitcoin were to reach that scale it would take as much electricity as is produced in the entire US.
- **Note:** Bitcoin energy per transaction has dropped 80% in the past 12 months and continues to decline.



# Crypto Challenges

## Crypto Mining is an environmental disaster

- Mining is a practice of running computer cycles to show 'work'. New tokens are awarded on a 'Proof of Work' (PoW) basis. The more work performed by a server or group, the larger the percentage of new tokens that entity gets.
- Bitcoin, Ethereum and other mining cryptos consume ~0.4% of world's electricity output. Roughly equal to Ireland and Nigeria combined.
- Mining includes processing that supports the crypto, but the processing power has massively outstripped the processing needed - by about 1,000x.
  - Cryptos based on POW must have processing power to operate, so the system was designed to make it lucrative to those that provided processing resources.
  - Newer coins are mostly moving to 'Proof of Stake' (PoS) or other models for token distribution that remove the need for mining entirely.



# Crypto Challenges

## Not very decentralized

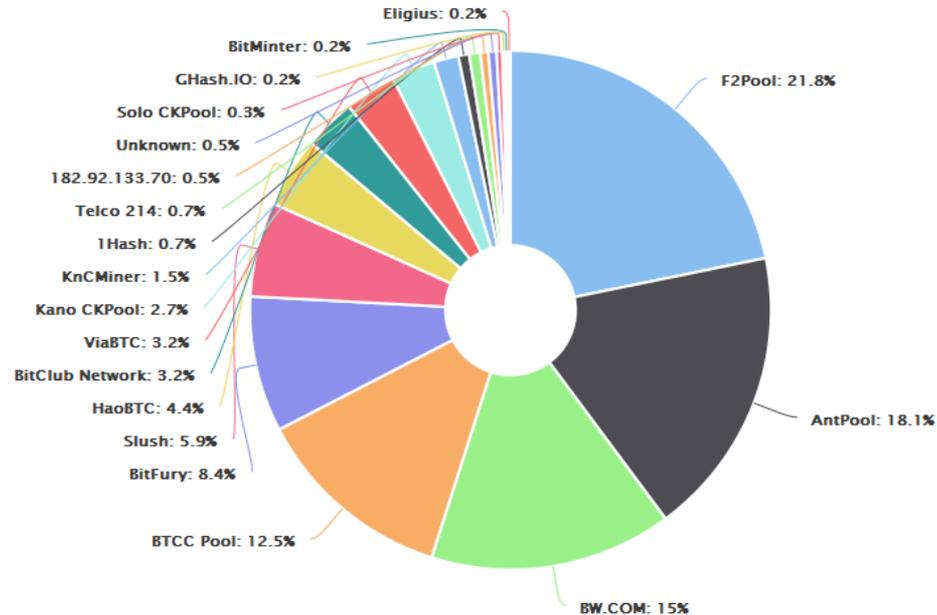
Bitcoin is the most decentralized of all crypto - held by about 17M people

About 20 groups really control it.

Large miner groups have most of the power in the sector - lead by Bitmain of China.

- 70% market share of mining equipment
- 30% share of all processing and mining globally
- Estimated to hold 8% of all Bitcoins

## Mining Pool Distribution



\* Source: 99Bitcoins.com



# State Sponsored Cryptocoin

- Countries that have announced studies/initiatives for new state issued cryptocurrencies:

- **Singapore**
- **Canada**
- **Estonia**
- **Russia**
- **China**
- **Dubai**
- **+ 7 More**



**Zero chance of success**



- Governments are building cryptocurrencies with all the features (flaws) of current fiat currency, just in digital form:
  - Unlimited supply of coins at state discretion
  - Malleable/mutable issuance timing
  - Traceable/personally identifiable through all levels
- Recreating the same problems driving cryptocurrency adoption now, e.g., central bankers printing lots of money that raises inflation.
- Fiat Money is already digital - anyone with banking can send money digitally. Simply putting it on a blockchain doesn't solve anything.
- This fiat-crypto model removes most of the benefits of blockchain technology.
  - The whole point of crypto is that it is unmalleable - the rules are set at the start.



# Crypto Challenges

## Heavily Biased Press

### Coindesk has the largest presence - the "TechCrunch" of Crypto

- Owned by Digital Currency Group 
- DCG has investments in ~90 blockchain companies and tokens - including investments into 5 of the 8 largest exchanges
- Ex: Coindesk published 15 articles that were highly supportive of Filecoin after making a large investment. Some had disclaimer language, some didn't.



## \$257 Million: Filecoin Breaks All-Time Record for ICO Funding

**Disclosure:** CoinDesk is a subsidiary of Digital Currency Group, which invested in the Filecoin pre-sale.

### Most Active Blockchain VCs

Ranked by number of portfolio companies 2012 - YTD (as of 10/8/2017)\*

Rank	Venture Investor
1	Digital Currency Group
2	Blockchain Capital
3	Draper Associates
4	500 Startups
4	RRE Ventures
4	Fenbushi Capital
7	Andreessen Horowitz
8	Liberty City Ventures
8	Union Square Ventures
8	FuturePerfect Ventures
11	AME Cloud Ventures

\* Source: CB Insights



# Crypto Challenges

## Orchards full of 'Bad Apples'

- Complete lack of "self-regulation" - with many new coins promoting features that enable bad uses
- Massive AML issues. Huge percentage of criminal organizations using crypto
- BTC-e was the largest European exchange - now shuttered by several federal governments for allegedly laundering billions for crime syndicates.
  - The founder is currently in prison awaiting trial.
  - The running joke was: BTC-e was never hacked because it's where hackers held or laundered their own coins - who would dare hack the Russian hackers.
- Many scam offerings among early ICOs, though declining recently.
  - 3 have been targeted by SEC in US, several in China and South Korea
- Phishing attacks around real ICOs
  - Huge number of fake websites/emails created to mimic ICO funding pages. Many consumers have sent tokens to fraudulent wallets. There is no recourse.



# Crypto Challenges

A huge number of upgrades are needed for the platforms to thrive – but each upgrade (fork) presents a huge risk to each token

- Bitcoin Technology Upgrades
  - Lacks any central body to make decisions. Miners/processors hold a disproportionate amount of power. It is critical that the speed and efficiency of transactions is dramatically improved. Of course, the most logical methods to improve efficiency and reduce transactions costs negatively impact miner's profits, so they have tried to block all efforts.
  - Bitcoin Cash – miner created airdrop
    - Bitmain and other large miners created a whole new crypto that their servers are best suited to mine
    - Unfortunately, it worked great - created another ~\$20B in value
  - SegWit2x – Next major fork designed to half transaction costs (among other upgrades) has already failed. Huge miner opposition.
- Ethereum upgrades / forks coming
  - Metropolis, Constantinople, Serenity (PoS)
- Dozens of forks announced for other alt-coins.



# Crypto Challenges

## Regulations and Central Banker Opposition Just Starting

- Strength of any government in today's world is almost entirely tied to the strength of its currency
- The Fed of any country can literally print an unlimited amount of new money (often called 'quantitative easing')
- By manipulating the money supply, and hence interest rates - governments can spur growth
- 300,000 central bankers in the world - very powerful roles and very well compensated
  - Role of central bankers in crypto world is Zero. They are just waking up to this threat
- SEC and global equivalents are likely to rewrite the rules around securities definitions, giving themselves purview. ICOs will likely be regulated shortly.
- US Congress has the '**exclusive constitutional power to coin money and regulate the value thereof**'



# Crypto Tax Issues

## Global tax collectors are targeting cryptocurrency trades and issuances

- US IRS declared Bitcoin and similar tokens to be property, not currency. Any sale/trade results in an ordinary or capital gain/loss – and must be reported
  - The value of gains and losses must be reported in the US in USD
  - In 2015, there were about 3M US bitcoin transactions, but only 802 individuals reported gains or losses to the IRS
- Example:
  - Consumer buys bitcoin at \$3,000 (recent low). Then uses that coin to buy a cup of coffee for \$3.00 – on that day Bitcoin is \$6,000
  - Consumer must report a gain of \$1.50 on state and federal tax returns – and pay applicable taxes
  - A tax preparer must document every single such transaction – to specific coins at each exact trading price
- ICO - Utility token sales – Is it revenue? Sales tax?
  - If revenue, it would result in a massive tax bill for every ICO of around – 15% to 35% of all proceeds
  - If gift card – Issuers owe 4.0 to 9.75% sales tax to the state. Still owe income taxes when redeemed



# Crypto Tax Issues

## Distributed platforms often compensate large numbers of users across the world

### Distributing tokens as payment for services / mining:

- As tokens are issued, this must be revenue to token earners.
- Are token issuers responsible to 1099 token recipients? Withhold taxes?
- Filecoin example - at scale it needs millions of users across the world to offer storage to buyers, which earns tokens. So Filecoin is paying millions of people in presumably a hundred plus countries differing, tiny amounts of currency, and presumably has an obligation to issue the equivalent of 1099s to millions of individual earners.

### Global tax compliance challenge:

- Several steps in the token issuance process create taxable events.
- For even large ICOs, this is a huge burden. For smaller ICOs this a virtual impossibility:
  - Median ICO raises ~\$7M from ~2,500 backers across the globe. This entity, which may never have more than \$7M, now needs to be tax compliant across upwards of 100 countries.



SECTION NINE:  
**FINAL THOUGHTS**



# Opportunity is Immense, as Are the Risks

It's really early, and there are two potential paths

## Most analogies place the entire crypto sector at the very beginning of huge innovation waves

- Distributed software and Decentralized Applications
  - Most analogs place the current market between 1993 and 1996 in the technology space. If a consumer bought a share of the entire sector (public and private) in 1995 and held through the dotcom bust (with some rebalancing), it would have resulted in a ~100x returns.
- Currency
  - This is likely a new dawn of money, comparable only to the ending of the gold/silver standard. Only 0.2% of the worlds currency has moved to crypto.
- Either path is an incredible outcome for investors, and both paths seem likely to succeed.
- Many challenges ahead. Each sector is experiencing extreme volatility, which is expected to continue for the next decade.





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