



FROM PILOT TO PRODUCTION: THE BLOCKCHAIN STATE OF PLAY FOR 2019

A BLOCKCHAIN STATE OF PLAY FOR 2019

PRESENTED BY

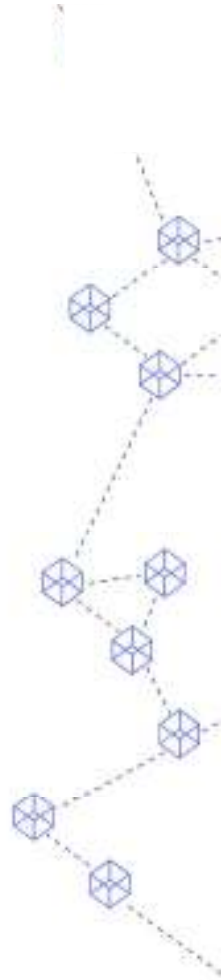


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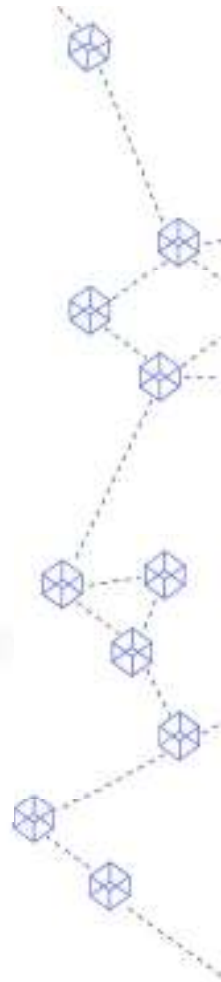
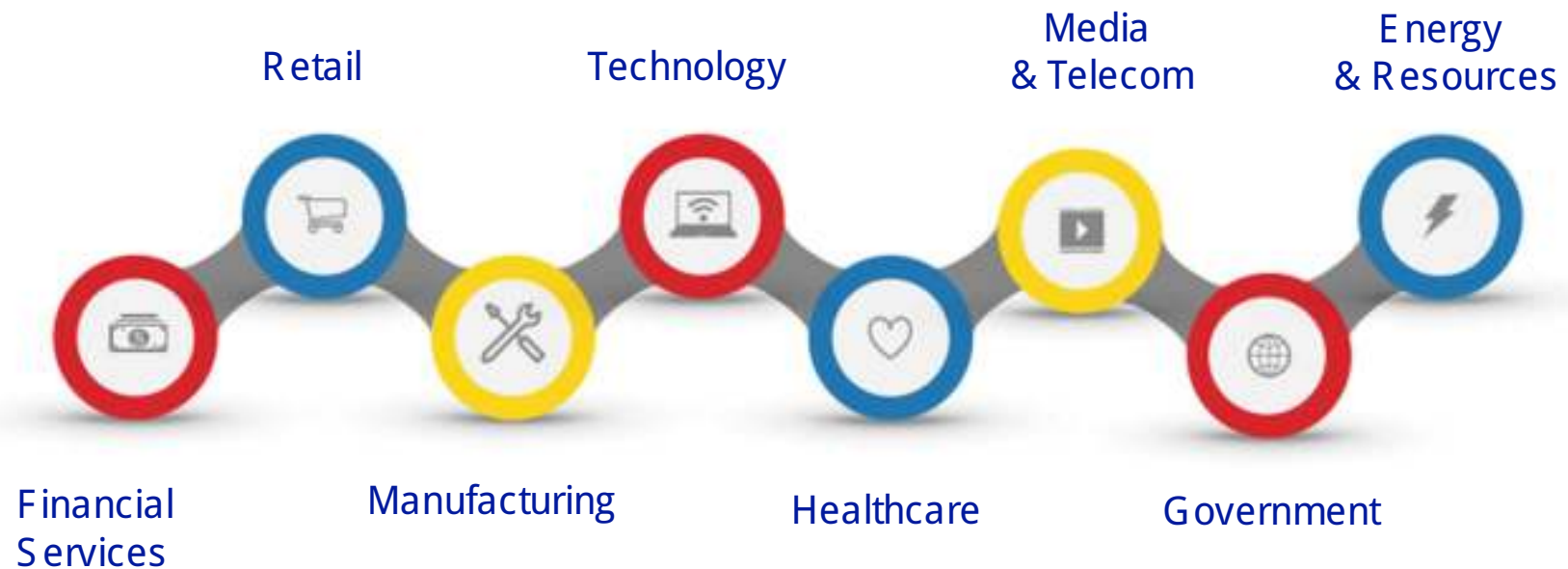


BLOCKCHAIN
RESEARCH
INSTITUTE

- đ The definitive investigation into blockchain strategy, opportunities and challenges
- đ 80 Projects
- đ Led by 40 of the world's leading blockchain thinkers and practitioners
- đ Sponsored by many of the world's most important companies and governments



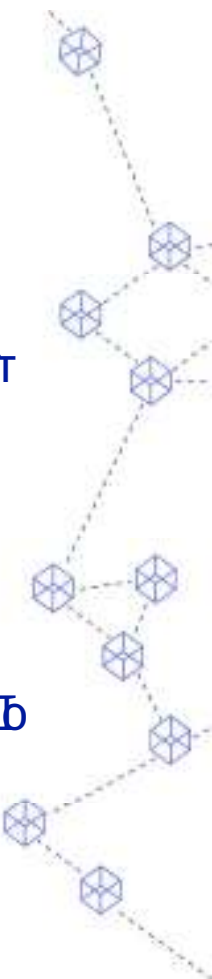
Blockchain Vertical Transformations



Blockchain Horizontal Transformations



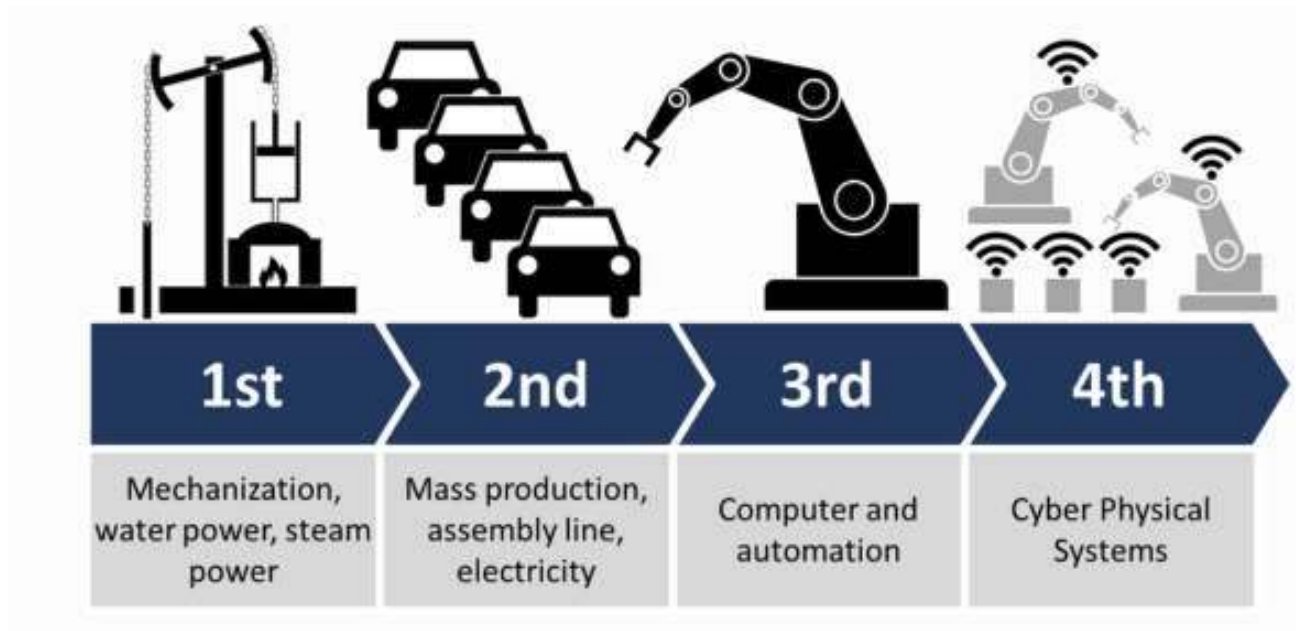
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BRI Members



The Dawn of A New Era



Technologies of The Fourth Industrial Revolution



Machine Learning



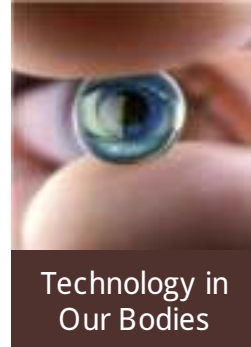
Animating the Physical World



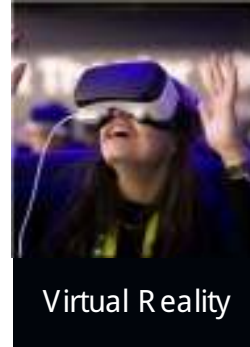
Autonomous Vehicles



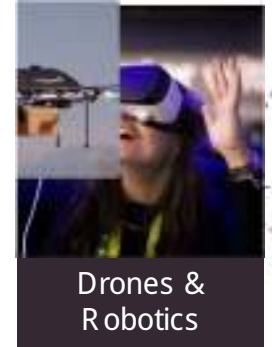
Distributed Energy



Technology in Our Bodies



Virtual Reality



Drones & Robotics

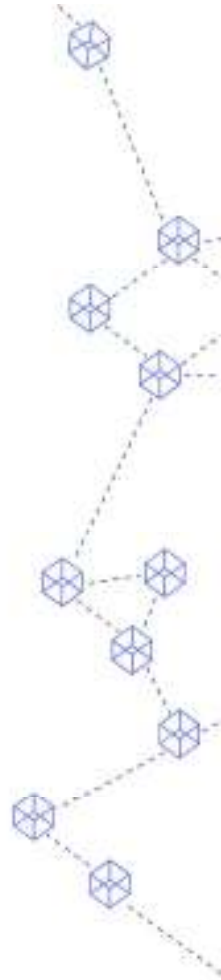


Trust

A SHORT HISTORY



Image by Starline / Freepik (CC BY 2.0)



International Payments and Trust

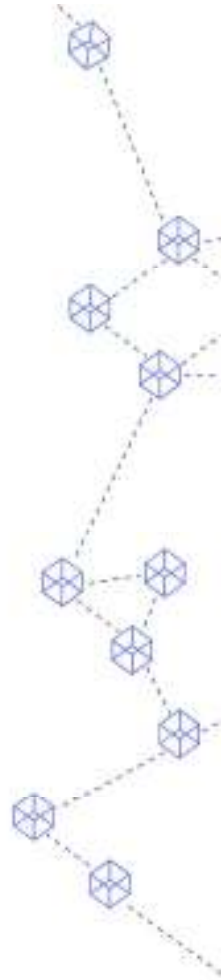
A HISTORY



Dutch East India Trading Company

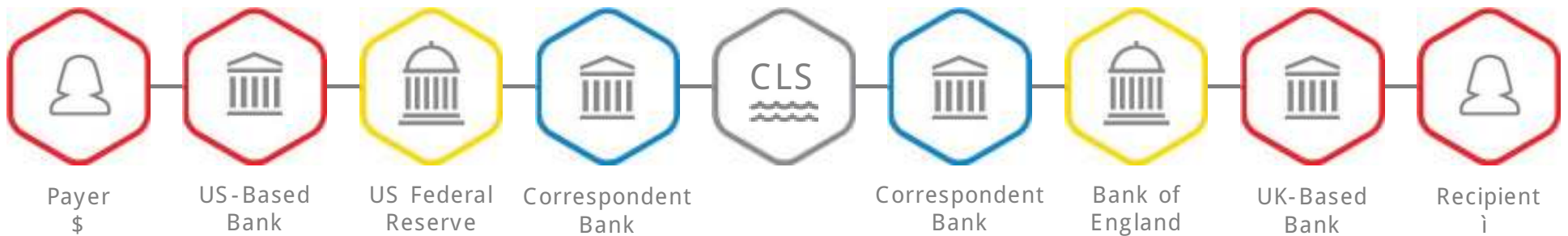


British East India Trading Company

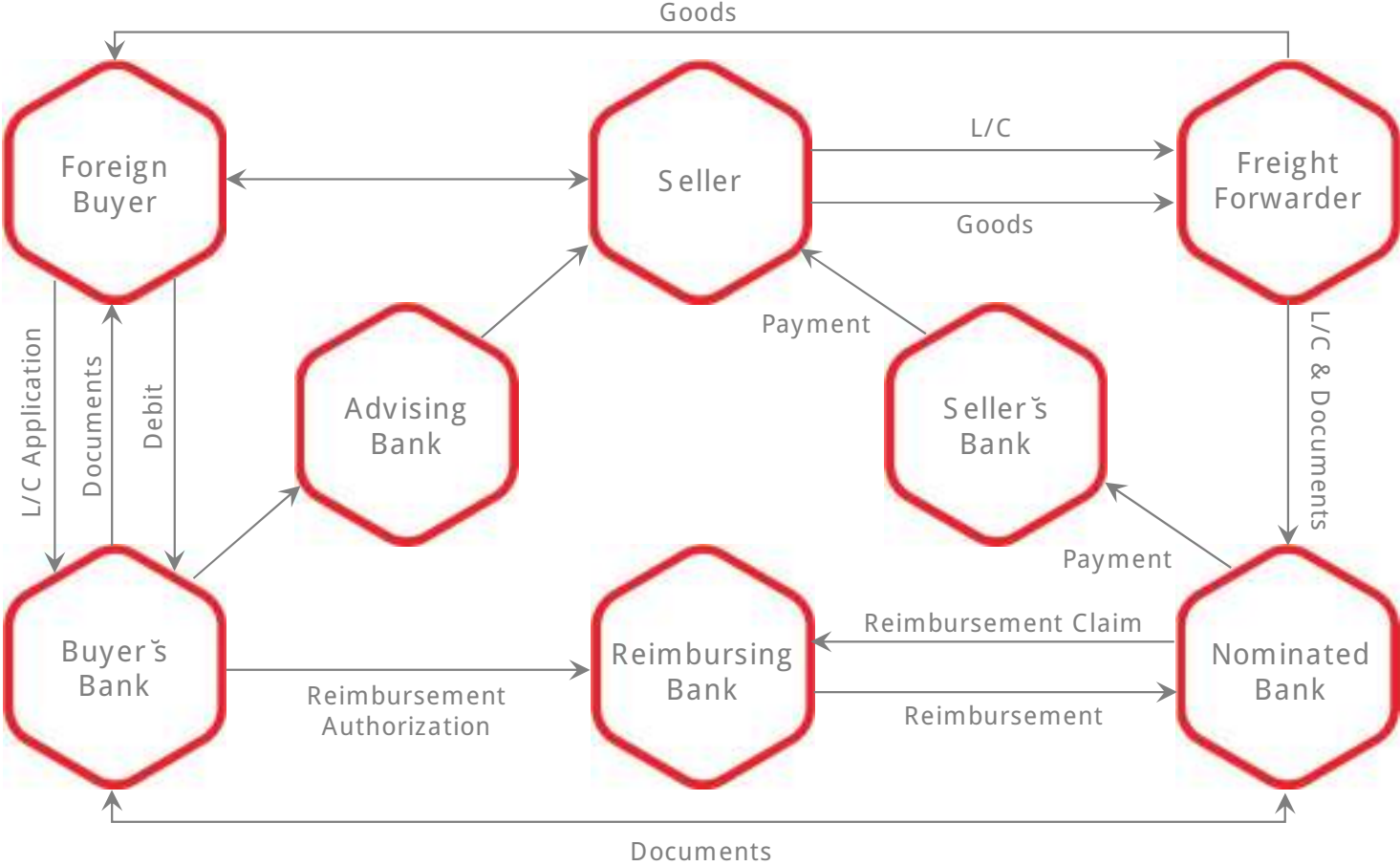


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International Payments Today

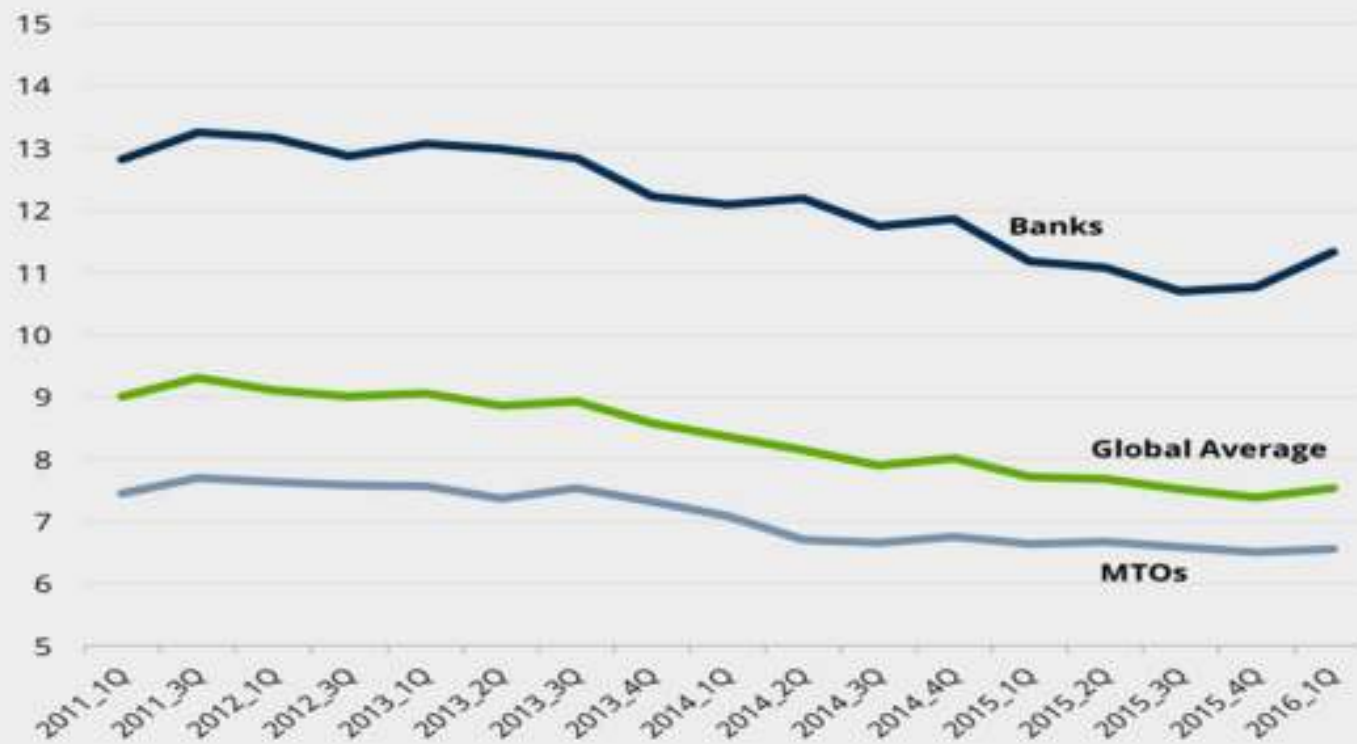


International Trade Payments Today



How Much It Costs To Transfer 200 USD

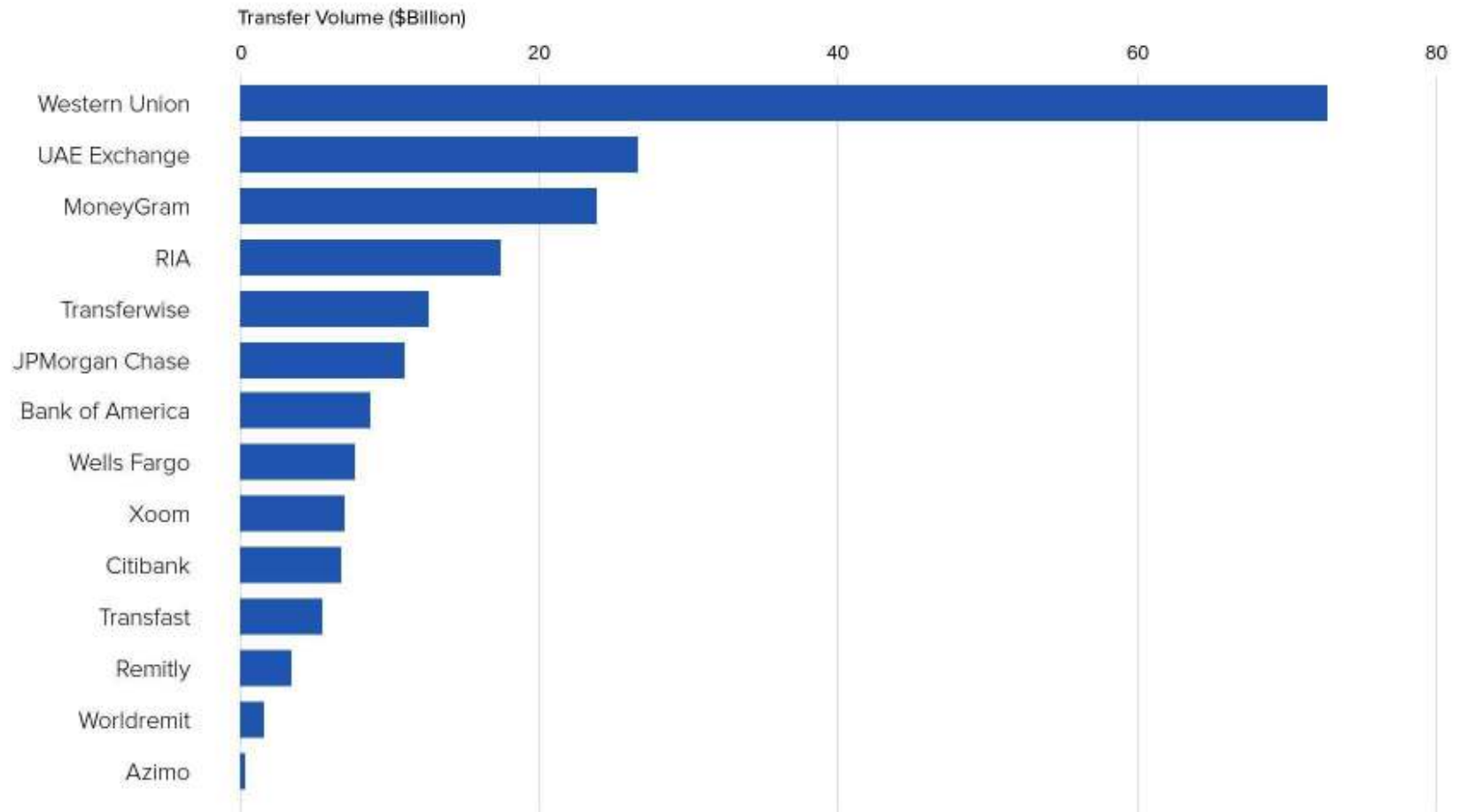
% of Transfer, 2011-2016



Source: The World Bank, Remittance Prices Worldwide

FXcompared.com
INTELLIGENCE

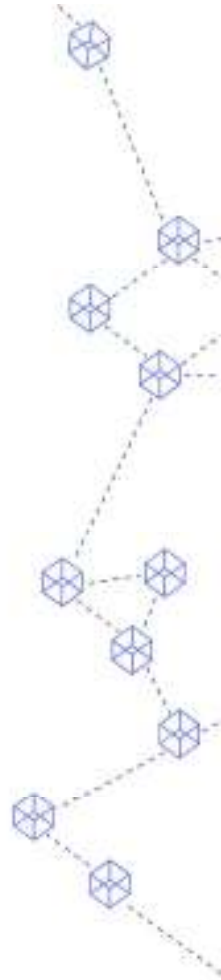
Chart 4: Cross-Border Money Transfer Volumes by Company (TTM August 2017)



Is That Trust Warranted?

FOR BANKS IN FX

- Ø \$7.77 trillion in Fed loans and guarantees to save the banks post 2008
- Ø 2015 Citigroup, Barclays, JPMorgan Chase, and RBS, pleaded guilty to rigging FX currency rates, and agreed to pay \$5.8 billion dollars in penalties
- Ø U.S. District Judge Stefan R. Underhill said `when the market is rigged, folks who play by the rules are suckers. _
- Ø Equifax 143 million Americans private information exposed
- Ø HSBC to pay \$175 million for questionable FX practices
- Ø Western Union to Pay \$586 Million Over Failure to Stop Fraud
- Ø Citibank to refund \$700 million to credit card customers for unfair and deceptive practices
- Ø William K. Black's book

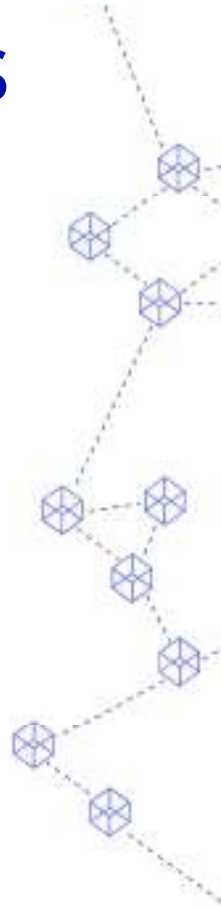


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Fines to Banks Since the Financial Crisis

IN (YES) BILLIONS !!! US

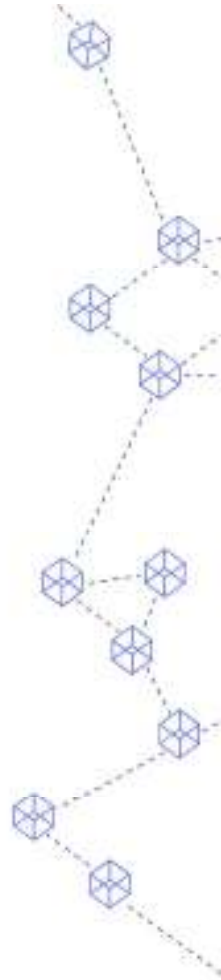
| | |
|--------------------|--------|
| • Bank of America | \$76.1 |
| • J P Morgan Chase | \$43.7 |
| • Citigroup | \$19 |
| • Deutsche Bank | \$14 |
| • Wells Fargo | \$11.8 |
| • RBS | \$10.1 |
| • BNP Paribas | \$9.3 |
| • Credit Suisse | \$9.1 |
| • Morgan Stanley | \$8.6 |
| • Goldman Sachs | \$7.7 |
| • UBS | \$6.5 |



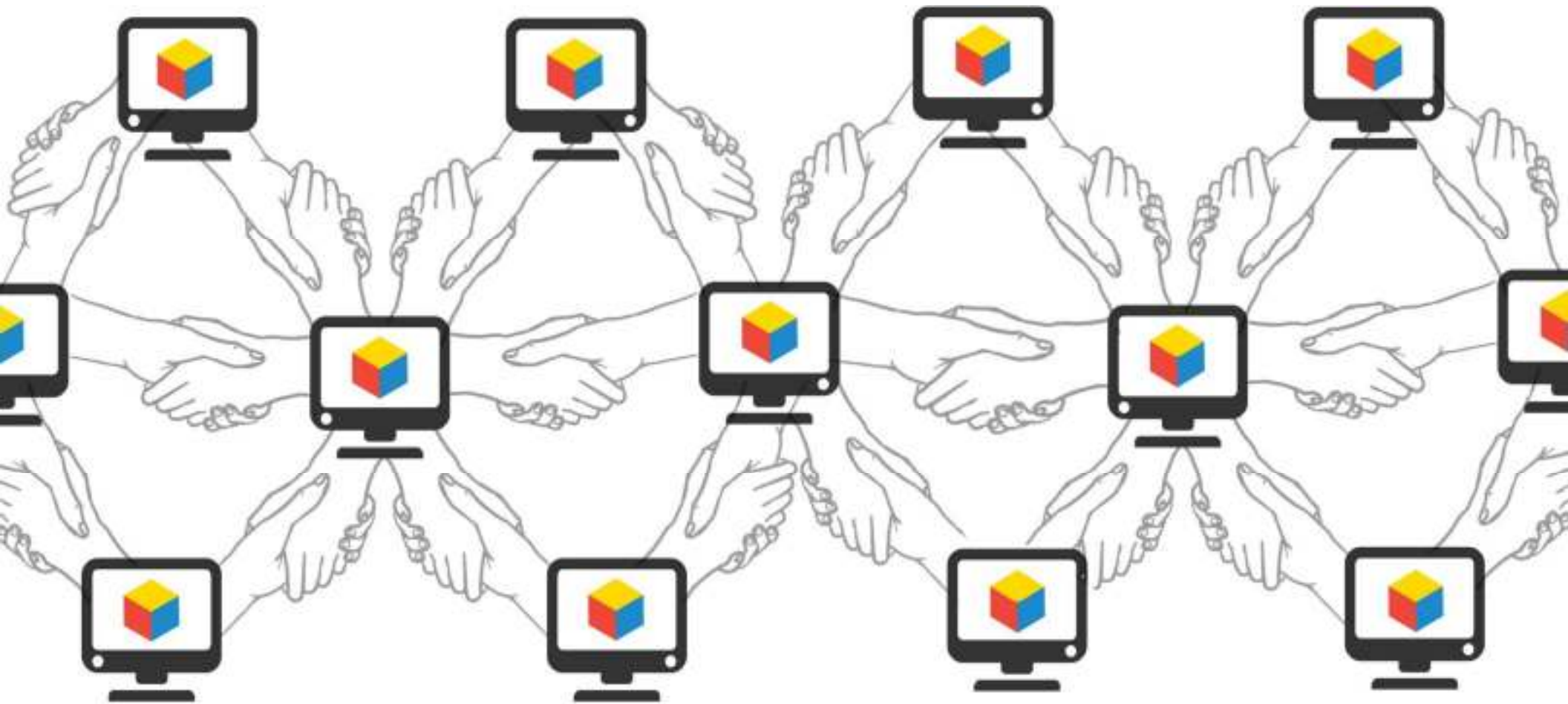
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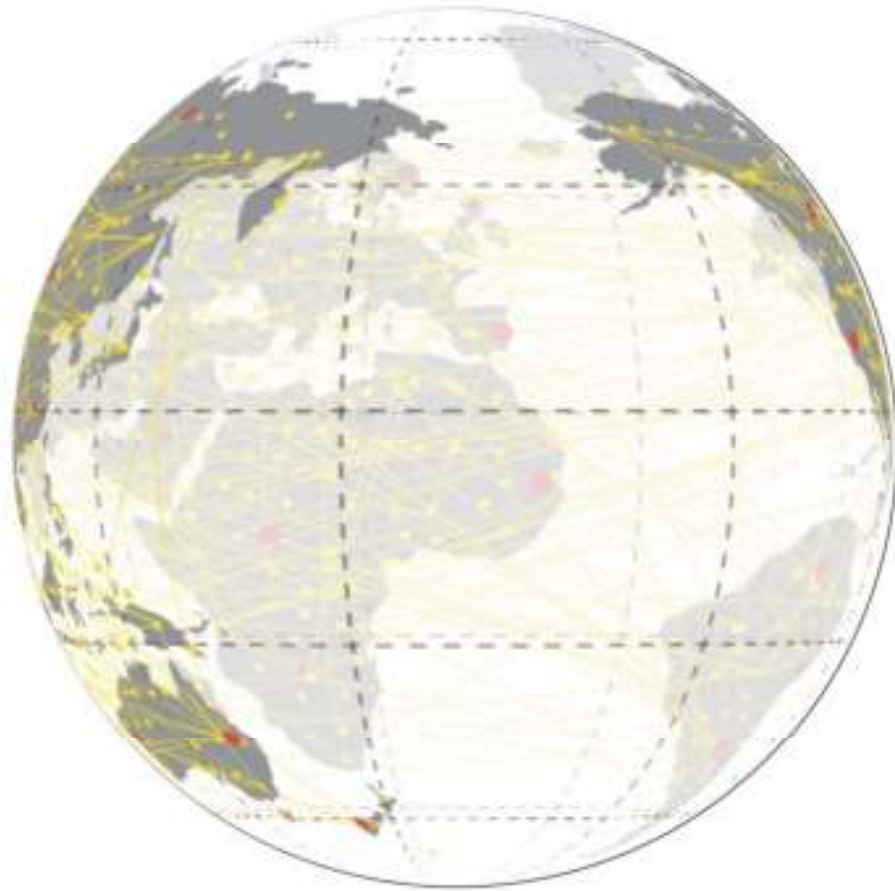
Is There a Better Trust Argument?

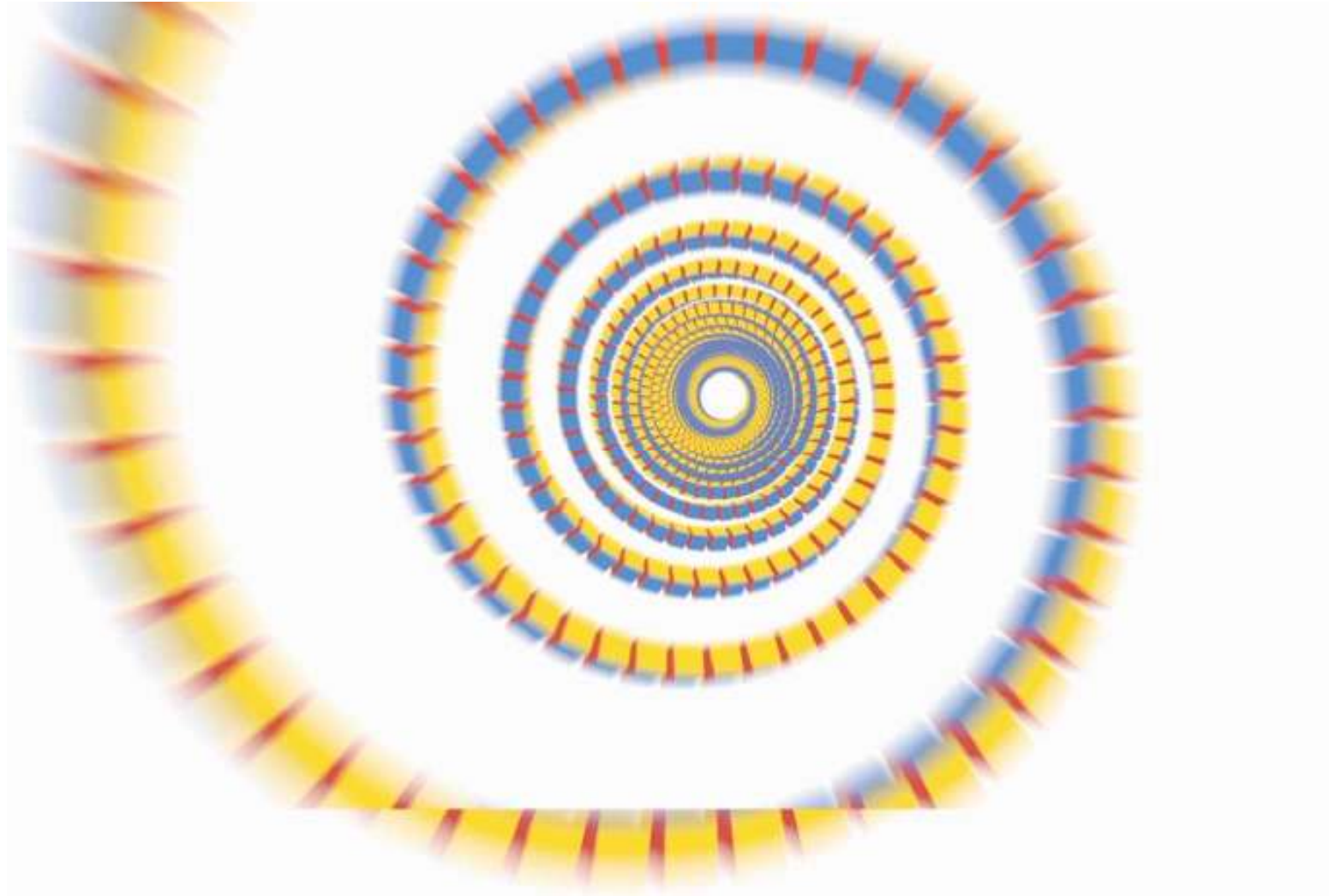
- Ø Trust in mathematics / SHA-256 cryptographic hash functions
- Ø [Ralph Merkle](#), [Whitfield Diffie](#) and [Martin Hellman](#)
- Ø Trust in immutability of a shared sequential ledger
- Ø If cryptocurrencies are liquid and stable then FX moving through them faster and lower cost than status quo
- Ø Should reduce the costs by orders of magnitude
- Ø Should speed up funds transfers (that now can take weeks) down to a few minutes
- Ø Could give total transparency to the movement of funds
- Ø Dan Schulman. CEO of PayPal on Change



TODAY'S PAYMENTS MODEL



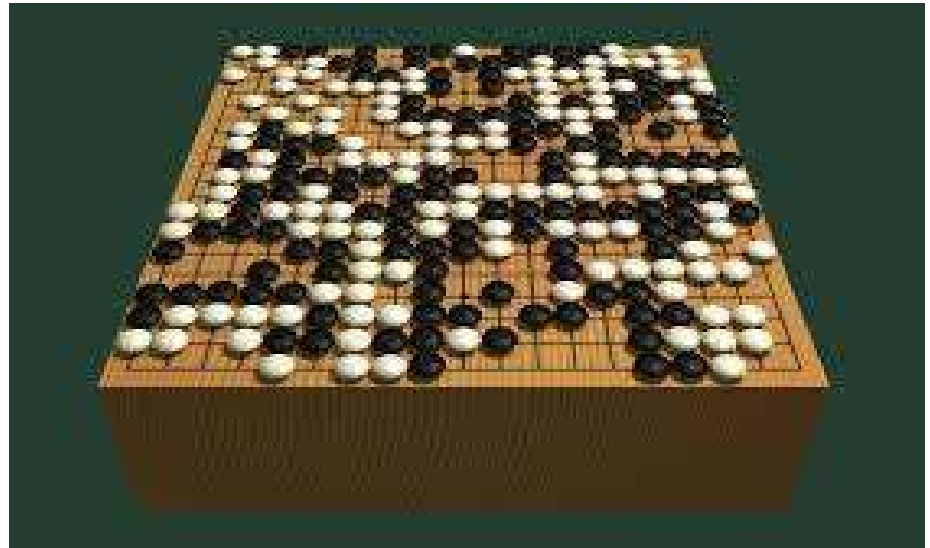




THE BLOCKCHAIN IS THE NEW SUPPLY CHAIN

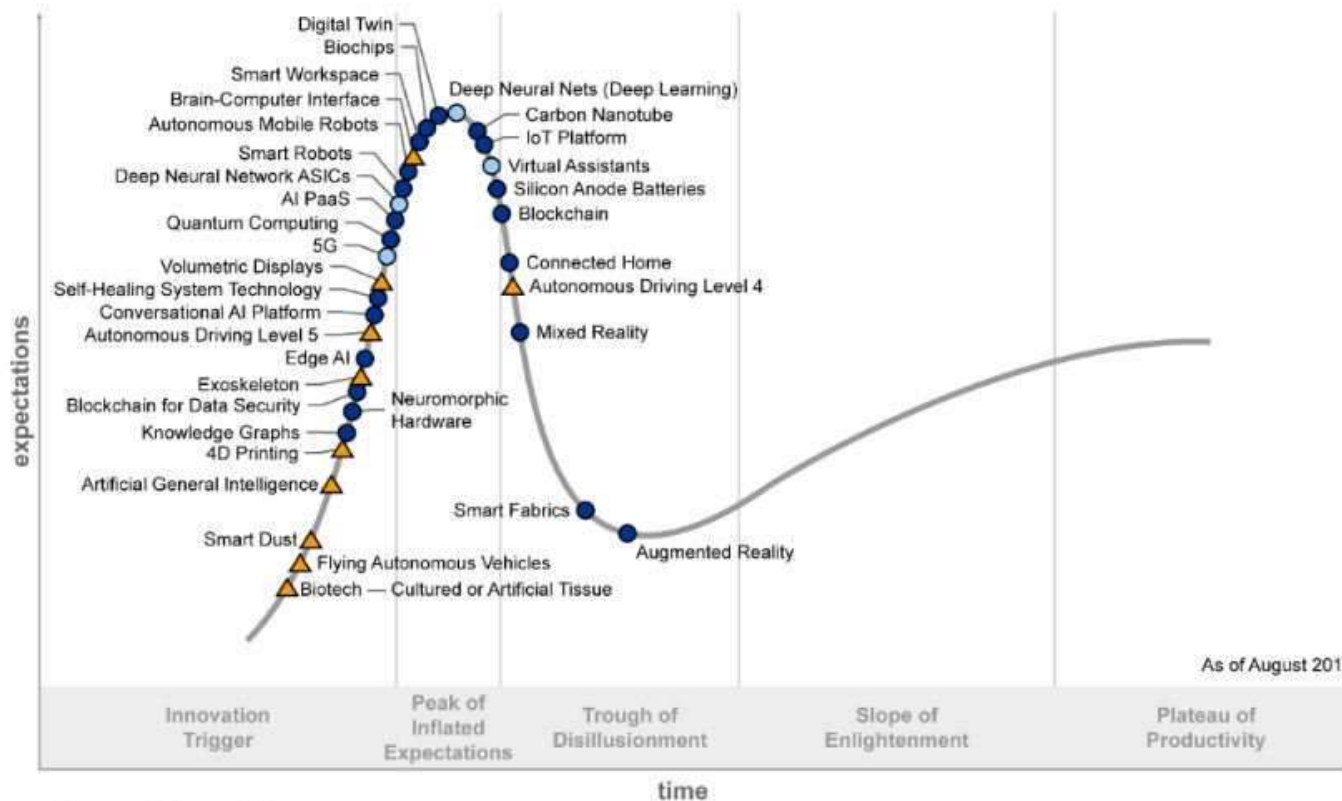


Artificial Intelligence Vs. Deep Learning





Gartner Hype Cycle August 2018



As of August 2018

Plateau will be reached:

- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau

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Are ICOs Proving to Be Speculative?

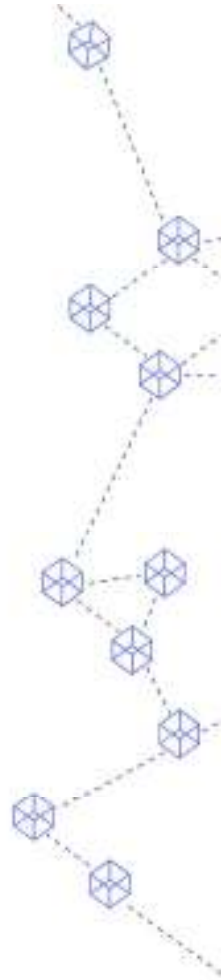
Crypto Startups

• Success Rate_ 56 percent of funded crypto startups die within four months of their initial coin offerings.

• a Boston College [study](#) determined that only 44.2 percent of startups survive after 120 days from the end of their ICOs.

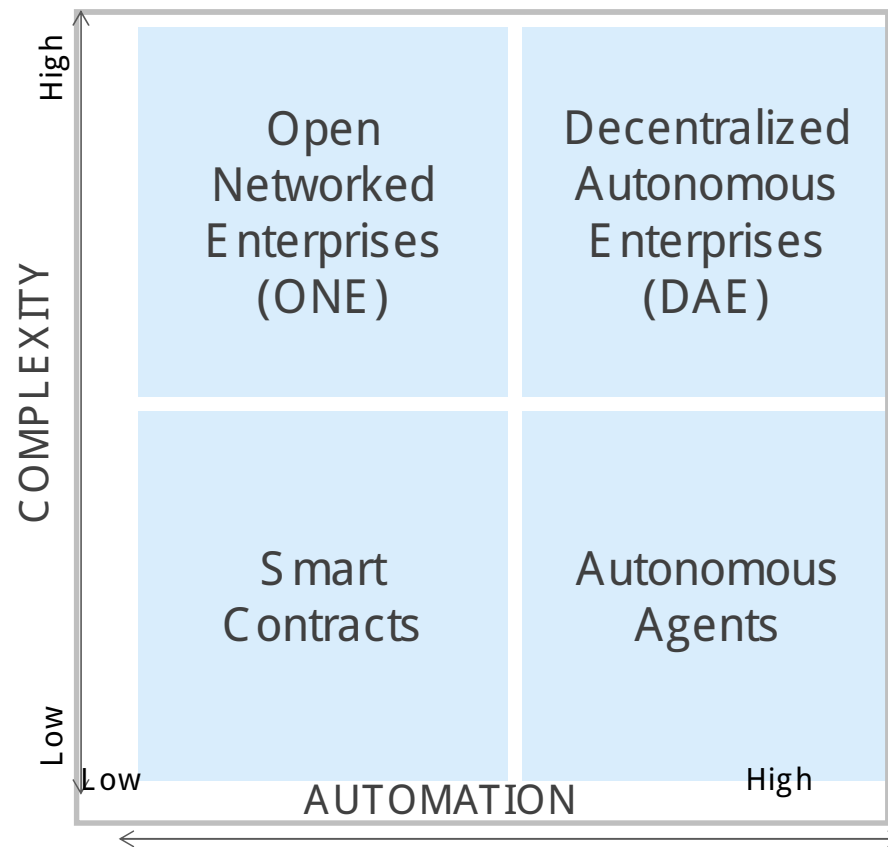
(Hugo Benedetti and [Leonard Kostovetsky](#) based on 2,390 ICOs)

<https://www.bloomberg.com/news/articles/2018-07-09/half-of-icos-die-within-four-months-after-token-sales-finalized>

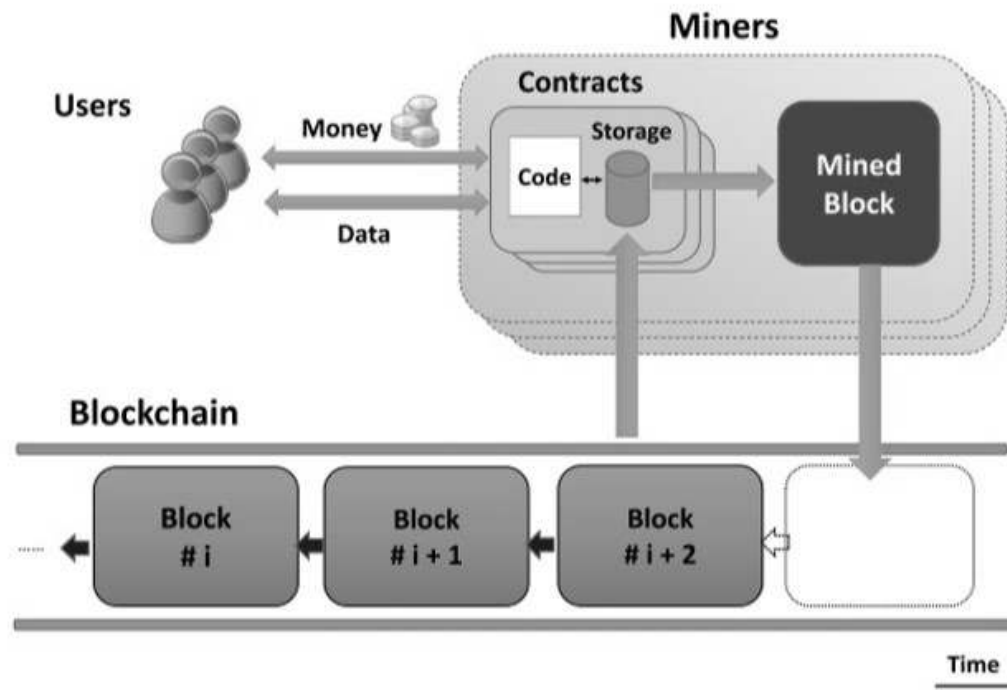


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CONNECTIVITY and CREATIVITY DRIVE NEW BUSINESS MODELS



Smart Contracts and The Blockchain



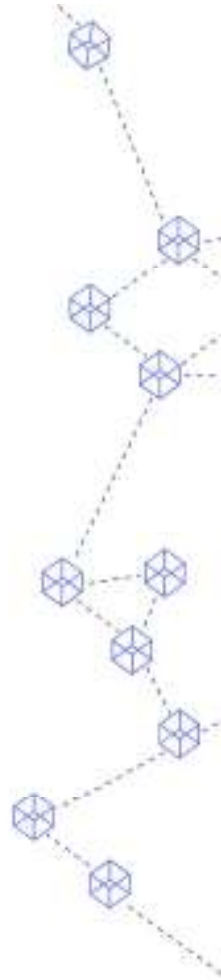
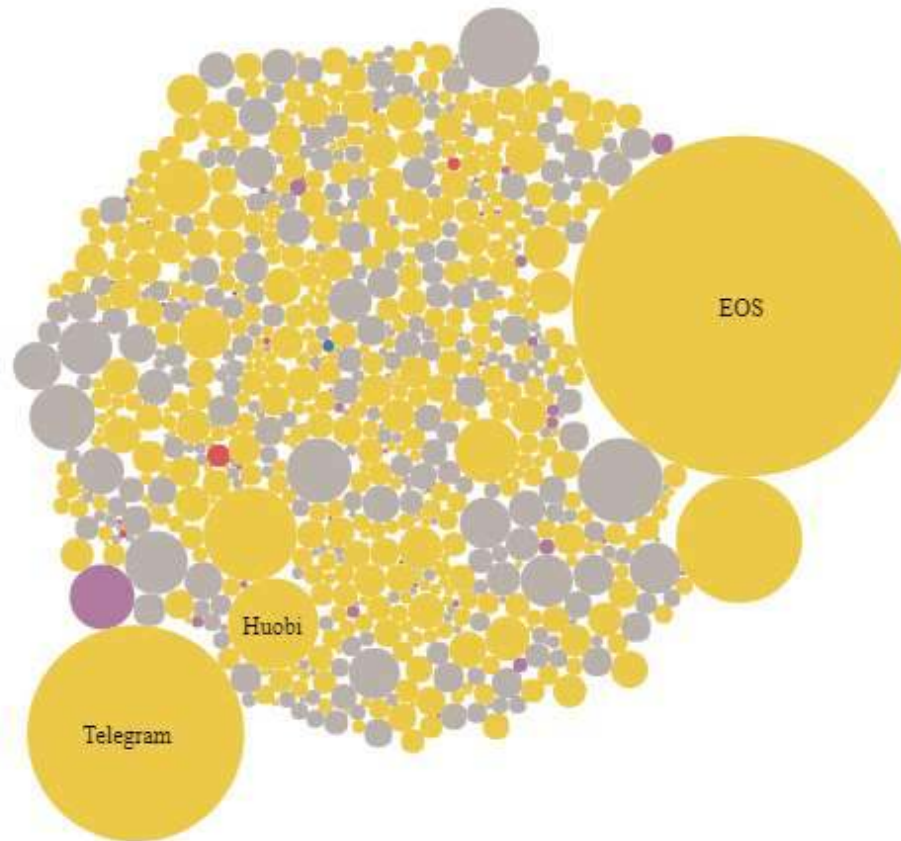
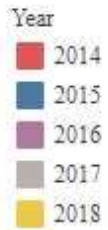
CRYPTOASSET CATEGORIES



Funding Remains High for Some ICO's



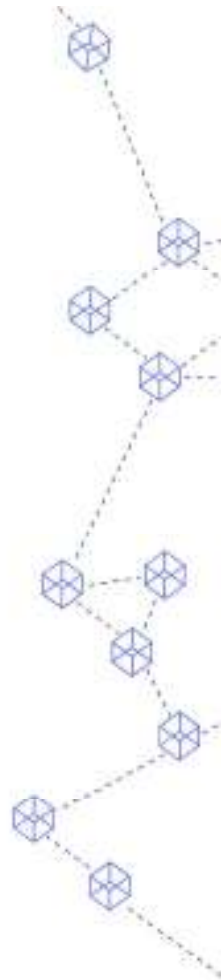
ICO Tracker



Funding Remains High for Some ICO's

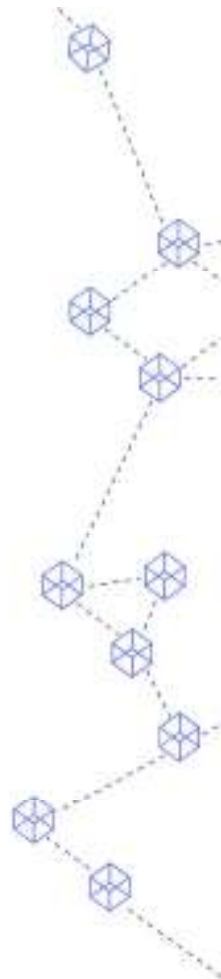


ROI USD is current return on investment from ICO price that is subject to change daily. \$ RAISED is an amount raised by the project and it is calculated based on exchange rate on the end day of ICO. All figures in this chart are subject to daily change due to high market volatility.

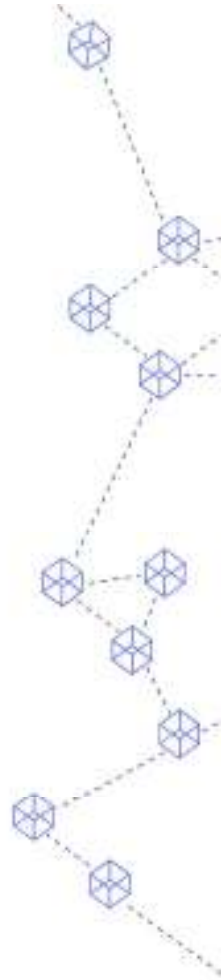


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EOS

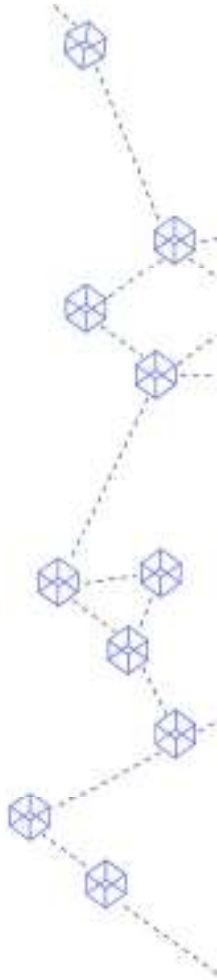


The ICO that Never Was



Digital Asset Service Provider





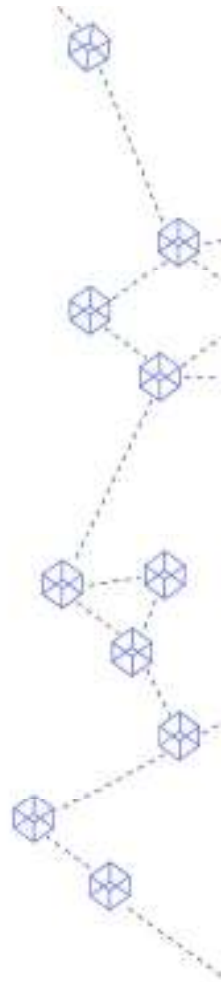
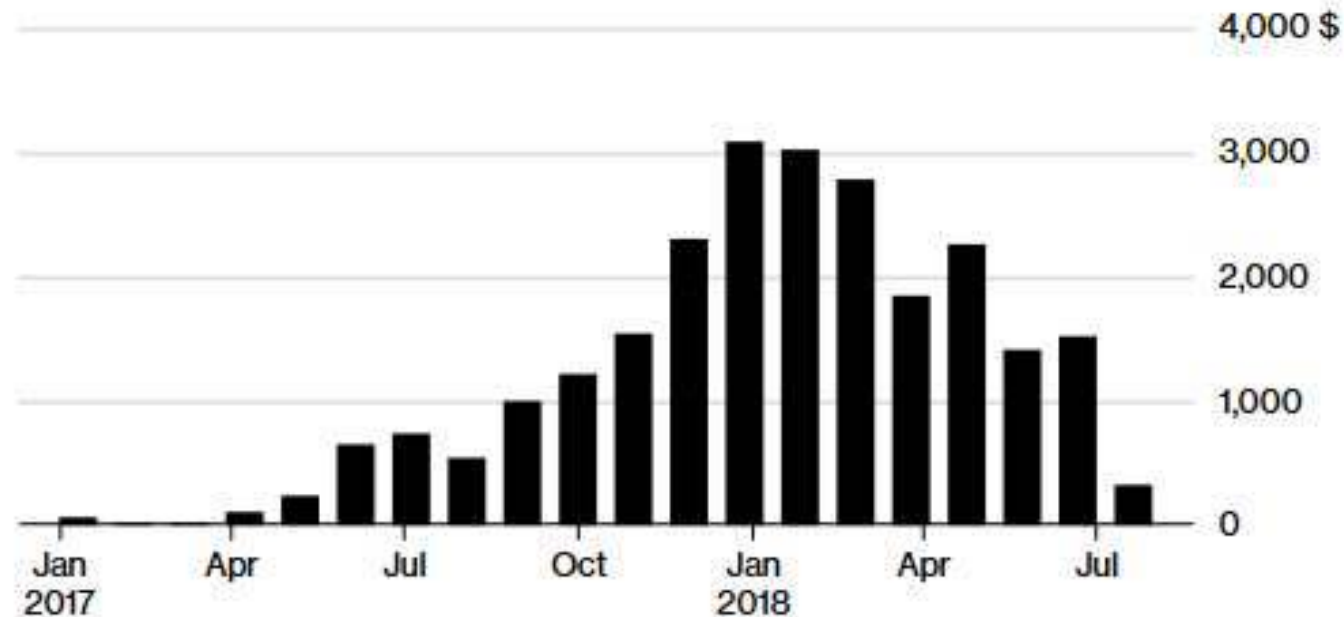
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But The Market is Beginning to Decline

ICO Funding Raised by End Month

In millions of dollars

■ Funding



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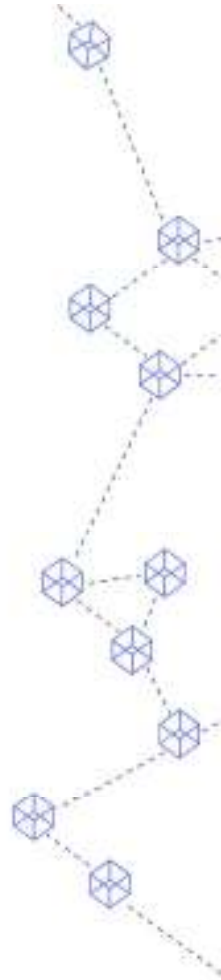
The (crypto) assets of the future

Need have:

- đ Strong governance
- đ Data controls
- đ Compliance with regulatory requirements
- đ Standardization
- đ Identity framework
- đ Security and cyber defense

Need have:

- đ Reliability
- đ Scalability
- đ Widely held, easy to use
- đ Stable in value
- đ Fiscal policy
- đ Monetary policy



Currency Stability

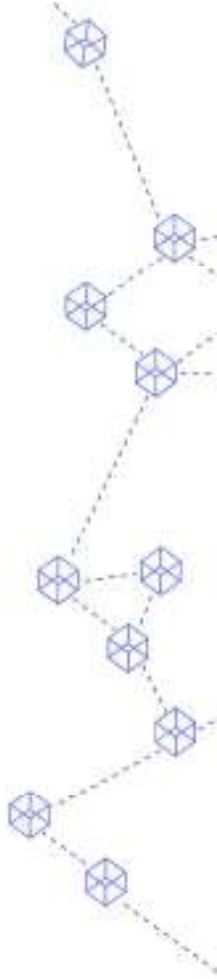
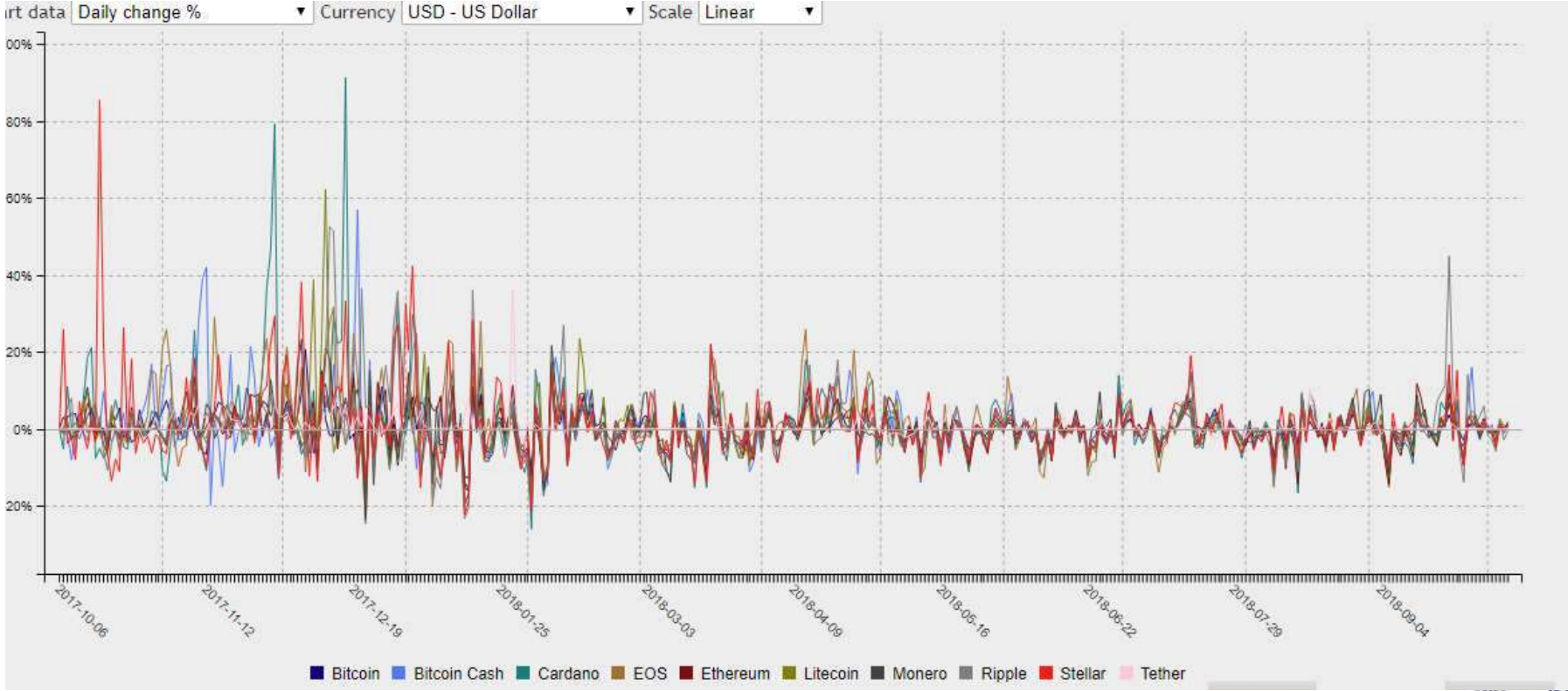
GBP EUR CAD AUD



https://www.oanda.com/fx-for-business/historical-rates?utm_source=average_rates



What Has Changed in 2018?



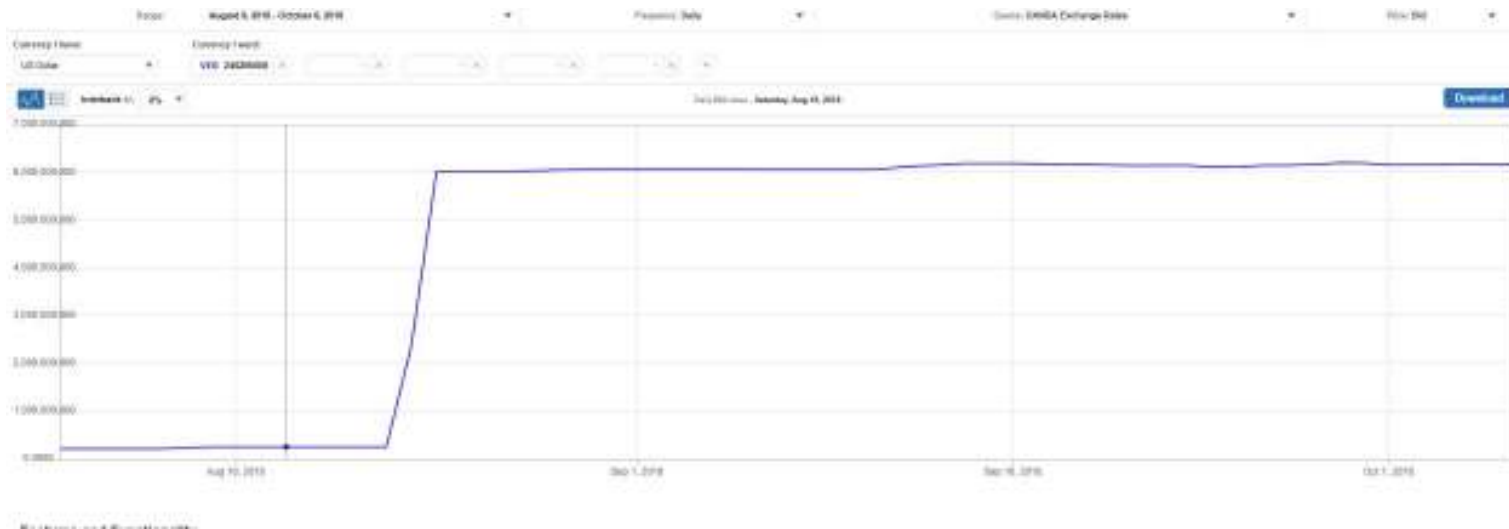
<https://www.cryptocurrencychart.com/>



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Fiscal Policy Mismanaged

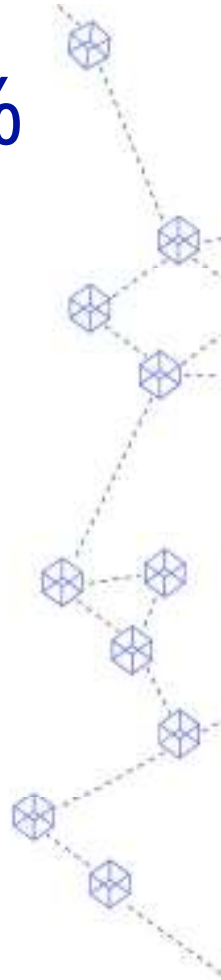
VENEZUELA



<https://www.oanda.com/fx-for-business/historical-rates>

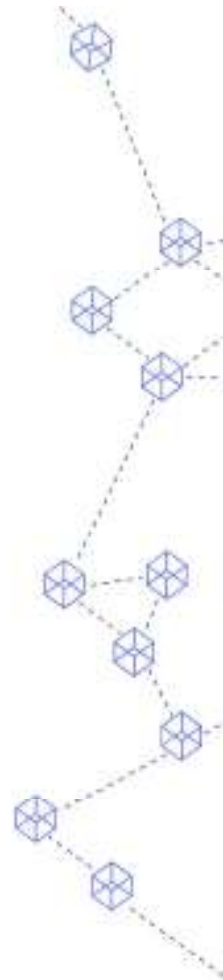
Country List Government Debt to GDP %

| | | | |
|---------------|------|----------|------|
| Japan | 253% | Jamaica | 103% |
| Greece | 179% | Belgium | 103% |
| Lebanon | 149% | Egypt | 101% |
| Italy | 132% | Spain | 98% |
| Portugal | 126% | Cyprus | 97% |
| Cape Verde | 125% | France | 97% |
| Congo | 117% | Jordan | 96% |
| Singapore | 110% | Djibouti | 91% |
| Bhutan | 109% | Bahrain | 91% |
| United States | 105% | Canada | 89% |



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Fiscal Policy Differences By Country

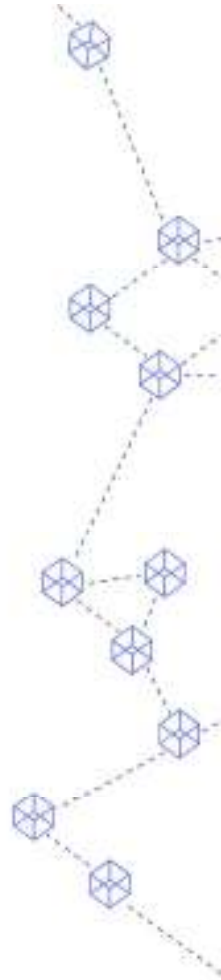


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Bank of England

Distributed ledger technology

- with potential benefits
- although there are challenges to overcome
- before it can be implemented in critical services
- such as the BoE [high value payments service](#)
- We are not planning to create a central bank-issued digital currency_
- Virtual Digital Gold Standard Monetary Amnesia - Deflationary



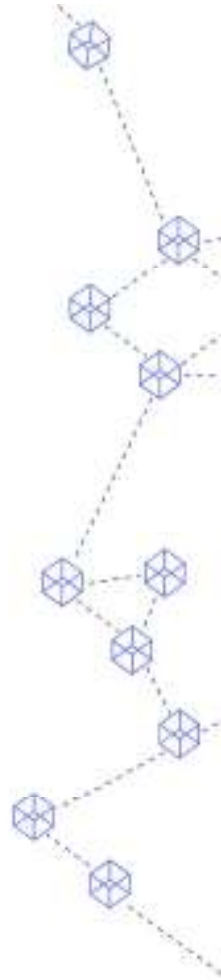
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Bank of Canada Initiative

Payments Canada and Bank of Canada Objectives:

- ð Faster payment options
- ð Data Rich Payments
- ð Transaction transparency
- ð Easier payments
- ð Cross border convenience
- ð Activity based oversight
- ð Open and risk based access, and
- ð A platform for innovation.

Built two DLT prototypes (on Corda, and E thereum)



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In Conclusion

Trust is moving from institutions to mathematics, inevitably

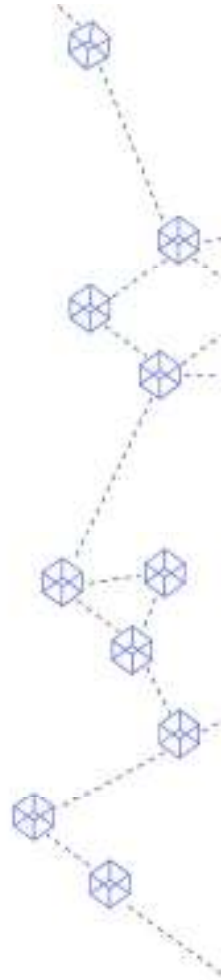
Distributed Autonomous Organizations Seem Inevitable

The wild ride of unregulated crypto speculation is likely coming to an end

Investors recently burnt will be twice shy

Currencies and cryptocurrencies will likely merge

The cryptocurrency of the future has yet to materialize



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