

**TAL
TECH**

 blockchain.taltech.ee

BLOCKCHAIN-BASED CROWDFUNDING

04.07.2021

AGENDA

- Introduction
- ICO vs. IEO vs. STO
- Asset Tokenization
- Blockchain- and Token Economics
- Practical Task

ICO-RECAP

- Telegram ICO anticipates raising the most money in the history of the industry, with records from 2017 eclipsed.
- Three countries are said to be “friendly to ICOs”; Singapore is the third largest ICO market.

coindesk

Year

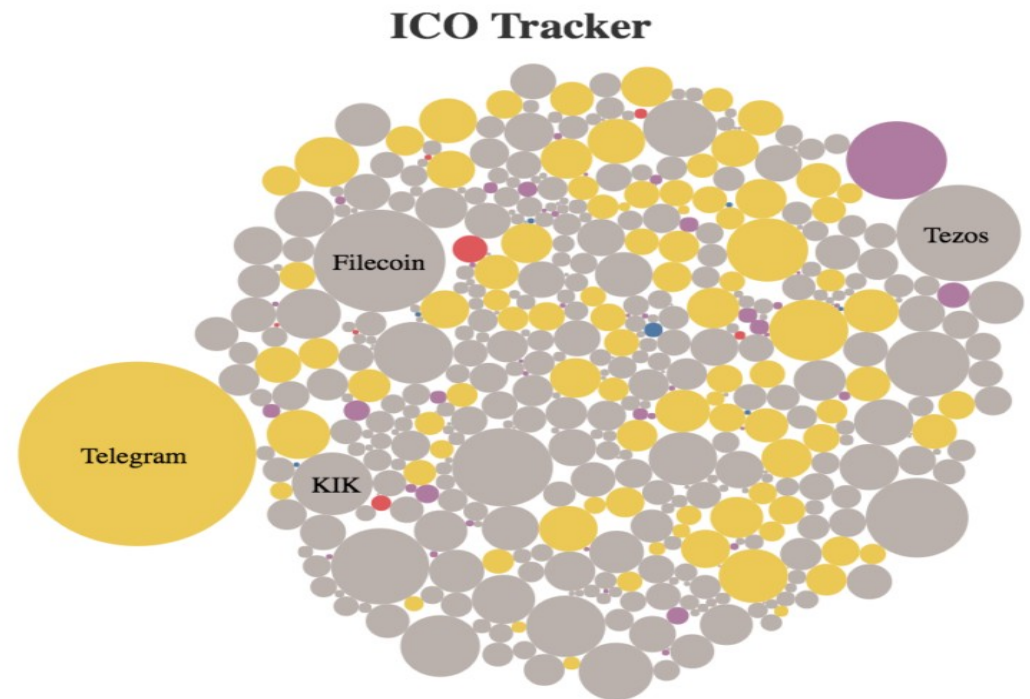
2014

2015

2016

2017

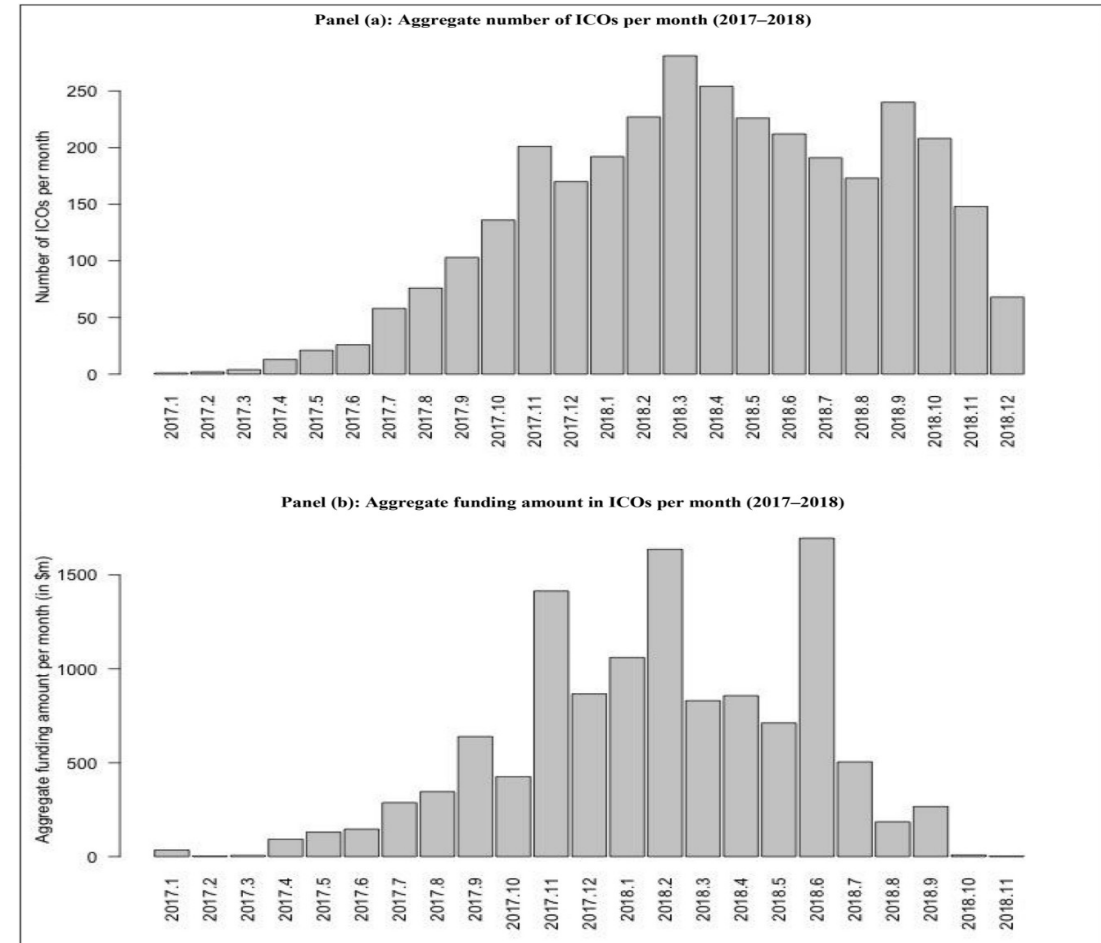
2018



Source: Fintech ICOs in Singapore

ICO-RECAP

- Figure displays the aggregate monthly number of ICOs (panel a) and the aggregate monthly funding amount (panel b) for the ICOs included in our study.
- Dramatic rise of the ICO market since 2017, which peaked in 2018 and declined in 2019 (as detailed in our 2019 ICO Market Report).



Source: [Average size of ICO](#)

RECAP OF THE INITIAL COIN OFFERING (ICO)



Summary Stats

	Year of Close Date				
	2014	2015	2016	2017	2018
ICO Size (\$mn)	30	9	256	5,482	16,718
Average	4	1	6	16	26
Median	2	1	1	8	10
Max	18	5	152	262	4,200
Min	0	0	0	0	0
Std. Dev.	7	2	23	28	173
Number of ICOs	7	7	43	343	650

Source: [Summary stats](#)

RISK OF ICO

- **ICO buyer risks**

- Investing in inexperienced and experimental teams with a high risk of default.
- No regulatory protection.
- Limited transparency on project progress and issues.
- The risk of investing in a costly fraud or pump-and-dump system.
- It can be challenging to get the full picture of the ICO before you invest.
- The value of ICO tokens can be purely speculative and subject to wide fluctuations.
- The hype of an ICO can exceed its actual value.
- ICO Organizers Risks

RISK OF ICO

- **ICO owners risks**

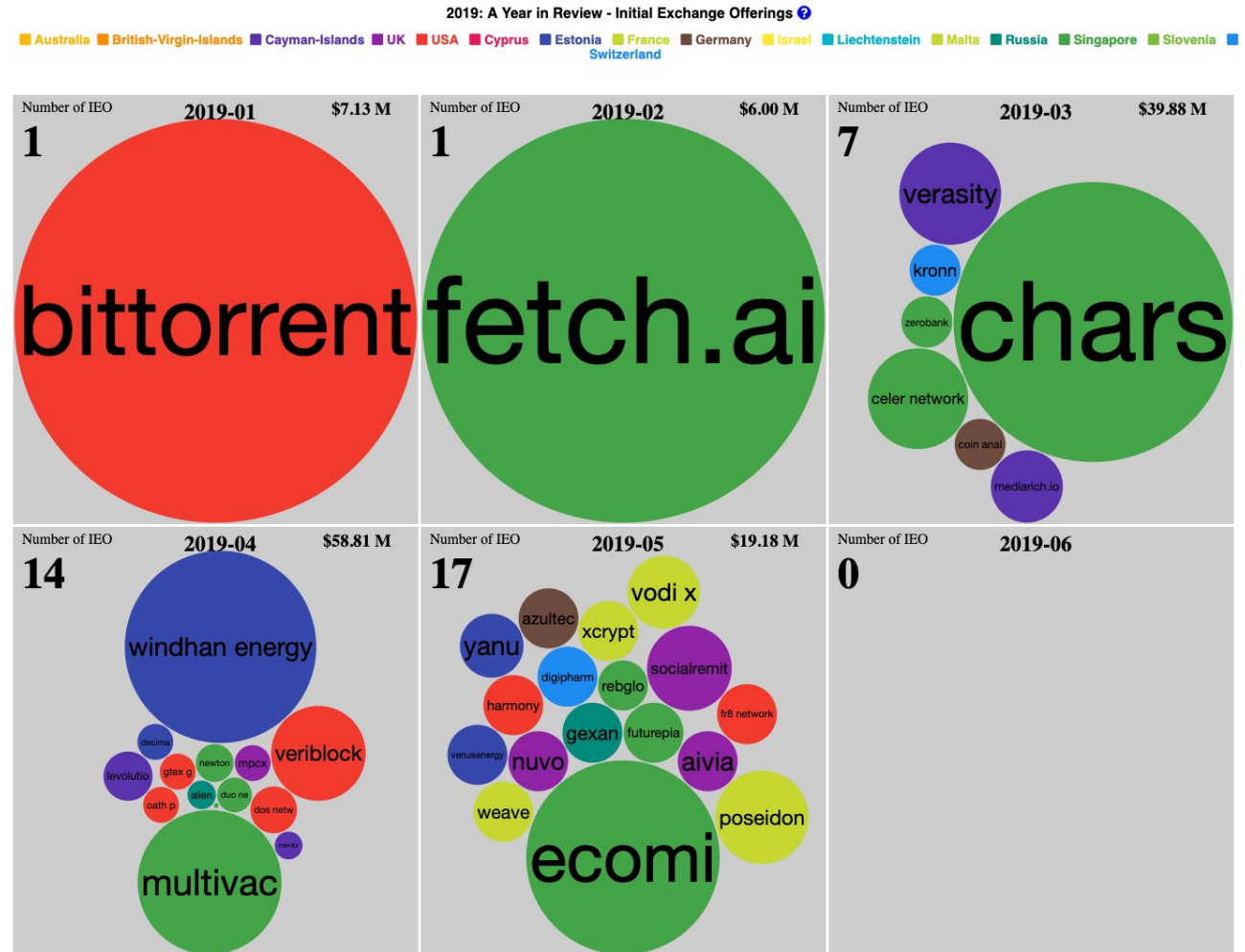
- Uncertainty in regulations, which could lead to fines, extra costs, or penalties.
- Uncertain regulatory difference between utility and security tokens.
- Unstable investment currencies that can devalue exceptionally quickly.
- Interest in ICOs has been declining since early 2018.
- Responsibility if the security of projects is compromised and ultimately damages investors.
- Risk of insufficient documentation in regulated countries.
- Therefore, both ICO organizers and potential investors must carefully weigh the risks.

INITIAL EXCHANGE OFFERINGS (IEOS)

- Binance: Binance Launchpad
- Bittrex: Bittrex International IEO
- BitMax: BitMax Launchpad
- Huobi: Huobi Prime
- KuCoin: KuCpon Spotlight
- OKEx: OKEx IEO

IEO STATISTICS

- You can see the number of IEO per months over 13 major countries.
- For each country, its color appears on the map an average of about once per month.
- Bubble size is directly correlated to the amount of money raised for each.
- An IEO which has failed to collect money has an arbitrary bubble size of approximately \$1m.
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Source: IEO Statistics

IEO VS. ICO

IEO vs ICO
What's the Difference?

CoinGecko 

Initial Exchange Offerings (IEO) started becoming popular in February 2019. IEOs are different from ICOs in the following aspects:

	Initial Exchange Offering (IEO)	Initial Coin Offering (ICO)
Token sale location	Exchange website	Token issuer website
Crowdsale counterparty	Exchange	Token issuer
Project Screening	Exchange will screen	None
AML/KYC	KYC-ed users of exchange	Token issuer to KYC each participant
Marketing	Token issuer can tap on the exchange's reach and users. Joint marketing with exchange.	Token issuer has to market to individual investors
Exchange listing	Immediate. Included in IEO fees	Not immediate. Listing fees to be negotiated with each exchange

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Source: CoinGecko 2019 Q1 Cryptoasset Report

INITIAL PUBLIC OFFERINGS (IPOS)

- The IPO process is where a company offers shares of stock to the public in a new stock issuance.
- Companies meet requirements by exchanges and the Securities and Exchange Commission (SEC) to hold an IPO.
- IPOs allow companies to obtain capital by offering shares in the primary market.
- Companies hire investment banks to market, gauge demand, set the IPO price and date, and more.
- An IPO is used by the company's founders and early investors to get their full return on their private investment.

DIFFERENCE BETWEEN ICO, IEO AND STO





	 Initial Coin Offering	 Initial Exchange Offering	 Security Token Offering
How does it work?	<p>A coin typically represents a contractual bundle of rights (e.g. right to use a platform) stored on a blockchain initiative. The proceeds are commonly used to develop the platform and/or for other capital expenditure needs.</p> <p>Coin holders do not necessarily have a claim to any assets of the company. The coin's value is typically dependent upon the rights represented by the token and the development status of any underlying project. Coin holders may also benefit if there is an appreciation in any secondary market price of the token. The issuer usually prepares a whitepaper detailing the idea of the project, financial or other conditions that are necessary for the project, the portion of offering and the duration of the project.</p>	<p>Issuer issues a coin/token via a virtual asset exchange.</p> <p>In an unregulated environment, the exchange trading platform performs limited due diligence on the coin issuer as well as provides the trading platform for investors in trading the coin/token.</p>	<p>A token represents entitlement to ownership of an asset or equity or debt security of the issuer.</p> <p>Diligence requirements depend on venue and jurisdiction of listing.</p> <p>The issuer may charge or pledge the underlying security/asset under custody of a credible intermediary (e.g. custodian). Certain terms of the token would be coded into the token.</p> <p>Disclosure documentation requirements depend on venue and jurisdiction of listing</p>
What are the benefits to issuers?	<p>Issuers have the flexibility to choose their ICO structure, including static pool, with price and quantity of offering pre-set; dynamic pool with varying price but pre-set quantity or dynamic pool with the price pre-set but the quantity of token varies.</p>	<p>The due diligence performed by a third party is intended to provide credibility to the offering by mitigating risk that the offering is a scam.</p>	<p>Security tokens are most similar to analog securities. By tokenizing illiquid assets such as private company shares, real estate or intellectual property rights, the original owner of the illiquid assets can monetize such assets in whole or in part through an STO with much lower transaction costs.</p>

Source: [Difference between ICO, IEO, STO](#)

DIFFERENCE BETWEEN ICO, IEO AND STO

	 Initial Coin Offering	 Initial Exchange Offering	 Security Token Offering
What are the problems?	<ul style="list-style-type: none">• The offering may not be regulated so there is limited protection under relevant securities laws and regulations.	<p>ICOs are often not registered as securities although many have subsequently been determined to be investment products. Securities sold as part of an ICO that are in fact illegal unless they meet regulatory requirements (e.g. securities regulation).</p> <ul style="list-style-type: none">• Not all jurisdictions regulate virtual asset exchanges. Therefore, the exchange trading platform may not be licensed with local regulator and/or the offering may be unregulated.• In an unregulated regime, standards of diligence and disclosure may vary and investors protection under the existing securities laws and regulations may be limited.• Internationally, the trend is towards regulation of exchanges and custody for virtual assets whether securities or otherwise, both from the standpoint of protecting participants from misconduct as well to increasing user confidence and trust.• Sponsor-based regimes also exist in certain jurisdictions, mimicking traditional securities markets. This essentially relies on a trusted third party to complete a number of diligence and compliance procedures and effectively stand behind the project.	<p>The STOs are now subject to existing securities regulations in many jurisdictions including the U.S., U.K and Hong Kong. However, it is still not common for major securities exchanges to launch an STO.</p>

STO LANDSCAPE

Country/ Region	Status	Examples of license	Examples of regulated virtual asset trading platform
US	 Allowed,  regulated	<ul style="list-style-type: none"> • BitLicenses issued by New York State's Department of Financial Services¹ A person (whether an individual or a company) that engages in Virtual Currency Business Activity requires a BitLicense. Under 23 NYCRR 200.2(q) of the New York Financial Services Law, Virtual Currency Business Activity can fall into one of five types of activities involving New York or New Yorkers: <ul style="list-style-type: none"> - receiving Virtual Currency for transmission or transmitting Virtual Currency; - storing, holding, or maintaining custody or control of Virtual Currency on behalf of others; - buying and selling Virtual Currency as a customer business; - performing exchange services as a customer business; or - controlling, administering, or issuing a Virtual Currency. 	<ul style="list-style-type: none"> • Coinbase
UK	 Allowed,  regulated	<ul style="list-style-type: none"> • Cryptoasset registration - virtual asset service providers and money laundering regulations (5MLD) registered by Financial Conduct Authority²: A firm or sole practitioner who by way of business provides one or more of the following services, including where the creator or issuer of any of the cryptoassets involved, when providing such services: <ol style="list-style-type: none"> a. exchanging, or arranging or making arrangements with a view to the exchange of, cryptoassets for money or money for cryptoassets, b. exchanging, or arranging or making arrangements with a view to the exchange of, one cryptoasset for another, or c. operating a machine which utilises automated processes to exchange cryptoassets for money or money for cryptoassets. 	<ul style="list-style-type: none"> • Archax, Gemini

STO PROCESS

- Launching an STO involves multiple processes and that can be generalized in the following phases:
- Phase 1 – Preparation:
 - The issuer prepares investor information (a “deck”) for the target investors with the idea/business plan completed.
 - The information outlining the business plan, profit forecast, capital requirement, and independent valuation.
- Phase 2 - Designing the offering
 - Issuers decide the token structure, including token quantity, value, soft capitalization, embedded rights, and duration of the offering.
 - Also, due to regulatory differences, issuers must select the appropriate jurisdiction

STO PROCESS

- Phase 3 - Selection of service providers
 - At this stage, issuers choose a blockchain platform, create the security token, and repurchase to the intended investors
 - Issuers should also appoint a reputable custody service provider to hold the underlying assets, maintain cash flow, and market the token.
- Phase 4 - Capital raising
 - Issuer identifies their target investors, hold roadshows, meetings and distribute the deck to the target investors.
 - Certain jurisdictions might require pre- approval from the relevant authority
- Phase 5 - Listing of security on the trading venue
 - Issued token would be sold to a special purpose vehicle ("SPV") and reissued on the trading platform.

CHALLENGES FOR THE FUTURE DEVELOPMENT OF STOS

- Legal Protection of Cryptoassets
- Regulation Over Crypto-related Intermediaries
- Paper-Based Processes
- Accounting and Valuation
- Anti-Money-Laundering and Counter Financing of Terrorism and Know-Your-Client

TYPES OF SECURITY TOKENS (EXAMPLES)

- Utility Tokens
 - Serves some functionality in issuers' application /platform/ecosystem
- Equity Tokens
 - Entitles token holder to vote or to some profit share
- Asset-backed Tokens
 - The rights to an underlying asset (pool) are owned by the token holder (commodities, art, real estate)
- Fund Tokens
 - Tokenized share of an investment fund
- Debt Tokens
 - The holder of a token is entitled to a fixed-rate return on future earnings or revenue.

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ASSET TOKENIZATION

"Essentially, you're taking something that today you have on paper and you're putting an electronic wrapper around it."

Josh Stein, CEO of Harbor

TOKENIZATION

- The process of converting an asset, right, or digital good into a swappable unit to power an ecosystem.
- **Why Tokenize?**
 - Ownership fractionalization
 - Liquidity
 - On a global scale, capital is available.
 - Access to assets with traditionally high barriers to entry
 - Attractive to both traditional and crypto investors

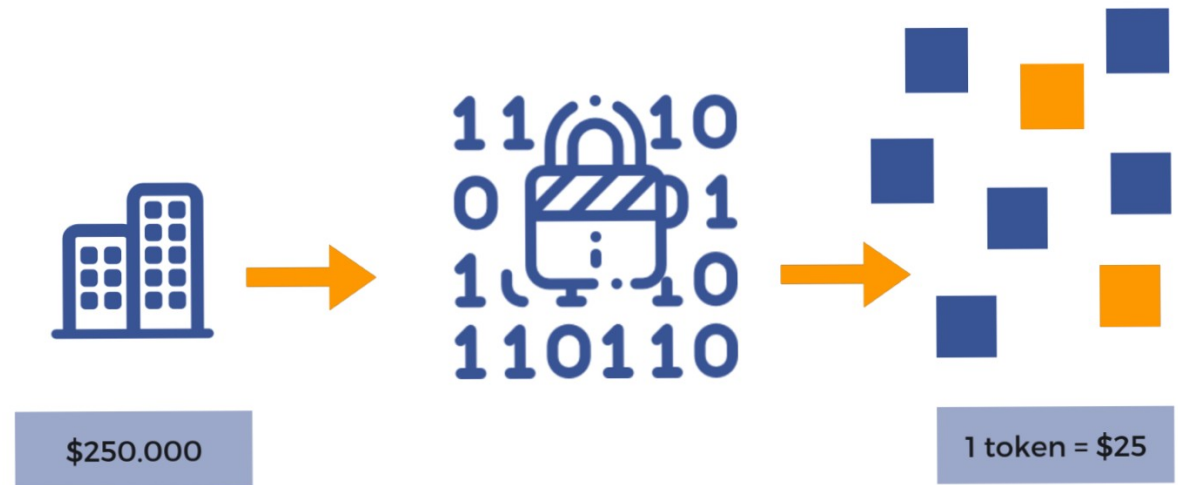
PS: By definition, tokenization excludes coins except for payment scenarios

ASSET TOKENIZATION

- Financial products → Easy (and boring)
- Commodities
 - Gold, oil, iron, etc. → Easy
 - Diamonds, groceries → Difficult
- Products:
 - Medicine
 - Engines
 - Computers
- Company shares, patents, sport teams, real estates, etc.

ASSET TOKENIZATION

- All assets can be split into an unlimited number of virtual shares that are each represented by a separate token.
- Entrance fee drops to \$ 25 for every 100 tokens bought.



Source: <https://merehead.com/blog/the-key-benefits-of-asset-tokenization-on-blockchain/>

BLOCKCHAIN ECONOMICS

- The study of the production, distribution, and consumption of goods and services => Individual and group decisions about goods and services and the consequences
- Fundamental dynamics remain constant:
 - Wants outweigh resources, decision-making costs, opportunity costs, and scarcity (material or intangible)
 - Same in all forms of economies → Classical Economics (material goods), Network Economics (digital goods), Blockchain Economics (automated smart contracts exchanging cryptographic assets)

Based on "Blockchain Economics - Building Societies of Trust" by Melanie Swan:
<https://de.slideshare.net/lablogga/blockchain-economics-94154369>

HOW WILL BLOCKCHAIN IMPACT GLOBAL ECONOMY

- Blockchain technologies are expected to be adopted in a wide scale across the global economy in 2025.
- Tracking and tracing of products and services – or provenance – which emerged as a new priority for many companies' supply chains during the COVID-19 pandemic, has the largest economic potential (\$962bn).
- Payments and financial services, including use of digital currencies, or supporting financial inclusion through cross border and remittance payments (\$433bn).
- Identity management (\$224bn) including personal IDs, professional credentials and certificates to help curb fraud and identity theft.
- Application of blockchain in contracts and dispute resolution (\$73bn), and customer engagement (\$54bn) including blockchain's use in loyalty programmes

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Thank you very much for your attention!

Q & A?

Reference: Arumaithurai M., Introduction to Blockchains, Tallinn, Estonia 2019, <https://tinyurl.com/n2y3k5pu>